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Accountancy

2008/9 Schools Wikipedia Selection. Related subjects: Business

Accountancy (profession) or **accounting** (methodology) is the measurement, statement or provision of assurance about financial information primarily used by managers, investors, tax authorities and other decision makers to make resource allocation decisions within companies, organizations, and public agencies. The terms derive from the use of financial accounts.

Accounting (Definition) is a service activity. Its function is to provide quantitative information primarily financial in nature, about economic entities, that is intended to be useful in making economic decisions, and in making reasoned choices among alternative courses of action.

It is also the discipline of measuring, communicating and interpreting financial activity. Accounting is also widely referred to as the "language of business".

Financial accounting is one branch of accounting and historically has involved processes by which financial information about a business is recorded, classified, summarised, interpreted, and communicated; for public companies, this information is generally publicly-accessible. By contrast management accounting information is used within an organisation and is usually confidential and accessible only to a small group, mostly decision-makers. Tax Accounting is the accounting needed to comply with jurisdictional tax regulations.

Practitioners of accountancy are known as **accountants**. There are many professional bodies for accountants throughout the world. Many allow their members to use titles indicating their membership or qualification level. Examples are Chartered Certified Accountant (ACCA or FCCA), Chartered Accountant (FCA, CA or ACA), Management Accountant (ACMA, FCMA or AICWA), Certified Public Accountant (CPA) and Certified General Accountant (CGA or FCGA).

Auditing is a related but separate discipline, with two sub-disciplines: internal auditing and external auditing. External auditing is the process whereby an independent auditor examines an organisation's financial statements and accounting records in order to express an opinion as to the truth and fairness of the statements and the accountant's adherence to Generally Accepted Accounting Principles (GAAP), or International Financial Reporting Standards (IFRS), in all material respects. Internal auditing aims at providing information for management usage, and is typically carried out by auditors employed by the company, and sometimes by external service providers.

Accounting/accountancy attempts to create accurate financial reports that are useful to managers, regulators, and other stakeholders such as shareholders, creditors, or owners. The day-to-day record-keeping involved in this process is known as bookkeeping.

Accounting scholarship is the academic discipline which studies accounting/accountancy.

Modern accounting

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Accounting is the process of identifying, measuring and communicating economic information so a user of the information may make informed economic judgments and decisions based on it.

Accounting is the degree of measurement of financial transactions which are transfers of legal property rights made under contractual relationships. Non-financial transactions are specifically excluded due to conservatism and materiality principles.

At the heart of modern financial accounting is the double-entry bookkeeping system. This system involves making at least two entries for every transaction: a debit in one account, and a corresponding credit in another account. The sum of all debits should always equal the sum of all credits, providing a simple way to check for errors. This system was first used in medieval Europe, although claims have been made that the system dates back to Ancient Rome or Greece.

According to critics of standard accounting practices, it has changed little since. Accounting reform measures of some kind have been taken in each generation to attempt to keep bookkeeping relevant to capital assets or production capacity. However, these have not changed the basic principles, which are supposed to be independent of economics as such. In recent times, the divergence of accounting from economic principles has resulted in controversial reforms to make financial reports more indicative of economic reality.

History of accounting

Early history

Accountancy's infancy dates back to the earliest days of human agriculture and civilization (the Sumerians in Mesopotamia), when the need to maintain accurate records of the quantities and relative values of agricultural products first arose. This need for record keeping was the synthesis of writing. Simple accounting is mentioned in the Christian Bible (New Testament) in the Book of Matthew, in the Parable of the Talents . The Islamic Quran also mentions simple accounting for trade and credit arrangements .

Twelfth-century A.D. Arab writer Ibn Taymiyyah mentioned in his book *Hisba* (literally, "verification" or "calculation") detailed accounting systems used by Muslims as early as in the mid-seventh century A.D. These accounting practices were influenced by the Roman and the Persian civilisations that Muslims interacted with. The most detailed example Ibn Taymiyyah provides of a complex governmental accounting system is the Divan of Umar, the second Caliph of Islam, in which all revenues and disbursements were recorded. The Divan of Umar has been described in detail by various Islamic historians and was used by Muslim rulers in the Middle East with modifications and enhancements until the fall of the Ottoman Empire.

Luca Pacioli and the birth of modern accountancy

Luca Pacioli (1445 - 1517), also known as Friar Luca dal Borgo, is credited for the "birth" of accounting. His *Summa de arithmetica, geometrica, proportioni et proportionalita* (*Summa on arithmetic, geometry, proportions and proportionality*, Venice 1494), was a textbook for use in the abbaco schools of northern Italy, where the sons of merchants and craftsmen were educated. It was a compendium of the mathematical knowledge of his time, and includes the first printed description of the method of keeping accounts that Venetian merchants used at that time, known as the double-entry accounting system. Although Pacioli codified rather than invented this system, he is widely regarded as the "Father of Accounting". The system he published included most of the accounting cycle as we know it today. He described the use of journals and ledgers, and warned that a person should not go to sleep at night until the debits equalled the credits! His ledger had accounts for assets (including receivables and inventories), liabilities, capital, income, and expenses — the account categories that are reported on an organisation's balance sheet and income statement, respectively. He demonstrated year-end closing entries and proposed that a trial balance be used to prove a balanced ledger. His treatise also touches on a wide range of related topics from accounting ethics to cost accounting.



Painting of Luca Pacioli, attributed to Jacopo de' Barbari

Post-Pacioli

The first known book in the English language on accounting was published in London, England by John Gouge (or Gough) in 1543. It is described as *A Profitable Treatyce called the Instrument or Boke to learn to know the good order of the kepyng of the famouse reconyng, called in Latin, Dare and Habere, and, in English, debtor and Creditor*.

A short book of instructions was also published in 1588 by John Mellis of Southwark, England, in which he says, "I am but the renuer and reviver of an ancient old copies printed here in London the 14 of August 1543: collected, published, made, and set forth by one Hugh Oldcastle, Schoolmaster, who, as reappeared by his treatise, then taught Arithmetics, and this booke in Saint Ollaves parish in Marko Lane." Mellis refers to the fact that the principle of accounts he explains (which is a simple system of double entry) is "after the former of Venice".

A book described as *The Merchants Mirrour, or directions for the perfect ordering and keeping of his accounts formed by way of Debitor and Creditor*, after the (so termed) Italian manner, by Richard Dafforne, accountant, published in 1635, contains many references to early books on the science of accountancy. In a chapter in this book, headed "Opinion of Book-keeping's Antiquity," the author states, on the authority of another writer, that the form of book-keeping referred to had then been in use in Italy about two hundred years, "but that the same, or one in many parts very like this, was used in the time of Julius Caesar, and in Rome long before." He gives quotations of Latin book-keeping terms in use in ancient times, and refers to "ex Oratione Ciceronis pro Roscio Comaedo"; and he adds:

"That the one side of their booke was used for Debitor, the other for Creditor, is manifest in a certain place, *Naturalis Historiae Plinii*, lib. 2, cap. 7, where hee, speaking of Fortune, saith thus:

Huic Omnia Expensa.

*Huic Omnia Feruntur accepta et in tota Ratione mortalium sola.
Utramque Paginam facit."*

An early Dutch writer appears to have suggested that double-entry book-keeping was even in existence among the Greeks, pointing to scientific accountancy having been invented in remote times.

There were several editions of Richard Dafforne's book - the second edition in 1636, the third in 1656, and another in 1684. The book is a very complete treatise on scientific accountancy, beautifully prepared and containing elaborate explanations. The numerous editions tend to prove that the science was highly appreciated in the 17th century. From this time on, there has been a continuous supply of literature on the subject, many of the authors styling themselves accountants and teachers of the art, and thus proving that the professional accountant was then known and employed.

Accountancy qualifications and regulation

The expectations for qualification in the profession of accounting vary between different jurisdictions and countries.

Accountants may be certified by a variety of organisations or bodies, such as the Association of Accounting Technicians (AAT), British qualified accountancy bodies including the Chartered Institute of Management Accountants (CIMA), Association of Chartered Certified Accountants (ACCA) and Institute of Chartered Accountants, and are recognised by titles such as *Chartered Management Accountant* (ACMA or FCMA) *Chartered Certified Accountant* (ACCA or FCCA) and *Chartered Accountant* (UK, Australia, New Zealand, Canada, India, Pakistan, South Africa, Ghana), *Certified Public Accountant* (Ireland, Japan, US, Singapore, Hong Kong, the Philippines), *Certified Management Accountant* (Canada, U.S.), *Certified General Accountant* (Canada), or *Certified Practising Accountant* (Australia). Some Commonwealth countries (Australia and Canada) often recognise both the certified and chartered accounting bodies. The majority of "public" accountants in New Zealand and Canada are Chartered Accountants; however, Certified General Accountants are also authorised by legislation to practice public accounting and auditing in all Canadian provinces, except Ontario and Quebec, as of 2005. There is, however, no legal requirement for an accountant to be a paid-up member of one of the many Institutes.

The "Big Four" accountancy firms

The "Big Four auditors" are the largest multinational accountancy firms.

- PricewaterhouseCoopers
- Deloitte Touche Tohmatsu
- KPMG
- Ernst & Young

These firms are associations of the partnerships in each country rather than having the classical structure of holding company and subsidiaries, but each has an international 'umbrella' organization for coordination (technically known as a Swiss Verein).

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Before the Enron and other accounting scandals in the United States, there were five large firms and were called the Big Five: Arthur Andersen, PricewaterhouseCoopers, KPMG, Deloitte Touche Tohmatsu and Ernst & Young.

On June 15, 2002, Arthur Andersen was convicted (later overturned) of obstruction of justice for shredding documents related to its audit of Enron. Nancy Temple (Andersen Legal Dept.) and David Duncan (Lead Partner for the Enron account) were cited as the responsible managers in this scandal as they had given the order to shred relevant documents. Since the U.S. Securities and Exchange Commission does not allow convicted felons to audit public companies, the firm agreed to surrender its licenses and its right to practice before the SEC on August 31, 2002. A plurality of Arthur Andersen joined KPMG in the US and Deloitte & Touche outside of the US. Historically, there had also been groupings referred to as the "Big Six" (Arthur Andersen, plus Coopers & Lybrand before its merger with Price Waterhouse) and the "Big Eight" (Ernst and Young prior to their merger were Ernst & Whinney and Arthur Young and Deloitte & Touche was formed by the merger of Deloitte, Haskins and Sells with the firm Touche Ross).

The accounting scandals at Enron and other high profile companies in the USA and Europe have had, and continue to have, far-reaching consequences for the accounting industry. Application of International Accounting Standards originating in International Accounting Standards Board headquartered in London and bearing more resemblance to UK than current US practices is often advocated by those who note the relative stability of the UK accounting system (which reformed itself after scandals in the late 1980s and early 1990s).

Lists of related topics

- List of accounting topics
- List of accountancy bodies
- List of finance topics
- List of business law topics
- List of business ethics, political economy, and philosophy of business topics

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Actuary

2008/9 Schools Wikipedia Selection. Related subjects: Economics

An **actuary** is a business professional who deals with the financial impact of risk and uncertainty.

Actuaries have a deep understanding of financial security systems, their reasons for being, their complexity, their mathematics, and the way they work . They evaluate the likelihood of events and quantify the contingent outcomes in order to minimize losses, both emotional and financial, associated with uncertain undesirable events. Since many events, such as death, cannot be totally avoided, it is helpful to take measures to minimize their financial impact when they occur. These risks can affect both sides of the balance sheet, and require asset management, liability management, and valuation skills. Analytical skills, business knowledge and understanding of human behaviour and the vagaries of information systems are required to design and manage programs that control risk .

Actuaries' insurance disciplines may be classified as life; health; pensions, annuities, and asset management; social welfare programs; property; casualty; general insurance; and reinsurance. Life, health, and pension actuaries deal with mortality risk, morbidity, and consumer choice regarding the ongoing utilization of drugs and medical services risk, and investment risk. Products prominent in their work include life insurance, annuities, pensions, mortgage and credit insurance, short and long term disability, and medical, dental, health savings accounts and long term care insurance. In addition to these risks, social insurance programs are greatly influenced by public opinion, politics, budget constraints, changing demographics and other factors such as medical technology, inflation and cost of living considerations .

Casualty actuaries, also known as non-life or general insurance actuaries, deal with catastrophic, unnatural risks that can occur to people or property. Products prominent in their work include auto insurance, homeowners insurance, commercial property insurance, workers' compensation, title insurance, malpractice insurance, products liability insurance, directors and officers liability insurance, environmental and marine insurance, terrorism insurance and other types of liability insurance. Reinsurance products have to accommodate all of the previously mentioned products, and in addition have to properly reflect the increasing long term risks associated with climate change, cultural litigiousness, acts of war, terrorism and politics .

In 2002, a *Wall Street Journal* survey on the best jobs in the United States listed actuary as the second best job, while in previous editions of the list, actuaries had been the top rated job . The survey used six key criteria to rank jobs: environment, income, employment outlook, physical demands, security and stress. A similar survey by *U.S. News & World Report* in 2006 included actuaries among the 25 "Best Professions" that it expects will be in great demand in the future .

History

Need for insurance

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Damage from Hurricane Katrina. Actuaries need to estimate long-term averages of such damage in order to accurately price property insurance.

The basic requirements of communal interests gave rise to risk sharing since the dawn of civilization. For example, people who lived their entire lives in a camp had the risk of fire, which would leave their band or family without shelter. After basic exchange came into existence, more complex forms developed beyond a basic barter economy, and new forms of risk manifested. Merchants embarking on trade journeys bore the risk of losing goods entrusted to them, their own possessions, or even their lives. Intermediaries developed to warehouse and trade goods, and they often suffered from financial risk. The primary providers in any extended families or household always ran the risk of premature death, disability or infirmity, leaving their dependents to starve. Credit procurement was difficult if the lender worried about repayment in the event of the borrower's death or infirmity. Alternatively, people sometimes lived too long, exhausting their savings, if any, or becoming a burden on others in the extended family or society .

Early attempts

In the ancient world there was not always room for the sick, suffering, disabled, aged, or the poor—these were often not part of the cultural consciousness of societies . Early methods of protection, aside from the normal support of the extended family, involved charity; religious organizations or neighbors would collect for the destitute and needy. By the middle of the third century, 1,500 suffering people were being supported by charitable operations in Rome . Charitable protection is still an active form of support to this very day . However, receiving charity is uncertain and is often accompanied by social stigma. Elementary mutual aid agreements and pensions did arise in antiquity . Early in the Roman empire, associations were formed to meet the expenses of burial, cremation, and monuments—precursors to burial insurance and friendly societies. A small sum was paid into a communal fund on a weekly basis, and upon the death of a member, the fund would cover the expenses of rites and burial. These societies sometimes sold shares in the building of columbāria, or burial vaults, owned by the fund—the precursor to mutual insurance companies . Other early examples of mutual surety and assurance pacts can be traced back to various forms of fellowship within the Saxon clans of England and their Germanic forbears, and to Celtic society . However, many of these earlier forms of surety and aid would fail due to lack of understanding and knowledge .

Development of theory

The 17th century was a period of extraordinary advances in mathematics in Germany, France, and England. At the same time there was a rapidly growing desire and need to place the valuation of personal risk on a more scientific basis. Independently from each other, compound interest was studied and probability theory emerged as a well understood mathematical discipline. Another important advance came in 1662 from a London draper named John Graunt, who showed that there were predictable patterns of longevity and death in a defined group, or cohort, of people, despite the uncertainty about the future longevity or mortality of any one individual person. This study became the basis for the original life table. It was now possible to set up an insurance scheme to provide life insurance or pensions for a group of people, and to calculate with some degree of accuracy how much each person in the group should contribute to a common fund assumed to earn a fixed rate of interest. The first person to demonstrate publicly how this could be done was Edmond Halley. In addition to constructing his own life table, Halley demonstrated a method of using his life table to calculate the premium someone of a given age should pay to purchase a life-annuity .

Early actuaries

James Dodson's pioneering work on the level premium system led to the formation of the Society for Equitable Assurances on Lives and Survivorship (now commonly known as Equitable Life) in London in 1762. This was the first life insurance company to use premium rates which were calculated scientifically for long-term life policies, using Dodson's work. The company still exists, though it has run into difficulties recently. After Dodson's death in 1757, Edward Rowe Mores took over the leadership of the group that eventually became the Society for Equitable Assurances in 1762. It was he who specified that the chief official should be called an 'actuary' . Previously, the use of the term had been restricted to an official who recorded the decisions, or 'acts', of ecclesiastical courts, in ancient times originally the secretary of the Roman senate, responsible for compiling the Acta Senatus . Other companies which did not originally use such mathematical and scientific methods most often failed or were forced to adopt the methods pioneered by Equitable .

Development of the modern profession

In the eighteenth and nineteenth centuries, computational complexity was limited to manual calculations. The actual calculations required to compute fair insurance premiums are rather complex. The actuaries of that time developed methods to construct easily-used tables, using sophisticated approximations called commutation functions, to facilitate timely, accurate, manual calculations of premiums . Over time, actuarial organizations were founded to support and further both actuaries and actuarial science, and to protect the public interest by ensuring competency and ethical standards . However, calculations remained cumbersome, and actuarial shortcuts were commonplace. Non-life actuaries followed in the footsteps of their life compatriots in the early twentieth century. In the United States, the 1920 revision to workers' compensation rates took over two months of around-the-clock work by day and night teams of actuaries . In the 1930s and 1940s, however, rigorous mathematical foundations for stochastic processes were developed . Actuaries could now begin to forecast losses using models of random events instead of deterministic methods. Computers further revolutionized the actuarial profession. From pencil-and-paper to punchcards to microcomputers, the modeling and forecasting ability of the actuary has grown exponentially .

Another modern development is the convergence of modern financial theory with actuarial science . In the early twentieth century, actuaries were developing

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many techniques that can be found in modern financial theory, but for various historical reasons, these developments did not achieve much recognition . However, in the late 1980s and early 1990s, there was a distinct effort for actuaries to combine financial theory and stochastic methods into their established models . Today, the profession, both in practice and in the educational syllabi of many actuarial organizations, combines tables, loss models, stochastic methods, and financial theory , but is still not completely aligned with modern financial economics .

Responsibilities

Actuaries use skills in mathematics, economics, finance, probability and statistics, and business to help businesses assess the risk of certain events occurring, and to formulate policies that minimize the cost of that risk. For this reason, actuaries are essential to the insurance and reinsurance industry, either as staff employees or as consultants, as well as to government agencies such as the Government Actuary's Department in the UK or the Social Security Administration in the US. Actuaries assemble and analyze data to estimate the probability and likely cost of the occurrence of an event such as death, sickness, injury, disability, or loss of property. Actuaries also address financial questions, including those involving the level of pension contributions required to produce a certain retirement income and the way in which a company should invest resources to maximize its return on investments in light of potential risk. Using their broad knowledge, actuaries help design and price insurance policies, pension plans, and other financial strategies in a manner which will help ensure that the plans are maintained on a sound financial basis .

Traditional employment

On both the life and casualty sides, the classical function of actuaries is to calculate premiums and reserves for insurance policies covering various risks. Premiums are the amount of money the insurer needs to collect from the policyholder in order to cover the expected losses, expenses, and a provision for profit. Reserves are provisions for future liabilities and indicate how much money should be set aside now to reasonably provide for future payouts. If you inspect the balance sheet of an insurance company, you will find that the liability side consists mainly of reserves.

On the casualty side, this analysis often involves quantifying the probability of a loss event, called the frequency, and the size of that loss event, called the severity. Further, the amount of time that occurs before the loss event is also important, as the insurer will not have to pay anything until after the event has occurred. On the life side, the analysis often involves quantifying how much a potential sum of money or a financial liability will be worth at different points in the future. Since neither of these kinds of analysis are purely deterministic processes, stochastic models are often used to determine frequency and severity distributions and the parameters of these distributions. Forecasting interest yields and currency movements also plays a role in determining future costs, especially on the life side.

Actuaries do not always attempt to predict aggregate future events. Often, their work may relate to determining the cost of financial liabilities that have already occurred, called retrospective reinsurance, or the development or re-pricing of new products.

Actuaries also design and maintain products and systems. They are involved in financial reporting of companies' assets and liabilities. They must communicate complex concepts to clients who may not share their language or depth of knowledge. Actuaries work under a strict code of ethics that covers their communications and work products, but their clients may not adhere to those same standards when interpreting the data or using it within different kinds of

businesses.

Non-traditional employment

Many actuaries are general business managers or financial officers. They analyze prospective business prospects with their financial skills in valuing or discounting risky future cash flows, and many apply their pricing expertise from insurance to other lines of business. Some actuaries act as expert witnesses by applying their analysis in court trials to estimate the economic value of losses such as lost profits or lost wages.

There has been a recent widening of the scope of the actuarial field to include investment advice and asset management. Further, there has been a convergence from the financial fields of risk management and quantitative analysis with actuarial science. Now, actuaries also work as risk managers, quantitative analysts, or investment specialists. Even actuaries in traditional roles are now studying and using the tools and data previously in the domain of finance . One of the latest developments in the industry, insurance securitization, requires both the actuarial and finance skills .

Another field in which actuaries are becoming more prominent is that of Enterprise Risk Management, for both financial and non-financial corporations . For example, the Basel II accord for financial institutions, and its analogue, the Solvency II accord for insurance companies, requires such institutions to account for operational risk separately and in addition to credit, reserve, asset, and insolvency risk. Actuarial skills are well suited to this environment because of their training in analyzing various forms of risk, and judging the potential for upside gain, as well as downside loss associated with these forms of risk .

Remuneration

The credentialing and examination procedure for becoming a fully qualified actuary can be discouraging. Consequently, the profession remains very small throughout the world. As a result, actuaries are in high demand, and they are highly paid for the services they render . In the UK, where there are approximately 8,000 fully qualified actuaries, typical post-university starting salaries range between GBP £25,300 and £35,000 (approx. US\$50,100–US\$69,300 c. January 2008) and newly qualified actuaries in insurance companies earn somewhere between £46,000 and £55,000 (approx. US\$91,100–US\$108,900 c. January 2008) per year. Many successful actuaries earn over £100,000 a year (approx. US\$198,000 c. January 2008). These reflect nationwide salaries and numbers are likely to be higher in London or in the South East of England .

Credentialing and exams

Becoming a fully credentialed actuary requires passing a rigorous series of exams, usually taking several years. In some countries, such as France, most study takes place in a university setting. In others, such as the U.S. and the UK, most study takes place during employment.

UK and Republic of Ireland

Qualification in the United Kingdom and the Republic of Ireland consists of a combination of exams and courses provided by the professional bodies, the

Institute of Actuaries based in London, England, and the Faculty of Actuaries based in Edinburgh, Scotland—separate but coinciding bodies. No geographic limitations exist for these bodies. Students and actuaries in any part of the UK or the Republic of Ireland may be a member of either or both bodies. The exams may only be taken upon having officially joined the body, unlike many other countries where exams may be taken earlier. However, a candidate may offer proof of having previously covered topics, usually while at university, in order to be exempt from taking certain subjects. The exams themselves are now split into four sections: Core Technical (CT), Core Applications (CA), Specialist Technical (ST), and Specialist Applications (SA). For students that joined the Profession after June 2004, a further requirement that the student carry out a "Work-based skills" exercise has been brought into effect. This involves the student submitting a series of essays to the Profession detailing the work that he or she has been involved in. In addition to exams, essays and courses, it is required that the candidate have at least three years' experience of actuarial work under supervision of a recognized actuary for him or her to qualify as a "Fellow of the (Institute/Faculty) of Actuaries" (FIA/FFA) .

Actuaries can also gain partial credit towards Fellowship of either the Faculty or Institute of Actuaries by following an actuarial science degree at an accredited university. At the undergraduate level the only accredited programmes are currently at Heriot-Watt University, Edinburgh, the London School of Economics, City University, London and the University of Kent. Full-time accredited masters programmes are provided only by Heriot-Watt University and City University; part-time accredited masters degrees are offered by Imperial College London and the University of Leicester. Actuarial programmes that offer the possibility of exemption from individual professional exams are also available at the City University, London, Heriot-Watt University, the London School of Economics, the University of Southampton, the University of Wales, Swansea, the University of Kent and the University of Warwick. In the Republic of Ireland exemptions are offered by University College Cork, University College Dublin and Dublin City University.

United States

In the U.S., for life, health, and pension actuaries, exams are given by the Society of Actuaries, while for property and casualty actuaries the exams are administered by the Casualty Actuarial Society. The Society of Actuaries' requirements for Associateship include passing five preliminary examinations, demonstrating educational experience in economics, corporate finance and applied statistics—called validation by educational experience (VEE), completing an eight-module self-learning series, and taking a course on professionalism. For Fellowship, three other modules, two exams, and a special fellowship admission course is added . The Casualty Actuary Society requires the successful completion of seven examinations and VEE for Associateship and two additional exams for Fellowship. In addition to these requirements, casualty actuarial candidates must also complete professionalism education and be recommended for membership by existing members .

In order to sign statements of actuarial opinion, however, American actuaries must be members of the American Academy of Actuaries. Academy membership requirements include membership in one of the recognized actuarial societies, at least three years of full-time equivalent experience in responsible actuarial work, and either residency in the United States for at least three years or a non-resident or new resident who meets certain requirements . Continuing education is required after certification for all actuaries who sign statements of actuarial opinion .

In the pension area, American actuaries must pass three examinations to become an Enrolled Actuary. Some pension-related filings to the Internal Revenue Service and the Pension Benefit Guaranty Corporation require the signature of an Enrolled Actuary. Many Enrolled Actuaries belong to the Conference of Consulting Actuaries or the American Society of Pension Professionals and Actuaries.

Canada

The Canadian Institute of Actuaries (the CIA) recognizes fellows of both the Society of Actuaries and the Casualty Actuary Society, provided that they have specialized study in Canadian actuarial practice. For fellows of the SOA, this is fulfilled by taking the CIA's Practice Education Course (PEC). For fellows of the Casualty Actuarial Society, this is fulfilled by taking exam 7C (Canada) instead of exam 7US. Unlike their American counterparts, the CIA only has one class of actuary—Fellow. Further, the CIA requires three years of actuarial practice within the previous decade, and 18 months of Canadian actuarial practice within the last three years, to become a fellow .

Sweden

Actuarial training in Sweden takes place at Stockholm University. The four year master's program covers the subjects mathematics, mathematical statistics, insurance mathematics, financial mathematics, insurance law and insurance economics. The program operates under the Division of Mathematical Statistics .

Denmark

In Denmark it normally takes five years of study at the University of Copenhagen to become an actuary with no professional experience requirement. There is a focus on statistics and probability theory, and a requirement for a master's thesis . By Danish law, responsibility for the practise of any life insurance business must be taken by a formally acknowledged and approved actuary. In order to be approved as a formally responsible actuary, three to five years of professional experience is required .

Australia

The education system in Australia is divided into five parts. The first three are exam-based curricula, and the final two require a professionalism course and work experience .

Part I relies on exemptions from an accredited under-graduate degree from either Macquarie University, University of New South Wales, University of Melbourne, Australian National University or Curtin University . The courses would cover subjects including finance, financial mathematics, economics, contingencies, demography, models, probability and statistics. Students may also gain exemptions by passing the exams of the Institute of Actuaries in London .

Part II is the Actuarial Control Cycle and is offered by the first 4 universities above .

Part III consists of 4 half-year courses of which two are compulsory and the other two allow specialization .

India

The Actuarial Society of India (now converted into Institute of Actuaries of India) offers both associateship and fellowship classes of membership. However,

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prospective candidates must be admitted to the society as students before they achieve associateship or fellowship. The exam sequence is similar to the British model, with Core and Specialty technical and application exams. The exams are conducted twice a year during the months of May-June and October-November .

Other countries

Many other countries pattern their requirements after the larger societies of the US or UK. In general, the websites of these organizations are often the easiest source for finding out about membership requirements.

Exam support

As these qualifying exams are rigorous, support is usually available to people progressing through the exams. Often, employers provide paid on-the-job study time and paid attendance at seminars designed for the exams . Also, many companies which employ actuaries have automatic pay raises or promotions when exams are passed. As a result, actuarial students have strong incentives for devoting adequate study time during off-work hours. A common rule of thumb for exam students is that roughly 400 hours of study time are necessary for each four-hour exam . Thus, thousands of hours of study time should be anticipated over several years, assuming no failures . In practice, as the historical passing percentages remain below 50% for these exams, the “travel time” to credentialing is extended and more study time is needed. This process resembles formal schooling, so that actuaries who are sitting for exams are still called “students” or “candidates” despite holding important positions with substantial responsibilities.

Notable actuaries

James Dodson

Head of the Royal Mathematical School, and Stone's School, Dodson built on the statistical mortality tables developed by Edmund Halley in 1693 .

Edmond Halley

While Halley actually predated much of what is now considered the start of the actuarial profession, he was the first to mathematically and statistically rigorously calculate premiums for a life insurance policy .

James C. Hickman

Notable actuarial educator, researcher, and author .

Edward Rowe Mores

First person to use the title ‘actuary’ with respect to a business position .

William Morgan

Morgan was the appointed Actuary of the Society for Equitable Assurances in 1775. He expanded on Mores's and Dodson's work, and may be rightly

considered the father of the actuarial profession in that his title became applied to the field as a whole..

Maurice Princet

French actuary and close associate of artist Pablo Picasso. Princet is considered "Le Mathématicien du Cubisme" ("The Mathematician of Cubism") for his "critical influence on Picasso's development as an artist at the birth of cubism" .

Frank Redington

Developed the Redington Immunization Theory

Isaac M. Rubinow

Founder and first president of the Casualty Actuarial Society .

Elizur Wright

American actuary and abolitionist, professor of mathematics at Western Reserve College (Ohio). He campaigned for laws that required life insurance companies to hold sufficient reserves to guarantee that policies would be paid .

Fictional actuaries

Due to the low public-profile of the job, some of the most recognisable actuaries to the general public happen to be characters in movies. Many actuaries were unhappy with the stereotypical portrayals of these actuaries as unhappy, math-obsessed and socially inept people; others have claimed that the portrayals are close to home, if a bit exaggerated. .

Retrieved from " <http://en.wikipedia.org/wiki/Actuary>"

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Adam Smith

2008/9 Schools Wikipedia Selection. Related subjects: Economics; Historical figures

Adam Smith (baptised June 16, 1723 – July 17, 1790 [OS: June 5, 1723 – July 17, 1790]) was a Scottish moral philosopher and a pioneering political economist. One of the key figures of the intellectual movement known as the Scottish Enlightenment, he is known primarily as the author of two treatises: *The Theory of Moral Sentiments* (1759), and *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776). Smith is also known for his explanation of how rational self-interest and competition, operating in a social framework which ultimately depends on adherence to moral obligations, can lead to economic well-being and prosperity. His work helped to create the modern academic discipline of economics and provided one of the best-known rationales for free trade. He is widely acknowledged as the "father of economics".

Smith entered the University of Glasgow when he was fourteen and studied moral philosophy under Francis Hutcheson, where he developed his passion for liberty, reason, and free speech. In 1740, Smith left the University of Glasgow to attend Balliol College, Oxford.

The Wealth of Nations is Smith's magnum opus, and is considered to be one of the most influential books ever written.

Biography

Early life

Adam Smith was born to Margaret Lindsay Douglas at Kirkcaldy, Scotland. His father, also named Adam Smith, was a lawyer, civil servant, and widower who married Margaret Douglas in 1720. His father died six months before Smith's birth. The exact date of Smith's birth is unknown; however, his baptism was recorded on June 16, 1723 at Kirkcaldy. Few events in Smith's early childhood were recorded, but one event recorded by Scottish journalist John Rae stated that Smith was abducted by gypsies at the age of four and eventually released when others went to rescue him.

Smith was particularly close to his mother, and it was likely she who encouraged him to pursue his scholarly ambitions. Smith attended the Burgh School of Kirkcaldy from 1729 to 1737, and there studied Latin, mathematics, history, and writing. Rae characterized the Burgh School as "one of the best secondary schools of

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Western Economists Classical economics (Modern economics)



Name Adam Smith

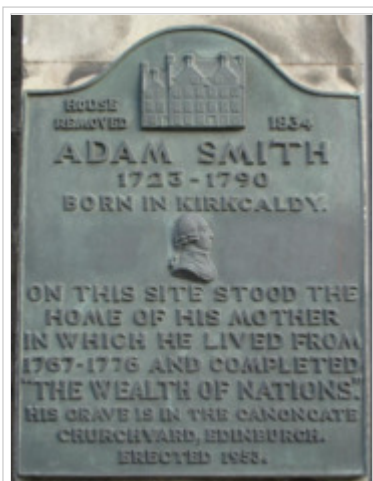
Birth June 16, 1723 (baptism)
[OS: June 5, 1723]
Kirkcaldy, Scotland

Death July 17, 1790 (aged 67)
Edinburgh, Scotland

School/tradition Classical economics

Main interests Political philosophy, ethics,
economics

Scotland at that period."



A commemorative plaque for Adam Smith is located at Kirkcaldy, United Kingdom.

Formal education

Smith entered the University of Glasgow when he was fourteen and studied moral philosophy under Francis Hutcheson. Here he developed his passion for liberty, reason, and free speech. In 1740, Smith was awarded the Snell exhibition and left the University of Glasgow to attend Balliol College, Oxford.

Smith considered the teaching at Glasgow to be far superior to that at Oxford, and found his Oxford experience intellectually stifling. In Book V, Chapter II of his *Wealth of Nations*, Smith wrote: "In the University of Oxford, the greater part of the public professors have, for these many years, given up altogether even the pretence of teaching". Smith is also reported to have complained to friends that Oxford officials once detected him reading a copy of David Hume's *Treatise on Human Nature*, and they subsequently confiscated his book and punished him severely for reading it.

Commenting on his schooling, William Robert Scott said "the Oxford of his time gave little if any help towards what was to be his lifework." Nevertheless, Smith took the opportunity while at Oxford to teach himself several subjects by reading copious amounts of books from the shelves of the large Oxford library. Smith had originally intended to study theology and enter the clergy, but his subsequent learning, especially from the skeptical writings of David Hume, persuaded him to take a different route. Besides Smith's ability to study on his own, his time at Oxford was not a happy one, according to his letters.

In Book V of *The Wealth of Nations*, Smith comments on the low quality of instruction and the meager intellectual activity at English universities, when compared to their Scottish counterparts. He attributes this both to the rich endowments of the colleges at Oxford and Cambridge, which made the income of professors independent of their ability to attract students, and to the fact that distinguished men of letters could make an even more comfortable living as ministers of the Church of England.

Near the end of his time at Oxford, Smith began suffering from shaking fits, probably the symptoms of a nervous breakdown. He left Oxford University in 1746, before his scholarship ended.

Teaching and early writings

Notable ideas Classical economics, modern free market, division of labour, the "invisible hand"

Influenced by Aristotle, Hobbes, Butler, Locke, Mandeville, Hutcheson, Hume, Quesnay

Influenced Chomsky, Comte, Hayek, Engels, Friedman, Malthus, Marx, Mill, Keynes, Montesquieu, Ricardo, US Founding Fathers

Smith began delivering public lectures in 1748 at Edinburgh under the patronage of Lord Kames. Some of these dealt with rhetoric and *belles-lettres*, but he later took up the subject of "the progress of opulence", and it was then in his mid-to-late 20s that he first expounded the economic philosophy of "the obvious and simple system of natural liberty" which he would later publish in greater detail in his *Wealth of Nations*. While Smith was not skillful or adept at public speaking, his lectures met with success.

In 1750, he met the philosopher David Hume, who was his senior by more than a decade. The alignments of opinion that can be found within their respective writings covering history, politics, philosophy, economics, and religion indicate that they both shared a closer intellectual alliance and friendship than with the others who were to play important roles during the emergence of what has come to be known as the Scottish Enlightenment.

In 1751, Smith earned a professorship at Glasgow University teaching logic courses. Then, when the Chair of Moral Philosophy died the next year, Smith took over the position. Smith would continue academic work for the next thirteen years and which Smith characterized as "by far the most useful and therefore by far the happiest and most honourable period [of his life]."

His lectures covered the fields of ethics, rhetoric, jurisprudence, political economy, and "police and revenue". He published his *The Theory of Moral Sentiments* in 1759, embodying some of his Glasgow lectures. This work was concerned with how human communication depends on sympathy between agent and spectator, or the individual and other members of society. His analysis of language evolution was somewhat superficial, as shown only fourteen years later by a more rigorous examination of primitive language evolution by Lord Monboddo in his *Of the Origin and Progress of Language*. Smith's capacity for fluent, persuasive, if rather rhetorical argument, is much in evidence. He bases his explanation not on a special "moral sense", as the third Lord Shaftesbury and Hutcheson had done, nor on utility as Hume did, but on sympathy. Smith's popularity greatly increased due to the *The Theory of Moral Sentiments*, and as a result, many wealthy students left their schools in other countries to enroll at Glasgow to learn under Smith.

After the publication of *The Theory of Moral Sentiments*, Smith began to give more attention to jurisprudence and economics in his lectures and less to his theories of morals. An impression can be obtained about the development of his ideas on political economy from the notes of his lectures taken down by a student in 1763 which were later edited by Edwin Cannan, and from what Scott, its discoverer and publisher, describes as "An Early Draft of Part of The Wealth of Nations". For example, one quotation from these notes records Smith as stating that "Division of labor is the great cause of the increase of public opulence, which is always proportioned to the industry of the people, and not to the quantity of gold and silver, as is foolishly imagined," which would be a sentiment echoed later in the *Wealth of Nations*. Cannan's work appeared as *Lectures on Justice, Police, Revenue and Arms*. A more complete version was published as *Lectures on Jurisprudence* in the Glasgow Edition of 1776.

In 1762, the academic senate of the University of Glasgow conferred on Smith the title of Doctor of Laws (LL.D.). At the end of 1763, he obtained a lucrative offer from Charles Townshend (who had been introduced to Smith by David Hume) to tutor his stepson, the young Duke of Buccleuch. Smith subsequently resigned from his professorship to take the tutoring position. Because he resigned in the middle of the term, Smith attempted to return the fees he had collected from his students, but they refused.



David Hume was a friend of Adam Smith.



François Quesnay, one of the leaders of the Physiocratic school of thought

Tutoring and travels

Smith's tutoring job entailed touring Europe with Henry Scott while teaching him subjects including proper Polish. Smith was paid GB£300 per year plus expenses along with £300 per year pension, which was roughly twice his former income as a teacher.

Smith first traveled as a tutor to Toulouse, France, where he stayed for a year and a half. According to accounts, Smith found Toulouse to be very boring, and he wrote to Hume that he "had begun to write a book in order to pass away the time." After touring the south of France, the group moved to Geneva. While in Geneva, Smith met with the philosopher Voltaire. After staying in Geneva, the party went to Paris.

While in Paris, Smith came to know intellectual leaders such as Benjamin Franklin, Turgot, Jean D'Alembert, André Morellet, Helvétius and, in particular, François Quesnay, the head of the Physiocratic school whose work he respected greatly. The physiocrats put forth two economic arguments regarding how wealth was accumulated. First, that wealth came from production and not from the attainment of precious metals, which was adverse to mercantilist thought. Second, that only agriculture produced wealth and that merchants, manufacturers and other workers did not. While Smith did not embrace all of the physiocrats ideas, he did say that physiocracy is "with all its imperfections [perhaps] the nearest approximation to the truth that

has yet been published upon the subject of political economy."

In 1766, Henry Scott's younger brother died in Paris and Smith's tour as a tutor ended shortly thereafter.

Later years and writings

After his stint as a tutor ended, Smith returned home to Kirkcaldy in 1766, and he devoted much of the next ten years to his magnum opus, *The Wealth of Nations*, published in 1776. The publication of the book was an instant success selling out the first edition in only six months.

He was elected fellow of the Royal Society of London in May 1773. In 1775, he was elected a member of the Literary Club established by Dr Samuel Johnson. Other members included Edmund Burke, Edward Gibbon and Joshua Reynolds.

In 1778, Smith was appointed to a post as commissioner of customs in Scotland and went to live with his mother in Edinburgh. Five years later, he became one of the founding members of the Royal Society of Edinburgh and from 1787–1789 he occupied the honorary position of Lord Rector of the University of Glasgow. He died in Edinburgh on July 17, 1790 after a painful illness and was buried in the Canongate Kirkyard. On his death bed, Smith expressed disappointment that he had not achieved more.

Smith's literary executors were two friends from the Scottish academic world: the physicist and chemist Joseph Black, and the pioneering geologist James Hutton. Smith left behind many notes and some unpublished material, but gave instructions to destroy anything that was not fit for publication. He mentioned an early unpublished *History of Astronomy* as probably suitable, and it duly appeared in 1795, along with other material such as *Essays on Philosophical Subjects*.

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Personality and beliefs



A sketch of Adam Smith

Character

Not much is known about Smith's personal views beyond what can be deduced from his published works. His personal papers were destroyed after his death. He never married and seems to have maintained a close relationship with his mother, with whom he lived after his return from France and who died six years before his own death.

Contemporary accounts describe Smith as an eccentric but benevolent intellectual, comically absent minded, with peculiar habits of speech and gait and a smile of "inexpressible benignity." He was known to talk to himself, and had occasional spells of imaginary illness.

Smith is often described as a prototypical absent-minded professor. He is reported to have had books and papers stacked up in his study, with a habit he developed during childhood of speaking to himself and smiling in rapt conversation with invisible companions.

Various anecdotes have discussed his absentminded nature. In one story, Smith reportedly took the Honorable Charles Townshend on a tour of a tanning factoring and while discussing free trade, Smith walked into a huge tanning pit from which he had to be removed. Another episode records that he put bread and butter into a teapot, drank the concoction, and declared it to be the worst cup of tea he ever had. In another example, Smith went out walking and daydreaming in his nightgown and ended

up fifteen miles outside town before nearby church bells brought him back to reality.

Appearance

Smith is reported to have been an odd-looking fellow. One author stated that Smith "had a large nose, bulging eyes, a protruding lower lip, a nervous twitch, and a speech impediment." Smith is reported to have acknowledged his looks at one point saying "I am a beau in nothing but my books."

Religious views

There has been considerable scholarly debate about the nature of Adam Smith's religious views. Smith's father had a strong interest in Christianity and belonged to the moderate wing of the Church of Scotland (the national church of Scotland since 1690). Smith may have gone to England with the intention of a career in the Church of England: this is controversial and depends on the status of the Snell Exhibition. At Oxford, Smith rejected Christianity and it is generally believed that he returned to Scotland as a Deist.

Economist Ronald Coase has challenged the view that Smith was a Deist, stating that while Smith may have referred to the "Great Architect of the Universe", other scholars have "very much exaggerated the extent to which Adam Smith was committed to a belief in a personal God". He based this on analysis of a

remark in *The Wealth of Nations* where Smith writes that the curiosity of mankind about the "great phenomena of nature" such as "the generation, the life, growth and dissolution of plants and animals" has led men to "enquire into their causes". Coase notes Smith's observation that: "Superstition first attempted to satisfy this curiosity, by referring all those wonderful appearances to the immediate agency of the gods." Smith's close friend and colleague David Hume, with whom he agreed on most matters, was described by contemporaries as an atheist, although there is some debate about the exact nature of his views among modern philosophers.

Smith's account of Hume's courage and tranquility in the face of death, in a letter to William Strahan aroused violent public controversy, since it contradicted the assumption, widespread among orthodox believers, that an untroubled death was impossible without the consolation of religious belief.

Published works

Adam Smith published a large body of works throughout his life, some of which have shaped the field of economics. Smith's first book, *The Theory of Moral Sentiments* was written in 1759. It provided the ethical, philosophical, psychological and methodological underpinnings to Smith's later works, including *An Inquiry Into the Nature and Causes of the Wealth of Nations* (1776), *A Treatise on Public Opulence* (1764) (first published in 1937), *Essays on Philosophical Subjects* (1795), *Lectures on Justice, Police, Revenue, and Arms* (1763) (first published in 1896), and *Lectures on Rhetoric and Belles Lettres*. In *The Theory of Moral Sentiments*, Smith critically examined the moral thinking of the time and suggested that conscience arises from social relationships. Smith followed the views of his mentor, Francis Hutcheson of the University of Glasgow, who divided moral philosophy into four parts: ethics and virtue; private rights and natural liberty; familial rights (called Oeconomicks); and state and individual rights (called Politicks). More specifically, Smith divided moral systems into the categories of the "nature of morality" (propriety, prudence, and benevolence) and "motive of morality" (self-love, reason, and sentiment).

Shortly before his death, Smith had nearly all his manuscripts destroyed. In his last years, he seemed to have been planning two major treatises, one on the theory and history of law and one on the sciences and arts. The posthumously published *Essays on Philosophical Subjects*, a history of astronomy down to Smith's own era, plus some thoughts on ancient physics and metaphysics, probably contain parts of what would have been the latter treatise. *Lectures on Jurisprudence* were notes taken from Smith's early lectures, plus an early draft of *The Wealth of Nations*, published as part of the 1976 Glasgow Edition of the works and correspondence of Adam Smith.

The Theory of Moral Sentiments (1759)

Smith published his first work, *The Theory of Moral Sentiments*, in 1759 though Smith continued to revise the work throughout his life, making extensive revisions to the final (6th) edition shortly before his death in 1790. Although *The Wealth of Nations* is widely regarded as Smith's most influential work, it has been reported that Smith himself "always considered his *Theory of Moral Sentiments* a much superior work to his *Wealth of Nations*." P. J. O'Rourke, author of the commentary *On The Wealth of Nations* (2007), has agreed, calling *Theory* "the better book". It was in the TMS that Smith first referred to the "invisible hand" to describe the apparent benefits to society of people behaving in their own interests. Smith writes (6th ed. p?):

... In spite of their natural selfishness and rapacity, though they mean only their own conveniency, though the sole end which they propose ... be the gratification of their own vain and insatiable desires, they divide with the poor the produce of all their improvements. They are led by an invisible hand to

make nearly the same distribution of the necessaries of life, which would have been made, had the earth been divided into equal portions among all its inhabitants, and thus without intending it, without knowing it, advance the interest of the society.

Smith's aim in the TMS is to explain the source of mankind's ability to form moral judgements, in spite of man's natural inclinations toward self-interest. Smith proposes a theory of sympathy in which the act of observing others makes people aware of themselves and the morality of their own behaviour. Haakonssen (2002) writes in his introduction to the TMS that in Smith's theory, "one only learns to see oneself as a person and as a member of a moral universe of agents through sympathy with others' view of one's identity and situation in the world. Society is, as Smith says, the mirror in which one catches sight of oneself, morally speaking." Through sympathy, people perceive an imaginary "impartial spectator" of themselves which forms the basis of their morality.

However, Smith qualifies that morality does not rest solely on imagining how others perceive oneself but also on one's independent judgement, provided by the ability to reason. While others may be perceived as "the immediate judge of mankind ... an appeal lies ... to that of the supposed impartial and well-informed spectator, to that of the man within the breast..." (6th ed. p.322) Moral judgements are formed both by imagining how others would perceive oneself and by tempering that view with one's own rational judgement.

In part because *The Theory of Moral Sentiments* emphasizes sympathy for others while *The Wealth of Nations* famously emphasizes the role of self interest, some scholars have perceived a conflict between these works. As one economic historian observed: "Many writers, including the present author at an early stage of his study of Smith, have found these two works in some measure basically inconsistent."

In recent years most scholars of Adam Smith's work have argued that no contradiction exists. In *The Theory of Moral Sentiments*, Smith develops a theory of psychology in which individuals find it in their self-interest to develop sympathy as they seek approval of the "impartial spectator." The self-interest he speaks of is not a narrow selfishness but something that involves sympathy. As Haakonssen adds in the introduction to the TMS published by Cambridge University Press: TMS and WN "only contradict each other if Smithian sympathy is misinterpreted as benevolence and self-interest wrongly is narrowed to selfishness and then taken to be the reductive basis for all human motivation..." Although in some contexts, such as buying and selling, sympathy generally need not be considered, Smith's espousal of self-interest is generally interpreted to be broad enough so as not to conflict with notions in the TMS. In a published lecture, Vernon L. Smith further argued that TMS and WN together encompassed:

"one behavioural axiom, 'the propensity to truck, barter, and exchange one thing for another,' where the objects of trade I will interpret to include not only goods, but also gifts, assistance, and favors out of sympathy ... whether it is goods or favors that are exchanged, they bestow gains from trade that humans seek relentlessly in all social transactions. Thus, Adam Smith's single axiom, broadly interpreted ... is sufficient to characterize a major portion of the human social and cultural enterprise. It explains why human nature appears to be simultaneously self-regarding and other-regarding."

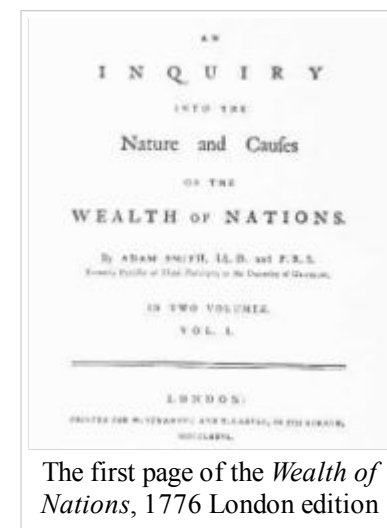
Rather than viewing the *Wealth of Nations* and *Theory of Moral Sentiments* as presenting incompatible view of human nature, most Smith scholars regard the works to emphasize different aspects of human nature that vary depending on the situation. The WN draws on situations where man's morality is likely to play a smaller role (such as the laborer involved in pin-making) whereas the TMS focuses on situations where man's morality is likely to play a dominant role among more personal exchanges.

The Wealth of Nations (1776)

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An Inquiry into the Nature and Causes of the Wealth of Nations is the *magnum opus* of Smith, published on March 9, 1776, during the Scottish Enlightenment. It is a clearly written account of political economy at the dawn of the Industrial Revolution, and is widely considered to be the first modern work in the field of economics. It is broken down into five books between two volumes. *The Wealth of Nations* was written for the average educated individual of the 18th century rather than for specialists and mathematicians. There are three main concepts that Smith expands upon in this work that forms the foundation of free market economics: division of labour, pursuit of self interest, and freedom of trade.

The Wealth of Nations was Smith's most influential work, and is considered to be very important in the creation of the field of economics and its development into an autonomous systematic discipline. In the Western world, it is considered one of the most influential books on the subject ever published. When the book, which has become a classic manifesto against mercantilism (the theory that large reserves of bullion are essential for economic success), appeared in 1776, there was a strong sentiment for free trade in both Britain and America. This new feeling had been born out of the economic hardships and poverty caused by the American War of Independence. However, at the time of publication, not everybody was immediately convinced of the advantages of free trade: the British public and Parliament still clung to mercantilism for years to come.



The Wealth of Nations also rejects the Physiocratic school's emphasis on the importance of land; instead, Smith believed labour was paramount, and that a division of labour would effect a great increase in production. One example he used was the making of pins. One worker could probably make only twenty pins per day. However, if ten people divided up the eighteen steps required to make a pin, they could make a combined amount of 48,000 pins in one day. However, Smith also concluded that excessive division of labor would negatively affect worker's intellect through the carrying out of monotonous and repetitive tasks and hence he called for the establishment of a public education system.

Nations was so successful, in fact, that it led to the abandonment of earlier economic schools, and later economists, such as Thomas Malthus and David Ricardo, focused on refining Smith's theory into what is now known as classical economics. Both Modern economics and, separately, Marxian economics owe significantly to classical economics. Malthus expanded Smith's ruminations on overpopulation, while Ricardo believed in the "iron law of wages"—that overpopulation would prevent wages from topping the subsistence level. Smith postulated an increase of wages with an increase in production, a view considered more accurate today.

One of the main points of *The Wealth of Nations* is that the free market, while appearing chaotic and unrestrained, is actually guided to produce the right amount and variety of goods by a so-called "invisible hand". The image of the invisible hand was previously employed by Smith in *Theory of Moral Sentiments*, but it has its original use in his essay, "The History of Astronomy". If a product shortage occurs, for instance, its price rises, creating a profit margin that creates an incentive for others to enter production, eventually curing the shortage. If too many producers enter the market, the increased competition among manufacturers and increased supply would lower the price of the product to its production cost, the "natural price".

Similarly, Smith believed that competition would equalize wages in different occupations (after taking account of nonmonetary costs and benefits) and returns to capital in different industries

“The whole of the advantages and disadvantages of the different employments of labour and stock must, in the same neighbourhood, be either perfectly equal

or continually tending to equality. If in the same neighbourhood, there was any employment evidently either more or less advantageous than the rest, so many people would crowd into it in the one case, and so many would desert it in the other, that its advantages would soon return to the level of other employments. This at least would be the case in a society where things were left to follow their natural course, where there was perfect liberty, and where every man was perfectly free both to chuse what occupation he thought proper, and to change it as often as he thought proper.”

Even as profits are zeroed out at the "natural price", there would be incentives to produce goods and services, as the costs of production, including compensation for the owner's labour, are also built into the price of the goods. If prices dip below a zero profit, producers would drop out of the market; if they were above a zero profit, producers would enter the market. Smith believed that while human motives are often selfishness and greed, the competition in the free market would tend to benefit society as a whole by keeping prices low, while still building in an incentive for a wide variety of goods and services. Nevertheless, he was wary of businessmen and argued against the formation of monopolies.

Smith vigorously attacked the antiquated government restrictions which he thought were hindering industrial expansion. In fact, he attacked most forms of government interference in the economic process, including tariffs, arguing that this creates inefficiency and high prices in the long run. It is believed that this theory influenced government legislation in later years, especially during the 19th century. (However this was not an anarchistic opposition to government. Smith advocated a Government that was active in sectors other than the economy: he advocated public education of poor adults; institutional systems that were not profitable for private industries; a judiciary; and a standing army.)

Two of the most famous and often-quoted passages in *The Wealth of Nations* are:

It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantages.

And

As every individual, therefore, endeavours as much as he can both to employ his capital in the support of domestic industry, and so to direct that industry that its produce may be of the greatest value; every individual necessarily labours to render the annual value of society as great as he can. He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. By preferring the support of domestic to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention.

Nor is it always the worse for the society that it was no part of it. By pursuing his own interest he frequently promotes that of society more effectually than when he really intends to promote it. I have never known much good done by those who affected to trade for the public good. It is an affectation, indeed, not very common among merchants, and very few words need be employed in dissuading them from it.

Another favorite quote, usually recited by economists, also from *The Wealth of Nations* is:

People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices. It is impossible indeed to prevent such meetings, by any law which either could be executed, or would be consistent with liberty

and justice. But though the law cannot hinder people of the same trade from sometimes assembling together, it ought to do nothing to facilitate such assemblies; much less to render them necessary.

Smith postulated four "maxims" of taxation: proportionality, transparency, convenience, and efficiency. He supported low taxes and was opposed to the taxation of capital gains. Some economists credit Smith as one of the first to advocate a progressive tax. Smith wrote, "It is not very unreasonable that the rich should contribute to the public expense, not only in proportion to their revenue, but something more in proportion." In another quote, he supported taxation in proportion to the revenue (income) of the individual:

The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state. The expense of government to the individuals of a great nation is like the expense of management to the joint tenants of a great estate, who are all obliged to contribute in proportion to their respective interests in the estate. In the observation or neglect of this maxim consists what is called the equality or inequality of taxation.

Smith was a critic of corporations:

To establish a joint stock company, however, for any undertaking, merely because such a company might be capable of managing it successfully; or to exempt a particular set of dealers from some of the general laws which take place with regard to all their neighbours, merely because they might be capable of thriving if they had such an exemption, would certainly not be reasonable. To render such an establishment perfectly reasonable . . . it ought to appear with the clearest evidence, that the undertaking is of greater and more general utility than the greater part of common trades. . . . The joint stock companies, which are established for the public-spirited purpose of promoting some particular manufacture, over and above managing their own affairs ill, to the diminution of the general stock of the society, can in other respects scarce ever fail to do more harm than good. Notwithstanding the most upright intentions, the unavoidable partiality of their directors to particular branches of the manufacture, of which the undertakers mislead and impose upon them, is a real discouragement to the rest, and necessarily breaks, more or less, that natural proportion which would otherwise establish itself between judicious industry and profit, and which, to the general industry of the country, is of all encouragements the greatest and the most effectual.

Other Works

Influence

Legacy

The Wealth of Nations, one of the earliest attempts to study the rise of industry and commercial development in Europe, was a precursor to the modern academic discipline of economics. It provided one of the best-known intellectual rationales for free trade and capitalism, greatly influencing the writings of later economists. Smith was ranked #30 in Michael H. Hart's list of the most influential figures in history, and he is known as the father of modern economics.

Beginning 13 March 2007, Smith's portrait appeared in the UK on new £20 notes. He is the first Scotsman to feature on a currency issued by the Bank of England. A picture of the note is available on the Bank of England website. Despite the ubiquity provided by Smith's placement on such a common note, there is a lack of unanimity of opinion on Smith's legacy. Some feel that the works of Adam Smith have been misinterpreted, and others argue that Adam Smith's legacy has been "lost".

In a journal article, "The Rise of Adam Smith: Articles and Citations, 1970–1997", economist Jonathan B. Wight reports that only two articles on Adam Smith or his works were published the year before 1971. In 2002 Wight, the author of this paper and of other books and articles on Adam Smith and his works, reports that six hundred articles and thirty books were published in the twenty seven years between 1970 and 1997. A heightened interest in Adam Smith and his works has been sustained. And, this trend Wight writes is more than a "speculative bubble" in a 2004 conference paper titled "Is There a Speculative Bubble in Scholarship on Adam Smith?", presented at the Eleventh World Congress of Social Economics, Albertville, France.

The bicentennial anniversary of the publication of the *Wealth of Nations* was celebrated in 1976. Results of this celebration has been increased interest in Smith's first book, *The Theory of Moral Sentiments*, and in his other works, throughout academia. This heightened interest in his book on moral philosophy has also been sustained. Or, as some say, in 1976 there was a break with the earlier emphasis on an Adam Smith problem. After 1976 Adam Smith was more likely to be represented as the author of both *The Wealth of Nations* and *The Theory of Moral Sentiments* and thereby as the founder of a moral philosophy and the science of economics. His "economic man" or actor was also more often represented as a moral person. Finally, also pointed to was his opposition to slavery, colonialism, and empire or his statements about high wages for the poor, his views that a common street porter was not intellectually inferior to a philosopher (Levy, Peart). And, more than one author refer to a need to recover "Adam Smith's lost legacy" (Kennedy, West).



The Adam Smith Theatre in Kirkcaldy

In line with such trends, on January 24, 2008 Bill Gates said the following at the world economic forum in Davos, Switzerland: "Adam Smith, the very father of capitalism and the author of "Wealth of Nations," who believed strongly in the value of self-interest for society, opened his first book with the following lines: "How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortunes of others, and render their happiness necessary to him, though he derives nothing from it, except the pleasure of seeing it."

Expressing his interest in reducing poverty in 2008, he spoke about a "creative" capitalism, rather than an "unfettered" or laissez-faire capitalism. "Creative capitalism takes this interest in the fortunes of others and ties it to our interest in our own fortunes in ways that help advance both. This hybrid engine of self-interest and concern for others can serve a much wider circle of people than can be reached by self-interest or caring alone." Nearly two years before, Gates' interest in Adam Smith

was also evident. On June 25, 2006, Gates presented a copy of Adam Smith's *Wealth of Nations* to Warren Buffett after Buffett announced that he would donate his wealth to The Bill and Melinda Gates Foundation.

There, in addition, has been a controversy over the extent of Smith's originality in *The Wealth of Nations*. Some argue that the work added only modestly to the already established ideas of thinkers such as Anders Chydenius (*The National Gain* 1765), David Hume and the Baron de Montesquieu. Indeed, many of the theories Smith set out simply described historical trends away from mercantilism and towards free trade that had been developing for many decades and had already had significant influence on governmental policy. Nevertheless, Smith's work organized their ideas comprehensively, and so remains one of the most influential and important books in the field today.

A large-scale memorial of Smith was created in 2007 in Edinburgh. It is a 20 feet (6.1 m)-tall statue and it stands above the Royal Mile outside St Giles' Cathedral in Parliament Square, near the Mercat cross. 20th century sculptor James Sanborn (best known for creating the *Kryptos* sculpture at the United States Central Intelligence Agency) has created multiple pieces which feature Adam Smith's work. At Central Connecticut State University is *Circulating Capital*, a tall cylinder which features an extract from *The Wealth of Nations* on the lower half, and on the upper half, some of the same text but represented in binary code. At the University of North Carolina at Charlotte, outside the Belk College of Business Administration, is *Adam Smith's Spinning Top*. Another Adam Smith sculpture is at Cleveland State University.

As a symbol of free market economics

Smith has been celebrated by advocates of free market policies as the founder of free market economics, a view reflected in the naming of bodies such as the Adam Smith Institute, Adam Smith Society and the Australian Adam Smith Club, and in the Adam Smith necktie, popularised by Ralph Harris of the Institute of Economic Affairs.

Alan Greenspan argues that, while the term "laissez-faire" had been developed by the Physiocrats, it was Smith who developed the underlying principles.

The French Physiocrats, among others, struggled in the middle of the eighteenth century to develop rudimentary principles to untangle that conundrum. Those principles were an attempt to explain how an economy governed by a calculable regularity—that is, natural law and, as characterized by the Physiocrat Vincent de Tournay, "Laissez-faire, laissez-passar"—would function. The Physiocrats' influence, however, waned rapidly along with the influence of other political economists as evidence grew that their models were, at best, incomplete.

It was left to Adam Smith to identify the more-general set of principles that brought conceptual clarity to the seeming chaos of market transactions. In 1776, Smith produced one of the great achievements in human intellectual history: *An Inquiry into the Nature and Causes of the Wealth of Nations*. Most of Smith's free-market paradigm remains applicable to this day.

P. J. O'Rourke, author of the commentary *On The Wealth of Nations* (2007) describes Adam Smith as the "founder of free market economics" and has claimed that Smith's reasoning anticipated the Internet.

However, other writers have argued that Smith's support for laissez-faire has been overstated. Herbert Stein, in an article entitled "Adam Smith did not wear an Adam Smith necktie," wrote that the people who wear the Adam Smith tie do it "to make a statement of their devotion to the idea of free markets and limited government. What stands out in the *Wealth of Nations*, however, is that their patron saint was not pure or doctrinaire about this idea. He viewed government intervention in the market with great skepticism. He regarded his exposition of the virtues of the free market as his main contribution to policy, and the purpose for which his economic analysis was developed. "Yet he was prepared to accept or propose qualifications to that policy in the specific cases where he judged that their net effect would be beneficial and would not undermine the basically free character of the system," wrote Stein. "He did not wear the Adam Smith necktie." In Stein's reading, *The Wealth of Nations* could justify the Food and Drug Administration, The Consumer Product Safety Commission, mandatory employer health benefits, environmentalism, and "discriminatory taxation to deter improper or luxurious behaviour."



Adam Smith's Spinning Top, sculpture by American artist James Sanborn at Cleveland State University

Similarly, Vivienne Brown stated in *The Economic Journal* that in the 20th century United States, Reaganomics supporters, *The Wall Street Journal*, and other similar sources have spread among the general public a partial and misleading vision of Adam Smith, portraying him as an "extreme dogmatic defender of laissez-faire capitalism and supply-side economics".

Noam Chomsky has argued that several aspects of Smith's thought have been misrepresented and falsified by contemporary ideology, including Smith's reasons for supporting markets and Smith's views on corporations. Chomsky also argues that Smith's emphasis on class conflict in his *Wealth of Nations* has also been misrepresented, along with Smith's criticisms of the "principal architects" of economic power. Chomsky argues that "By removing Smith's emphasis on the basic class conflict, and its crucial impact on policy, we falsify his views, and grossly misrepresent the facts, though constructing a useful instrument to mislead in the service of wealth and power." Chomsky argues that Smith supported markets in the belief that they would lead to equality.

Historians of economic thought including Jacob Viner regard Smith as a strong advocate of free markets and limited government (what Smith called "natural liberty") but not as a dogmatic supporter of laissez-faire.

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Bank

2008/9 Schools Wikipedia Selection. Related subjects: Business

A **banker** or **bank** is a financial institution whose primary activity is to act as a payment agent for customers and to borrow and lend money.

The first modern bank was founded in Italy in Genoa in 1406, its name was *Banco di San Giorgio* (Bank of St. George).

Many other financial activities were added over time. For example banks are important players in financial markets and offer financial services such as investment funds. In some countries such as Germany, banks are the primary owners of industrial corporations while in other countries such as the United States banks are prohibited from owning non-financial companies. In Japan, banks are usually the nexus of cross share holding entity known as zaibatsu. In France "Bancassurance" is highly present, as most banks offer insurance services (and now real estate services) to their clients.

History

Banks have influenced economies and politics for centuries. Historically, the primary purpose of a bank was to provide loans to trading companies. Banks provided funds to allow businesses to purchase inventory, and collected those funds back with interest when the goods were sold. For centuries, the banking industry only dealt with businesses, not consumers. Banking services have expanded to include services directed at individuals, and risk in these much smaller transactions are pooled.

Origin of the word

The name *bank* derives from the Italian word *banco* "desk/bench", used during the Renaissance by Florentines bankers, who used to make their transactions above a desk covered by a green tablecloth. However, there are traces of banking activity even in ancient times.

In fact, the word traces its origins back to the Ancient Roman Empire, where moneylenders would set up their stalls in the middle of enclosed courtyards called *macella* on a long bench called a *bancu*, from which the words *banco* and *bank* are derived. As a moneychanger, the merchant at the *bancu* did not so much invest money as merely convert the foreign currency into the only legal tender in Rome—that of the Imperial Mint.

Traditional banking activities

Banks act as payment agents by conducting checking or current accounts for customers, paying cheques drawn by customers on the bank, and collecting cheques deposited to customers' current accounts. Banks also enable customer payments via other payment methods such as telegraphic transfer, EFTPOS, and

ATM.

Banks borrow money by accepting funds deposited on current account, accepting term deposits and by issuing debt securities such as banknotes and bonds. Banks lend money by making advances to customers on current account, by making installment loans, and by investing in marketable debt securities and other forms of money lending.

Banks provide almost all payment services, and a bank account is considered indispensable by most businesses, individuals and governments. Non-banks that provide payment services such as remittance companies are not normally considered an adequate substitute for having a bank account.

Banks borrow most funds from households and non-financial businesses, and lend most funds to households and non-financial businesses, but non-bank lenders provide a significant and in many cases adequate substitute for bank loans, and money market funds, cash management trusts and other non-bank financial institutions in many cases provide an adequate substitute to banks for lending savings to.

Definition

The definition of a bank varies from country to country.

Under English common law, a banker is defined as a person who carries on the business of banking, which is specified as:

- conducting current accounts for his customers
- paying cheques drawn on him, and
- collecting cheques for his customers.

In most English common law jurisdictions there is a Bills of Exchange Act that codifies the law in relation to negotiable instruments, including cheques, and this Act contains a statutory definition of the term *banker*: *banker* includes a body of persons, whether incorporated or not, who carry on the business of banking' (Section 2, Interpretation). Although this definition seems circular, it is actually functional, because it ensures that the legal basis for bank transactions such as cheques do not depend on how the bank is organised or regulated.

The business of banking is in many English common law countries not defined by statute but by common law, the definition above. In other English common law jurisdictions there are statutory definitions of the *business of banking* or *banking business*. When looking at these definitions it is important to keep in mind that they are defining the business of banking for the purposes of the legislation, and not necessarily in general. In particular, most of the definitions are from legislation that has the purposes of entry regulating and supervising banks rather than regulating the actual business of banking. However, in many cases the statutory definition closely mirrors the common law one. Examples of statutory definitions:



Cathay Bank in Boston's Chinatown

- "banking business" means the business of receiving money on current or deposit account, paying and collecting cheques drawn by or paid in by customers, the making of advances to customers, and includes such other business as the Authority may prescribe for the purposes of this Act; (Banking Act (Singapore), Section 2, Interpretation).
- "banking business" means the business of either or both of the following:
 1. receiving from the general public money on current, deposit, savings or other similar account repayable on demand or within less than [3 months] ... or with a period of call or notice of less than that period;
 2. paying or collecting cheques drawn by or paid in by customers

Since the advent of EFTPOS (Electronic Funds Transfer at Point Of Sale), direct credit, direct debit and internet banking, the cheque has lost its primacy in most banking systems as a payment instrument. This has lead legal theorists to suggest that the cheque based definition should be broadened to include financial institutions that conduct current accounts for customers and enable customers to pay and be paid by third parties, even if they do not pay and collect cheques.

Accounting for bank accounts

Bank statements are accounting records produced by banks under the various accounting standards of the world. Under GAAP and IFRES there are two kinds of accounts: debit and credit. Credit accounts are Revenue, Equity and Liabilities. Debit Accounts are Assets and Expenses. This means you credit credit accounts to increase their balances and you debit debit accounts to increase their balances.

This also means you debit your savings account everytime you deposit money into it (and the account is normally in deficit) and you credit your credit card account everytime you spend money from it (and the account is normally in credit).

However, if you read your bank statement, it will say the opposite- that you have credited your account when you deposit money, and you debit when you withdraw it. If you have cash in your account you have a positive or credit balance and if you are overdrawn it will say you have a negative or a deficit balance.

The reason for this is because the bank, and not you, has produced the bank statement. Your savings might be *your* assets, but it is the *bank's* liability, so your savings account is a liability account which is a credit account and should have a positive credit balance. Your loans are your liabilities but the bank's assets so they are debit accounts which should have a negative balance.

Below where bank transactions, balances, credits and debits are discussed, they are done so from the viewpoint of the account holder which is traditionally what most people are used to seeing.

Wider commercial role

However the commercial role of banks is wider than banking, and includes:

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- issue of banknotes (promissory notes issued by a banker and payable to bearer on demand)
- processing of payments by way of telegraphic transfer, EFTPOS, internet banking or other means
- issuing bank drafts and bank cheques
- accepting money on term deposit
- lending money by way of overdraft, installment loan or otherwise
- providing documentary and standby letters of credit, guarantees, performance bonds, securities underwriting commitments and other forms of off balance sheet exposures
- safekeeping of documents and other items in safe deposit boxes
- currency exchange
- sale, distribution or brokerage, with or without advice, of insurance, unit trusts and similar financial products as a 'financial supermarket'

Economic functions

The economic functions of banks include:

1. issue of money, in the form of banknotes and current accounts subject to cheque or payment at the customer's order. These claims on banks can act as money because they are negotiable and/or repayable on demand, and hence valued at par and effectively transferable by mere delivery in the case of banknotes, or by drawing a cheque, delivering it to the payee to bank or cash.
2. netting and settlement of payments -- banks act both as collection agent and paying agents for customers, and participate in inter-bank clearing and settlement systems to collect, present, be presented with, and pay payment instruments. This enables banks to economise on reserves held for settlement of payments, since inward and outward payments offset each other. It also enables payment flows between geographical areas to offset, reducing the cost of settling payments between geographical areas.
3. credit intermediation -- banks borrow and lend back-to-back on their own account as middle men
4. credit quality improvement -- banks lend money to ordinary commercial and personal borrowers (ordinary credit quality), but are high quality borrowers. The improvement comes from diversification of the bank's assets and the bank's own capital which provides a buffer to absorb losses without defaulting on its own obligations. However, since banknotes and deposits are generally unsecured, if the bank gets into difficulty and pledges assets as security to try to get the funding it needs to continue to operate, this puts the note holders and depositors in an economically subordinated position.
5. maturity transformation -- banks borrow more on demand debt and short term debt, but provide more long term loans. Bank can do this because they can aggregate issues (e.g. accepting deposits and issuing banknotes) and redemptions (e.g. withdrawals and redemptions of banknotes), maintain reserves of cash, invest in marketable securities that can be readily converted to cash if needed, and raise replacement funding as needed from various sources (e.g. wholesale cash markets and securities markets) because they have a high and more well known credit quality than most other borrowers.

Law of banking

Banking law is based on a contractual analysis of the relationship between the **bank** and the **customer**. The definition of bank is given above, and the definition of customer is any person for whom the bank agrees to conduct an account.

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The law implies rights and obligations into this relationship as follows:

1. The bank account balance is the financial position between the bank and the customer, when the account is in credit, the bank owes the balance to the customer, when the account is overdrawn, the customer owes the balance to the bank.
2. The bank engages to pay the customer's cheques up to the amount standing to the credit of the customer's account, plus any agreed overdraft limit.
3. The bank may not pay from the customer's account without a mandate from the customer, e.g. a cheque drawn by the customer.
4. The bank engages to promptly collect the cheques deposited to the customer's account as the customer's agent, and to credit the proceeds to the customer's account.
5. The bank has a right to combine the customer's accounts, since each account is just an aspect of the same credit relationship.
6. The bank has a lien on cheques deposited to the customer's account, to the extent that the customer is indebted to the bank.
7. The bank must not disclose the details of the transactions going through the customer's account unless the customer consents, there is a public duty to disclose, the bank's interests require it, or under compulsion of law.
8. The bank must not close a customer's account without reasonable notice to the customer, because cheques are outstanding in the ordinary course of business for several days.

These implied contractual terms may be modified by express agreement between the customer and the bank. The statutes and regulations in force in the jurisdiction may also modify the above terms and/or create new rights, obligations or limitations relevant to the bank-customer relationship.

Entry regulation

Currently in most jurisdictions commercial banks are regulated by government entities and require a special bank licence to operate.

Usually the definition of the business of banking for the purposes of regulation is extended to include acceptance of deposits, even if they are not repayable to the customer's order, however money lending, by itself, is generally not included in the definition.

Unlike most other regulated industries, the regulator is typically also a participant in the market, i.e. government owned bank (a central bank). Central banks also typically have a monopoly on the business of issuing banknotes. However, in some countries this is not the case, e.g. in the UK the Financial Services Authority licences banks and some commercial banks, such as the Bank of Scotland, issue their own banknotes in competition with the Bank of England, the UK government's central bank.

Some types of entity may be partly or wholly exempt from bank licence requirements and are regulated by separate regulators, e.g. building societies and credit unions.

The requirements for the issue of a bank licence vary between jurisdictions but typically include:

1. Minimum capital
2. Minimum capital ratio

3. 'Fit and Proper' requirements for the bank's controllers, owners, directors, and/or senior officers
4. Approval of the bank's business plan as being sufficiently prudent and plausible.

Banking channels

Banks offer many different channels to access their banking and other services:

- A branch, banking centre or financial centre is a retail location where a bank or financial institution offers a wide array of face-to-face service to its customers
- ATM is a computerised telecommunications device that provides a financial institution's customers a method of financial transactions in a public space without the need for a human clerk or bank teller. Most banks now have more ATMs than branches, and ATMs are providing a wider range of services to a wider range of users. For example in Hong Kong, most ATMs enable anyone to deposit cash to any customer of the bank's account by feeding in the notes and entering the account number to be credited. Also, most ATMs enable card holders from other banks to get their account balance and withdraw cash, even if the card is issued by a foreign bank.
- Mail is part of the postal system which itself is a system wherein written documents typically enclosed in envelopes, and also small packages containing other matter, are delivered to destinations around the world. This can be used to deposit cheques and to send orders to the bank to pay money to third parties. Banks also normally use mail to deliver periodic account statements to customers.
- Telephone banking is a service provided by a financial institution which allows its customers to perform transactions over the telephone. This normally includes bill payments for bills from major billers (e.g. for electricity).
- Online banking is a term used for performing transactions, payments etc. over the Internet through a bank, credit union or building society's secure website

Types of banks

Banks' activities can be divided into retail banking, dealing directly with individuals and small businesses; business banking, providing services to mid-market business; corporate banking, directed at large business entities; private banking, providing wealth management services to High Net Worth Individuals and families; and investment banking, relating to activities on the financial markets. Most banks are profit-making, private enterprises. However, some are owned by government, or are non-profits.

Central banks are normally government owned banks, often charged with quasi-regulatory responsibilities, e.g. supervising commercial banks, or controlling the cash interest rate. They generally provide liquidity to the banking system and act as Lender of last resort in event of a crisis.

Types of retail banks

- Commercial bank: the term used for a normal bank to distinguish it from an investment bank. After the Great Depression, the U.S. Congress required that banks only engage in banking activities, whereas investment banks were limited to capital market activities. Since the two no longer have to be under separate ownership, some use the term "commercial bank" to refer to a bank or a division of a bank that mostly deals with deposits and loans from corporations or large businesses.
- Community Banks: locally operated financial institutions that empower employees to make local decisions to serve their customers and the partners
- Community development banks: regulated banks that provide financial services and credit to under-served markets or populations.
- Postal savings banks: savings banks associated with national postal systems.
- Private banks: manage the assets of high net worth individuals.
- Offshore banks: banks located in jurisdictions with low taxation and regulation. Many offshore banks are essentially private banks.
- Savings bank: in Europe, savings banks take their roots in the 19th or sometimes even 18th century. Their original objective was to provide easily accessible savings products to all strata of the population. In some countries, savings banks were created on public initiative, while in others socially committed individuals created foundations to put in place the necessary infrastructure. Nowadays, European savings banks have kept their focus on retail banking: payments, savings products, credits and insurances for individuals or small and medium-sized enterprises. Apart from this retail focus, they also differ from commercial banks by their broadly decentralised distribution network, providing local and regional outreach and by their socially responsible approach to business and society.
- Building societies and Landesbanks: conduct retail banking.
- Ethical banks: banks that prioritize the transparency of all operations and make only what they consider to be socially-responsible investments.
- Islamic banks: Banks that transact according to Islamic principles.



National Bank of the Republic,
Salt Lake City 1908



National Copper Bank, Salt
Lake City 1911

Types of investment banks

- Investment banks "underwrite" (guarantee the sale of) stock and bond issues, trade for their own accounts, make markets, and advise corporations on capital markets activities such as mergers and acquisitions.
- Merchant banks were traditionally banks which engaged in trade financing. The modern definition, however, refers to banks which provide capital to firms in the form of shares rather than loans. Unlike venture capital firms, they tend not to invest in new companies.

Both combined

- Universal banks, more commonly known as a financial services company, engage in several of these activities. For example, First Bank (a very large bank) is involved in commercial and retail lending, and its subsidiaries in tax-havens offer offshore banking services to customers in other countries. Other

large financial institutions are similarly diversified and engage in multiple activities. In Europe and Asia, big banks are very diversified groups that, among other services, also distribute insurance, hence the term bancassurance is the term used to describe the sale of insurance products in a bank. The word is a combination of "banque or bank" and "assurance" signifying that both banking and insurance are provided by the same corporate entity.

Other types of banks

Islamic banking

- Islamic banks adhere to the concepts of Islamic law. Islamic banking revolves around several well established concepts which are based on Islamic canons. Since the concept of interest is forbidden in Islam, all banking activities must avoid interest. Instead of interest, the bank earns profit (mark-up) and fees on financing facilities that it extends to the customers.

Banks in the economy

Size of global banking industry

Worldwide assets of the largest 1,000 banks grew 16.3% in 2006/2007 to reach a record \$74.2 trillion. This follows a 5.4% increase in the previous year. EU banks held the largest share, 53%, up from 43% a decade earlier. The growth in Europe's share was mostly at the expense of Japanese banks whose share more than halved during this period from 21% to 10%. The share of US banks remained relatively stable at around 14%. Most of the remainder was from other Asian and European countries. .

The US had by far the most banks (7,540 at end-2005) and branches (75,000) in the world. The large number of banks in the US is an indicator of its geography and regulatory structure, resulting in a large number of small to medium sized institutions in its banking system. Japan had 129 banks and 12,000 branches. In 2004, Germany, France, and Italy had more than 30,000 branches each—more than double the 15,000 branches in the UK.

Bank crisis

Banks are susceptible to many forms of risk which have triggered occasional systemic crises. Risks include liquidity risk (the risk that many depositors will request withdrawals beyond available funds), credit risk (the risk that those who owe money to the bank will not repay), and interest rate risk (the risk that the bank will become unprofitable if rising interest rates force it to pay relatively more on its deposits than it receives on its loans), among others.

Banking crises have developed many times throughout history when one or more risks materialize for a banking sector as a whole. Prominent examples include the U.S. Savings and Loan crisis in 1980s and early 1990s the Japanese banking crisis during the 1990s, the bank run that occurred during the Great Depression, and the recent liquidation by the central Bank of Nigeria, where about 25 banks were liquidated.

Challenges within the banking industry

The banking industry is a highly regulated industry with detailed and focused regulators. All banks with FDIC-insured deposits have the FDIC as a regulator; however, for examinations, the Federal Reserve is the primary federal regulator for Fed-member state banks; the Office of the Comptroller of the Currency (“OCC”) is the primary federal regulator for national banks; and the Office of Thrift Supervision, or OTS, is the primary federal regulator for thrifts. State non-member banks are examined by the state agencies as well as the FDIC. National banks have one primary regulator—the OCC.

Each regulatory agency has their own set of rules and regulations to which banks and thrifts must adhere.

The Federal Financial Institutions Examination Council (FFIEC) was established in 1979 as a formal interagency body empowered to prescribe uniform principles, standards, and report forms for the federal examination of financial institutions. Although the FFIEC has resulted in a greater degree of regulatory consistency between the agencies, the rules and regulations are constantly changing.

In addition to changing regulations, changes in the industry have led to consolidations within the Federal Reserve, FDIC, OTS and OCC. Offices have been closed, supervisory regions have been merged, staff levels have been reduced and budgets have been cut. The remaining regulators face an increased burden with increased workload and more banks per regulator. While banks struggle to keep up with the changes in the regulatory environment, regulators struggle to manage their workload and effectively regulate their banks. The impact of these changes is that banks are receiving less hands-on assessment by the regulators, less time spent with each institution, and the potential for more problems slipping through the cracks, potentially resulting in an overall increase in bank failures across the United States.

The changing economic environment has a significant impact on banks and thrifts as they struggle to effectively manage their interest rate spread in the face of low rates on loans, rate competition for deposits and the general market changes, industry trends and economic fluctuations. It has been a challenge for banks to effectively set their growth strategies with the recent economic market. A rising interest rate environment may seem to help financial institutions, but the effect of the changes on consumers and businesses is not predictable and the challenge remains for banks to grow and effectively manage the spread to generate a return to their shareholders.

The management of the banks’ asset portfolios also remains a challenge in today’s economic environment. Loans are a bank’s primary asset category and when loan quality becomes suspect, the foundation of a bank is shaken to the core. While always an issue for banks, declining asset quality has become a big problem for financial institutions. There are several reasons for this, one of which is the lax attitude some banks have adopted because of the years of “good times.” The potential for this is exacerbated by the reduction in the regulatory oversight of banks and in some cases depth of management. Problems are more likely to go undetected, resulting in a significant impact on the bank when they are recognized. In addition, banks, like any business, struggle to cut costs and have consequently eliminated certain expenses, such as adequate employee training programs.

Banks also face a host of other challenges such as aging ownership groups. Across the country, many banks’ management teams and board of directors are aging. Banks also face ongoing pressure by shareholders, both public and private, to achieve earnings and growth projections. Regulators place added pressure on banks to manage the various categories of risk. Banking is also an extremely competitive industry. Competing in the financial services industry has become

tougher with the entrance of such players as insurance agencies, credit unions, check cashing services, credit card companies, etc.

As a reaction, banks have developed their activities in financial instruments, through financial market operations such as brokerage and trading and become big players in such activities.

Profitability

A bank generates a profit from the differential between the level of interest it pays for deposits and other sources of funds, and the level of interest it charges in its lending activities. This difference is referred to as the *spread* between the cost of funds and the loan interest rate. Historically, profitability from lending activities has been cyclical and dependent on the needs and strengths of loan customers. In recent history, investors have demanded a more stable revenue stream and banks have therefore placed more emphasis on transaction fees, primarily loan fees but also including service charges on an array of deposit activities and ancillary services (international banking, foreign exchange, insurance, investments, wire transfers, etc.). Lending activities, however, still provide the bulk of a commercial bank's income.

In the past 10 years American banks have taken many measures to ensure that they remain profitable while responding to increasingly changing market conditions. First, this includes the Gramm-Leach-Bliley Act, which allows banks again to merge with investment and insurance houses. Merging banking, investment, and insurance functions allows traditional banks to respond to increasing consumer demands for "one-stop shopping" by enabling cross-selling of products (which, the banks hope, will also increase profitability). Second, they have expanded the use of risk-based pricing from business lending to consumer lending, which means charging higher interest rates to those customers that are considered to be a higher credit risk and thus increased chance of default on loans. This helps to offset the losses from bad loans, lowers the price of loans to those who have better credit histories, and offers credit products to high risk customers who would otherwise been denied credit. Third, they have sought to increase the methods of payment processing available to the general public and business clients. These products include debit cards, pre-paid cards, smart-cards, and credit cards. These products make it easier for consumers to conveniently make transactions and smooth their consumption over time (in some countries with under-developed financial systems, it is still common to deal strictly in cash, including carrying suitcases filled with cash to purchase a home). However, with convenience there is also increased risk that consumers will mismanage their financial resources and accumulate excessive debt. Banks make money from card products through interest payments and fees charged to consumers and transaction fees to companies that accept the cards.

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Behavioural economics

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Behavioural economics and **behavioural finance** are closely related fields which apply scientific research on human and social cognitive and emotional biases to better understand economic decisions and how they affect market prices, returns and the allocation of resources. The fields are primarily concerned with the rationality, or lack thereof, of economic agents. Behavioural models typically integrate insights from psychology with neo-classical economic theory.

Academics are divided between considering Behavioural Finance as supporting some tools of technical analysis by explaining market trends, and considering some aspects of technical analysis as behavioural biases (representativeness heuristic, self fulfilling prophecy).

Behavioural analysts are mostly concerned with the effects of market decisions, but also those of public choice, another source of economic decisions with some similar biases.

History

During the classical period, economics had a close link with psychology. For example, Adam Smith wrote *The Theory of Moral Sentiments*, an important text describing psychological principles of individual behaviour; and Jeremy Bentham wrote extensively on the psychological underpinnings of utility. Economists began to distance themselves from psychology during the development of neo-classical economics as they sought to reshape the discipline as a natural science, with explanations of economic behaviour deduced from assumptions about the nature of economic agents. The concept of homo economicus was developed, and the psychology of this entity was fundamentally rational. Nevertheless, psychological explanations continued to inform the analysis of many important figures in the development of neo-classical economics such as Francis Edgeworth, Vilfredo Pareto, Irving Fisher and John Maynard Keynes.

Psychology had largely disappeared from economic discussions by the mid 20th century. A number of factors contributed to the resurgence of its use and the development of behavioural economics. Expected utility and discounted utility models began to gain wide acceptance, generating testable hypotheses about decision making under uncertainty and intertemporal consumption respectively. Soon a number of observed and repeatable anomalies challenged those hypotheses. Furthermore, during the 1960s cognitive psychology began to describe the brain as an information processing device (in contrast to behaviorist models). Psychologists in this field such as Ward Edwards, Amos Tversky and Daniel Kahneman began to compare their cognitive models of decision making under risk and uncertainty to economic models of rational behaviour. In Mathematical psychology, there is a longstanding interest in the transitivity of preference and what kind of measurement scale utility constitutes (Luce, 2000).

An important paper in the development of the behavioural finance and economics fields was written by Kahneman and Tversky in 1979. This paper, ' Prospect theory: Decision Making Under Risk', used cognitive psychological techniques to explain a number of documented divergences of economic decision making from neo-classical theory. Over time many other psychological effects have been incorporated into behavioural finance, such as overconfidence and the effects

of limited attention. Further milestones in the development of the field include a well attended and diverse conference at the University of Chicago, a special 1997 edition of the Quarterly Journal of Economics ('In Memory of Amos Tversky') devoted to the topic of behavioural economics and the award of the Nobel prize to Daniel Kahneman in 2002 "for having integrated insights from psychological research into economic science, especially concerning human judgment and decision-making under uncertainty".

Prospect theory is an example of generalized expected utility theory. Although not commonly included in discussions of the field of behavioural economics, generalized expected utility theory is similarly motivated by concerns about the descriptive inaccuracy of expected utility theory.

Behavioural economics has also been applied to problems of intertemporal choice. The most prominent idea is that of hyperbolic discounting, proposed by George Ainslie (1975), in which a high rate of discount is used between the present and the near future, and a lower rate between the near future and the far future. This pattern of discounting is dynamically inconsistent (or time-inconsistent), and therefore inconsistent with some models of rational choice, since the rate of discount between time t and $t+1$ will be low at time $t-1$, when t is the near future, but high at time t when t is the present and time $t+1$ the near future. As part of the discussion of hyperbolic discounting, has been animal and human work on Melioration theory and Matching Law of Richard Herrnstein. They suggest that behaviour is not based on expected utility rather it is based on previous reinforcement experience.

Methodology

At the outset behavioural economics and finance theories were developed almost exclusively from experimental observations and survey responses, though in more recent times real world data has taken a more prominent position. fMRI has also been used to determine which areas of the brain are active during various steps of economic decision making. Experiments simulating market situations such as stock market trading and auctions are seen as particularly useful as they can be used to isolate the effect of a particular bias upon behavior; observed market behaviour can typically be explained in a number of ways, carefully designed experiments can help narrow the range of plausible explanations. Experiments are designed to be incentive compatible, with binding transactions involving real money the norm.

Key observations

There are three main themes in behavioural finance and economics:

- **Heuristics:** People often make decisions based on approximate rules of thumb, not strictly rational analysis. See also cognitive biases and bounded rationality.
- **Framing:** The way a problem or decision is presented to the decision maker will affect his action.
- **Market inefficiencies:** There are explanations for observed market outcomes that are contrary to rational expectations and market efficiency. These include mis-pricings, non-rational decision making, and return anomalies. Richard Thaler, in particular, has described specific market anomalies from a behavioural perspective.

Recently, Barberis, Shleifer, and Vishny (1998), as well as Daniel, Hirshleifer, and Subrahmanyam (1998) have built models based on extrapolation (seeing

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patterns in random sequences) and overconfidence to explain security market over- and underreactions, though such models have not been used in the money management industry. These models assume that errors or biases are correlated across agents so that they do not cancel out in aggregate. This would be the case if a large fraction of agents look at the same signal (such as the advice of an analyst) or have a common bias.

More generally, cognitive biases may also have strong anomalous effects in aggregate if there is a social contamination with a strong emotional content (collective greed or fear), leading to more widespread phenomena such as herding and groupthink. Behavioural finance and economics rests as much on social psychology within large groups as on individual psychology. However, some behavioural models explicitly demonstrate that a small but significant anomalous group can also have market-wide effects (eg. Fehr and Schmidt, 1999).

Behavioural finance topics

Some central issues in behavioural finance are why investors and managers (and also lenders and borrowers) make systematic errors. It shows how those errors affect prices and returns (creating market inefficiencies). It shows also what managers of firms or other institutions, as well as other financial players might do to take advantage of market inefficiencies.

Among the inefficiencies described by behavioural finance, underreactions or overreactions to information are often cited, as causes of market trends and in extreme cases of bubbles and crashes). Such misreactions have been attributed to limited investor attention, overconfidence / overoptimism, and mimicry (herding instinct) and noise trading.

Other key observations made in behavioural finance literature include the lack of symmetry between decisions to acquire or keep resources, called colloquially the "bird in the bush" paradox, and the strong loss aversion or regret attached to any decision where some emotionally valued resources (e.g. a home) might be totally lost. Loss aversion appears to manifest itself in investor behaviour as an unwillingness to sell shares or other equity, if doing so would force the trader to realise a nominal loss (Genesove & Mayer, 2001). It may also help explain why housing market prices do not adjust downwards to market clearing levels during periods of low demand.

Applying a version of prospect theory, Benartzi and Thaler (1995) claim to have solved the equity premium puzzle, something conventional finance models have been unable to do.

Presently, some researchers in experimental finance use experimental method, e.g. creating an artificial market by some kind of simulation software to study people's decision-making process and behaviour in financial markets.

Behavioural finance models

Some financial models used in money management and asset valuation use behavioural finance parameters, for example:

- Thaler's model of price reactions to information, with three phases, underreaction-adjustment-overreaction, creating a price trend

One characteristic of overreaction is that the average return of asset prices following a series of announcements of good news is lower than the average return following a series of bad announcements. In other words, overreaction occurs if the market reacts too strongly or for too long (persistent trend) to news that it subsequently needs to be compensated in the opposite direction. As a result, assets that were winners in the past should not be seen as an indication to invest in as their risk adjusted returns in the future are relatively low compared to stocks that were defined as losers in the past.

- The stock image coefficient

Criticisms of behavioural finance

Critics of behavioural finance, such as Eugene Fama, typically support the efficient market theory (though Fama may have reversed his position in recent years). They contend that behavioural finance is more a collection of anomalies than a true branch of finance and that these anomalies will eventually be priced out of the market or explained by appealing to market microstructure arguments. However, a distinction should be noted between individual biases and social biases; the former can be averaged out by the market, while the other can create feedback loops that drive the market further and further from the equilibrium of the "fair price".

A specific example of this criticism is found in some attempted explanations of the equity premium puzzle. It is argued that the puzzle simply arises due to entry barriers (both practical and psychological) which have traditionally impeded entry by individuals into the stock market, and that returns between stocks and bonds should stabilize as electronic resources open up the stock market to a greater number of traders (See Freeman, 2004 for a review). In reply, others contend that most personal investment funds are managed through superannuation funds, so the effect of these putative barriers to entry would be minimal. In addition, professional investors and fund managers seem to hold more bonds than one would expect given return differentials.

Quantitative behavioural finance

Quantitative behavioural finance is a new discipline that uses mathematical and statistical methodology to understand behavioural biases in conjunction with valuation. Some of this endeavor has been led by Gunduz Caginalp (Professor of Mathematics and Editor of Journal of Behavioural Finance during 2001-2004) and collaborators including Vernon Smith (2002 Nobel Laureate in Economics), David Porter, Don Balenovich, Vladimira Ilieva, Ahmet Duran, Huseyin Merdan). Studies by Jeff Madura, Ray Sturm and others have demonstrated significant behavioural effects in stocks and exchange traded funds.

The research can be grouped into the following areas:

1. Empirical studies that demonstrate significant deviations from classical theories
2. Modeling using the concepts of behavioural effects together with the non-classical assumption of the finiteness of assets
3. Forecasting based on these methods
4. Studies of experimental asset markets and use of models to forecast experiments

Critical conclusions of behavioural economics

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Critics of behavioural economics typically stress the rationality of economic agents (see Myagkov and Plott (1997) amongst others). They contend that experimentally observed behavior is inapplicable to market situations, as learning opportunities and competition will ensure at least a close approximation of rational behaviour.

Others note that cognitive theories, such as prospect theory, are models of decision making, not generalized economic behaviour, and are only applicable to the sort of once-off decision problems presented to experiment participants or survey respondents.

Traditional economists are also skeptical of the experimental and survey based techniques which are used extensively in behavioural economics. Economists typically stress revealed preferences over stated preferences (from surveys) in the determination of economic value. Experiments and surveys must be designed carefully to avoid systemic biases, strategic behaviour and lack of incentive compatibility, and many economists are distrustful of results obtained in this manner due to the difficulty of eliminating these problems.

Rabin (1998) dismisses these criticisms, claiming that results are typically reproduced in various situations and countries and can lead to good theoretical insight. Behavioural economists have also incorporated these criticisms by focusing on field studies rather than lab experiments. Some economists look at this split as a fundamental schism between experimental economics and behavioral economics, but prominent behavioral and experimental economists tend to overlap techniques and approaches in answering common questions. For example, many prominent behavioural economists are actively investigating neuroeconomics, which is entirely experimental and cannot be verified in the field.

Other proponents of behavioral economics note that neoclassical models often fail to predict outcomes in real world contexts. Behavioral insights can be used to update neoclassical equations, and behavioural economists note that these revised models not only reach the same correct predictions as the traditional models, but also correctly predict some outcomes where the traditional models failed.

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Bretton Woods system

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The **Bretton Woods system** of monetary management established the rules for commercial and financial relations among the world's major industrial states. The Bretton Woods system was the first example of a fully negotiated monetary order intended to govern monetary relations among independent nation-states.

Preparing to rebuild the international economic system as World War II was still raging, 730 delegates from all 44 Allied nations gathered at the Mount Washington Hotel in Bretton Woods, New Hampshire for the United Nations Monetary and Financial Conference. The delegates deliberated upon and signed the **Bretton Woods Agreements** during the first three weeks of July 1944.

Setting up a system of rules, institutions, and procedures to regulate the international monetary system, the planners at Bretton Woods established the International Bank for Reconstruction and Development (IBRD) (now one of five institutions in the World Bank Group) and the International Monetary Fund (IMF). These organizations became operational in 1946 after a sufficient number of countries had ratified the agreement.

The chief features of the Bretton Woods system were an obligation for each country to adopt a monetary policy that maintained the exchange rate of its currency within a fixed value—plus or minus one percent—in terms of gold and the ability of the IMF to bridge temporary imbalances of payments. In the face of increasing strain, the system collapsed in 1971, following the United States' suspension of convertibility from dollars to gold.

Until the early 1970s, the Bretton Woods system was effective in controlling conflict and in achieving the common goals of the leading states that had created it, especially the United States.

Origins

The political basis for the Bretton Woods system are in the confluence of several key conditions: the shared experiences of the Great Depression, the concentration of power in a small number of states (further enhanced by the exclusion of a number of important nations because of the war), and the presence of a dominant power willing and able to assume a leadership role in global monetary affairs.

The Great Depression

A high level of agreement among the powerful on the goals and means of international economic management facilitated the decisions reached by the Bretton Woods Conference. The foundation of that agreement was a shared belief in capitalism. Although the developed countries' governments differed somewhat in the type of capitalism they preferred for their national economies (France, for example, preferred greater planning and state intervention, whereas the United States favored relatively limited state intervention), all relied primarily on market mechanisms and on private ownership.

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Thus, it is their similarities rather than their differences that appear most striking. All the participating governments at Bretton Woods agreed that the monetary chaos of the interwar period had yielded several valuable lessons.

The experience of the Great Depression was fresh on the minds of public officials. The planners at Bretton Woods hoped to avoid a repeat of the debacle of the 1930s, when foreign exchange controls undermined the international payments system that was the basis for world trade. The "beggar thy neighbour" policies of 1930s governments—using currency devaluations to increase the competitiveness of a country's export products in order to reduce balance of payments deficits—worsened national deflationary spirals, which resulted in plummeting national incomes, shrinking demand, mass unemployment, and an overall decline in world trade. Trade in the 1930s became largely restricted to currency blocs (groups of nations that use an equivalent currency, such as the "Sterling Area" of the British Empire). These blocs retarded the international flow of capital and foreign investment opportunities. Although this strategy tended to increase government revenues in the short run, it dramatically worsened the situation in the medium and longer run.

Thus, for the international economy, planners at Bretton Woods all favored a liberal system, one that relied primarily on the market with the minimum of barriers to the flow of private trade and capital. Although they disagreed on the specific implementation of this liberal system, all agreed on an open system.

“Economic security”

Also based on experience of interwar years, U.S. planners developed a concept of economic security—that a liberal international economic system would enhance the possibilities of postwar peace. One of those who saw such a security link was Cordell Hull, the United States Secretary of State from 1933 to 1944. Hull believed that the fundamental causes of the two world wars lay in economic discrimination and trade warfare. Specifically, he had in mind the trade and exchange controls (bilateral arrangements) of Nazi Germany and the imperial preference system practiced by Britain (by which members or former members of the British Empire were accorded special trade status). Hull argued

“ [U]nhampered trade dovetailed with peace; high tariffs, trade barriers, and unfair economic competition, with war...if we could get a freer flow of trade...freer in the sense of fewer discriminations and obstructions...so that one country would not be deadly jealous of another and the living standards of all countries might rise, thereby eliminating the economic dissatisfaction that breeds war, we might have a reasonable chance of lasting peace.

”



Cordell Hull

The rise of governmental intervention

The developed countries also agreed that the liberal international economic system required governmental intervention. In the aftermath of the Great Depression, public management of the economy had emerged as a primary activity of governments in the developed states. Employment, stability, and growth were now important subjects of public policy. In turn, the role of government in the national economy had become associated with the assumption by the state of the responsibility for assuring of its citizens a degree of economic well-being. The welfare state grew out of the Great Depression, which created a popular demand for governmental intervention in the economy, and out of the theoretical contributions of the Keynesian school of economics, which asserted the need for governmental intervention to maintain an adequate level of employment.

At the international level, these ideas evolved from the experience of the 1930s. The priority of national goals, independent national action in the interwar period, and the failure to perceive that those national goals could not be realized without some form of international collaboration resulted in “beggar-thy-neighbour” policies such as high tariffs and competitive devaluations which contributed to economic breakdown, domestic political instability, and international war. The lesson learned was as the principal architect of the Bretton Woods system New Dealer Harry Dexter White put it:

“ the absence of a high degree of economic collaboration among the leading nations will...inevitably result in economic warfare that will be but the prelude and instigator of military warfare on an even vaster scale. ”

To ensure economic stability and political peace, states agreed to cooperate to regulate the international economic system. The pillar of the U.S. vision of the postwar world was free trade. Free trade involved lowering tariffs and among other things a balance of trade favorable to the capitalist system.

Thus, the more developed market economies agreed with the U.S. vision of postwar international economic management, which was to be designed to create and maintain an effective international monetary system and foster the reduction of barriers to trade and capital flows.

The Atlantic Charter



Roosevelt and Churchill during their secret meeting of August 9 – August 12, 1941 in Newfoundland that resulted in the Atlantic Charter, which the U.S. and Britain officially announced two days later.

Throughout the war, the United States envisaged a postwar economic order in which the U.S. could penetrate markets that had been previously closed to other currency trading blocs, as well as to expand opportunities for foreign investments for U.S. corporations by removing restrictions on the international flow of capital.

The Atlantic Charter, drafted during U.S. President Roosevelt's August 1941 meeting with British Prime Minister Winston Churchill on a ship in the North Atlantic, was the most notable precursor to the Bretton Woods Conference. Like Woodrow Wilson before him, whose "Fourteen Points" had outlined U.S. aims in the aftermath of the First World War, Roosevelt set forth a range of ambitious goals for the postwar world even before the U.S. had entered the Second World War. The Atlantic Charter affirmed the right of all nations to equal access to trade and raw materials. Moreover, the charter called for freedom of the seas (a principal U.S. foreign policy aim since France and Britain had first threatened U.S. shipping in the 1790s), the disarmament of aggressors, and the "establishment of a wider and permanent system of general security."

As the war drew to a close, the Bretton Woods conference was the culmination of some two and a half years of planning for postwar reconstruction by the Treasuries of the U.S. and the UK. U.S. representatives studied with their British counterparts the reconstitution of what had been lacking between the two world wars: a system of international payments that would allow trade to be conducted without fear of sudden currency depreciation or wild fluctuations in exchange rates—ailments that had nearly paralyzed world capitalism during the Great Depression.

Without a strong European market for U.S. goods and services, most policymakers believed, the U.S. economy would be unable to sustain the prosperity it had

achieved during the war. In addition, U.S. unions had only grudgingly accepted government-imposed restraints on their demand during the war, but they were willing to wait no longer, particularly as inflation cut into the existing wage scales with painful force. (By the end of 1945, there had already been major strikes in the automobile, electrical, and steel industries.)

In early 1945 Bernard Baruch described the spirit of Bretton Woods as: *if we can stop subsidization of labor and sweated competition in the export markets, 'as well as prevent rebuilding of war machines, bh boy, oh boy, what long term prosperity we will have.*"The United States would therefore use its position of influence to reopen and control the world economy, so as to give unhindered access to all nations' markets and materials.

Wartime devastation of Europe and East Asia

Furthermore, U.S. allies—economically exhausted by the war—accepted this leadership. They needed U.S. assistance to rebuild their domestic production and to finance their international trade; indeed, they needed it to survive.

Before the war, the French and the British were realizing that they could no longer compete with U.S. industry in an open marketplace. During the 1930s, the British had created their own economic bloc to shut out U.S. goods. Churchill did not believe that he could surrender that protection after the war, so he watered down the Atlantic Charter's "free access" clause before agreeing to it.

Yet, the U.S. officials were determined to open their access to the British empire. The combined value of British and U.S. trade was well over half of all the world's trade in goods. In order for the US to open global markets, it first had to split the British (trade) empire. Whilst Britain had economically dominated the 19th century, they intended the second half of the 20th to be under U.S. hegemony.

A devastated Britain had little choice. Two world wars had destroyed the country's principal industries that paid for the importation of half the nation's food and nearly all its raw materials except coal. The British had no choice but to ask for aid. In 1945, the U.S. agreed to a loan of \$3.8 billion. In return, British officials promised to negotiate the agreement.

For nearly two centuries, French and U.S. interests had clashed in both the Old World and the New World. During the war, French mistrust of the United States was embodied by General Charles de Gaulle, president of the French provisional government. De Gaulle bitterly fought U.S. officials as he tried to maintain his country's colonies and diplomatic freedom of action. In turn, U.S. officials saw de Gaulle as a political extremist.

But in 1945 de Gaulle— at that point the leading voice of French nationalism—was forced to grudgingly ask the U.S. for a billion-dollar loan. Most of the request was granted; in return France promised to curtail government subsidies and currency manipulation that had given its exporters advantages in the world market.

On a far more profound level, as the Bretton Woods conference was convening, the greater part of the Third World remained politically and economically subordinate. Linked to the developed countries of the West economically and politically—formally and informally—these states had little choice but to acquiesce to the international economic system established for them. In the East, Soviet hegemony in Eastern Europe provided the foundation for a separate international economic system.

Design

Free trade relied on the free convertibility of currencies. Negotiators at the Bretton Woods conference, fresh from what they perceived as a disastrous experience with floating rates in the 1930s, concluded that major monetary fluctuations could stall the free flow of trade.

The liberal economic system required an accepted vehicle for investment, trade, and payments. Unlike national economies, however, the international economy lacks a central government that can issue currency and manage its use. In the past this problem had been solved through the gold standard, but the architects of Bretton Woods did not consider this option feasible for the postwar political economy. Instead, they set up a system of fixed exchange rates managed by a series of newly created international institutions using the U.S. dollar (which was a gold standard currency for central banks) as a reserve currency.

Informal

Previous regimes

In the 19th and early 20th centuries gold played a key role in international monetary transactions. The gold standard was used to back currencies; the international value of currency was determined by its fixed relationship to gold; gold was used to settle international accounts. The gold standard maintained fixed exchange rates that were seen as desirable because they reduced the risk of trading with other countries.

Imbalances in international trade were theoretically rectified automatically by the gold standard. A country with a deficit would have depleted gold reserves and would thus have to reduce its money supply. The resulting fall in demand would reduce imports and the lowering of prices would boost exports; thus the deficit would be rectified. Any country experiencing inflation would lose gold and therefore would have a decrease in the amount of money available to spend. This decrease in the amount of money would act to reduce the inflationary pressure. Supplementing the use of gold in this period was the British pound. Based on the dominant British economy, the pound became a reserve, transaction, and intervention currency. But the pound was not up to the challenge of serving as the primary world currency, given the weakness of the British economy after the Second World War.

The architects of Bretton Woods had conceived of a system wherein exchange rate stability was a prime goal. Yet, in an era of more activist economic policy, governments did not seriously consider permanently fixed rates on the model of the classical gold standard of the nineteenth century. Gold production was not even sufficient to meet the demands of growing international trade and investment. And a sizable share of the world's known gold reserves were located in the Soviet Union, which would later emerge as a Cold War rival to the United States and Western Europe.

The only currency strong enough to meet the rising demands for international liquidity was the US dollar. The strength of the US economy, the fixed relationship of the dollar to gold (\$35 an ounce), and the commitment of the U.S. government to convert dollars into gold at that price made the dollar as good as gold. In fact, the dollar was even better than gold: it earned interest and it was more flexible than gold.

The Bretton Woods system of fixed exchange rates

The Bretton Woods system sought to secure the advantages of the gold standard without its disadvantages. Thus, a compromise was sought between the polar alternatives of either freely floating or irrevocably fixed rates—an arrangement that might gain the advantages of both without suffering the disadvantages of either while retaining the right to revise currency values on occasion as circumstances warranted.

The rules of Bretton Woods, set forth in the articles of agreement of the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (IBRD), provided for a system of fixed exchange rates. The rules further sought to encourage an open system by committing members to the convertibility of their respective currencies into other currencies and to free trade.

What emerged was the "pegged rate" currency regime. Members were required to establish a parity of their national currencies in terms of gold (a "peg") and to maintain exchange rates within plus or minus 1% of parity (a "band") by intervening in their foreign exchange markets (that is, buying or selling foreign money).

In practice, however, since the principal "Reserve currency" would be the U.S. dollar, this meant that other countries would peg their currencies to the U.S. dollar, and—once convertibility was restored—would buy and sell U.S. dollars to keep market exchange rates within plus or minus 1% of parity. Thus, the U.S. dollar took over the role that gold had played under the gold standard in the international financial system.

Meanwhile, in order to bolster faith in the dollar, the U.S. agreed separately to link the dollar to gold at the rate of \$35 per ounce of gold. At this rate, foreign governments and central banks were able to exchange dollars for gold. Bretton Woods established a system of payments based on the dollar, in which all currencies were defined in relation to the dollar, itself convertible into gold, and above all, "as good as gold." The U.S. currency was now effectively the world currency, the standard to which every other currency was pegged. As the world's key currency, most international transactions were denominated in dollars.

The U.S. dollar was the currency with the most purchasing power and it was the only currency that was backed by gold. Additionally, all European nations that had been involved in World War II were highly in debt and transferred large amounts of gold into the United States, a fact that contributed to the supremacy of the United States. Thus, the U.S. dollar was strongly appreciated in the rest of the world and therefore became the key currency of the Bretton Woods system.

Member countries could only change their par value with IMF approval, which was contingent on IMF determination that its balance of payments was in a "fundamental disequilibrium."

Formal regimes

The Bretton Woods Conference led to the establishment of the IMF and the IBRD (now the World Bank), which still remain powerful forces in the world economy.

As mentioned, a major point of common ground at the Conference was the goal to avoid a recurrence of the closed markets and economic warfare that had characterized the 1930s. Thus, negotiators at Bretton Woods also agreed that there was a need for an institutional forum for international cooperation on monetary matters. Already in 1944 the British economist John Maynard Keynes emphasized "the importance of rule-based regimes to stabilize business expectations"—something he accepted in the Bretton Woods system of fixed exchange rates. Currency troubles in the interwar years, it was felt, had been greatly exacerbated by the absence of any established procedure or machinery for intergovernmental consultation.

As a result of the establishment of agreed upon structures and rules of international economic interaction, conflict over economic issues was minimized, and the significance of the economic aspect of international relations seemed to recede.

The International Monetary Fund

Officially established on December 27, 1945, when the 29 participating countries at the conference of Bretton Woods signed its Articles of Agreement, the IMF was to be the keeper of the rules and the main instrument of public international management. The Fund commenced its financial operations on March 1, 1947. IMF approval was necessary for any change in exchange rates in excess of 10%. It advised countries on policies affecting the monetary system.

Designing the IMF

The big question at the Bretton Woods conference with respect to the institution that would emerge as the IMF was the issue of future access to international liquidity and whether that source should be akin to a world central bank able to create new reserves at will or a more limited borrowing mechanism.

Although attended by 44 nations, discussions at the conference were dominated by two rival plans developed by the U.S. and Britain. As the chief international economist at the U.S. Treasury in 1942–44, Harry Dexter White drafted the U.S. blueprint for international access to liquidity, which competed with the plan drafted for the British Treasury by Keynes. Overall, White's scheme tended to favour incentives designed to create price stability within the world's economies, while Keynes' wanted a system that encouraged economic growth.

At the time, gaps between the White and Keynes plans seemed enormous. Outlining the difficulty of creating a system that every nation could accept in his speech at the closing plenary session of the Bretton Woods conference on July 22, 1944, Keynes stated:

“ We, the delegates of this Conference, Mr. President, have been trying to accomplish something very difficult to accomplish.[...] It has been our task to find a common measure, a common standard, a common rule acceptable to each and not irksome to any. ”

Keynes' proposals would have established a world reserve currency (which he thought might be called "bancor") administered by a central bank vested with the possibility of creating money and with the authority to take actions on a much larger scale (understandable considering deflationary problems in Britain at the time).

In case of balance of payments imbalances, Keynes recommended that *both* debtors and creditors should change their policies. As outlined by Keynes, countries with payment surpluses should increase their imports from the deficit countries and thereby create a foreign trade equilibrium. Thus, Keynes was sensitive to the problem that placing too much of the burden on the deficit country would be deflationary.



John Maynard Keynes (right) and Harry Dexter White at the Bretton Woods Conference

But the U.S., as a likely creditor nation, and eager to take on the role of the world's economic powerhouse, balked at Keynes' plan and did not pay serious attention to it. The U.S. contingent was too concerned about inflationary pressures in the postwar economy, and White saw an imbalance as a problem only of the deficit country.

Although compromise was reached on some points, because of the overwhelming economic and military power of the U.S., the participants at Bretton Woods largely agreed on White's plan. As a result, the IMF was born with an economic approach and political ideology that stressed controlling inflation and introducing austerity plans over fighting poverty. This would influence its approach to Third World countries struggling with underdevelopment.

Subscriptions and quotas

What emerged largely reflected U.S. preferences: a system of subscriptions and quotas embedded in the IMF, which itself was to be no more than a fixed pool of national currencies and gold subscribed by each country as opposed to a world central bank capable of creating money. The Fund was charged with managing various nations' trade deficits so that they would not produce currency devaluations that would trigger a decline in imports.

The IMF was provided with a fund, composed of contributions of member countries in gold and their own currencies. The original quotas planned were to total \$8.8 billion. When joining the IMF, members were assigned "quotas" reflecting their relative economic power, and, as a sort of credit deposit, were obliged to pay a "subscription" of an amount commensurate to the quota. The subscription was to be paid 25% in gold or currency convertible into gold (effectively the dollar, which was the only currency then still directly gold convertible for central banks) and 75% in the member's own currency.

Quota subscriptions were to form the largest source of money at the IMF's disposal. The IMF set out to use this money to grant loans to member countries with financial difficulties. Each member was then entitled to withdraw 25% of its quota immediately in case of payment problems. If this sum was insufficient, each nation in the system was also able to request loans for foreign currency.

Financing trade deficits

In the event of a deficit in the current account, Fund members, when short of reserves, would be able to borrow foreign currency in amounts determined by the size of its quota. In other words, the higher the country's contribution was, the higher the sum of money it could borrow from the IMF.

Members were required to pay back debts within a period of 18 months to five years. In turn, the IMF embarked on setting up rules and procedures to keep a country from going too deeply into debt, year after year. The Fund would exercise "surveillance" over other economies for the U.S. Treasury, in return for its loans to prop up national currencies.

IMF loans were not comparable to loans issued by a conventional credit institution. Instead, it was effectively a chance to purchase a foreign currency with gold or the member's national currency.

The U.S.-backed IMF plan sought to end restrictions on the transfer of goods and services from one country to another, eliminate currency blocs and lift currency exchange controls.

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The IMF was designed to advance credits to countries with balance of payments deficits. Short-run balance of payment difficulties would be overcome by IMF loans, which would facilitate stable currency exchange rates. This flexibility meant that member states would not have to induce a depression automatically in order to cut its national income down to such a low level that its imports will finally fall within its means. Thus, countries were to be spared the need to resort to the classical medicine of deflating themselves into drastic unemployment when faced with chronic balance of payments deficits. Before the Second World War, European nations often resorted to this, particularly Britain.

Moreover, the planners at Bretton Woods hoped that this would reduce the temptation of cash-poor nations to reduce capital outflow by restricting imports. In effect, the IMF extended Keynesian measures—government intervention to prop up demand and avoid recession—to protect the U.S. and the stronger economies from disruptions of international trade and growth.

Changing the par value

The IMF sought to provide for occasional discontinuous exchange-rate adjustments (changing a member's par value) by international agreement. Member nations were permitted first to depreciate (or appreciate in opposite situations) their currencies by 10%. This tends to restore equilibrium in its trade by expanding its exports and contracting imports. This would be allowed only if there was what was called a "fundamental disequilibrium." A decrease in the value of the country's money was called a "devaluation" while an increase in the value of the country's money was called a "revaluation".

It was envisioned that these changes in exchange rates would be quite rare. Regrettably the notion of fundamental disequilibrium, though key to the operation of the par value system, was never spelled out in any detail—an omission that would eventually come back to haunt the regime in later years.

IMF operations

Never before had international monetary cooperation been attempted on a permanent institutional basis. Even more groundbreaking was the decision to allocate voting rights among governments not on a one-state, one-vote basis but rather in proportion to quotas. Since the U.S. was contributing the most, U.S. leadership was the key implication. Under the system of weighted voting the U.S. was able to exert a preponderant influence on the IMF. The U.S. held one-third of all IMF quotas at the outset, enough to veto all changes to the IMF Charter on its own.

In addition, the IMF was based in Washington, D.C., staffed mainly by U.S. economists. It regularly exchanged personnel with the U.S. Treasury. When the IMF began operations in 1946, President Harry S. Truman named White as its first U.S. Executive Director. Since no Deputy Managing Director post had yet been created, White served occasionally as Acting Managing Director and generally played a highly influential role during the IMF's first year.

The International Bank for Reconstruction and Development

No provision was made for international creation of reserves. New gold production was assumed to be sufficient. In the event of structural disequilibria, it was expected that there would be national solutions—a change in the value of the currency or an improvement by other means of a country's competitive position. Few means were given to the IMF, however, to encourage such national solutions.

It had been recognized in 1944 that the new system could come into being only after a return to normalcy following the disruption of World War II. It was expected that after a brief transition period — expected to be no more than five years — the international economy would recover and the system would enter into operation.

To promote the growth of world trade and to finance the postwar reconstruction of Europe, the planners at Bretton Woods created another institution, the International Bank for Reconstruction and Development (IBRD) — now the most important agency of the World Bank Group. The IBRD had an authorized capitalization of \$10 billion and was expected to make loans of its own funds to underwrite private loans and to issue securities to raise new funds to make possible a speedy postwar recovery. The IBRD was to be a specialized agency of the United Nations charged with making loans for economic development purposes.

Readjusting the Bretton Woods system

The dollar shortages and the Marshall Plan

The Bretton Wood arrangements were largely adhered to and ratified by the participating governments. It was expected that national monetary reserves, supplemented with necessary IMF credits, would finance any temporary balance of payments disequilibria. But this did not however prove sufficient to get Europe out of the doldrums.

Postwar world capitalism suffered from a huge dollar shortage. The United States was running huge balance of trade surpluses, and the U.S. reserves were immense and growing. It was necessary to reverse this flow. Dollars had to leave the United States and become available for international use. In other words, the United States would have to reverse the natural economic processes and run a balance of payments deficit.

The modest credit facilities of the IMF were clearly insufficient to deal with Western Europe's huge balance of payments deficits. The problem was further aggravated by the reaffirmation by the IMF Board of Governors in the provision in the Bretton Woods Articles of Agreement that the IMF could make loans only for current account deficits and not for capital and reconstruction purposes. Only the United States contribution of \$570 million was actually available for IBRD lending. In addition, because the only available market for IBRD bonds was the conservative Wall Street banking market, the IBRD was forced to adopt a conservative lending policy, granting loans only when repayment was assured. Given these problems, by 1947 the IMF and the IBRD themselves were admitting that they could not deal with the international monetary system's economic problems.

Thus, the much looser Marshall Plan—the European Recovery Program—was set up to provide U.S. finance to rebuild Europe largely through grants rather than loans. The Marshall Plan was the program of massive economic aid given by the United States to favored countries in Western Europe for the rebuilding of capitalism. In a speech at Harvard University on June 5, 1946, U.S. Secretary of State George Marshall stated:

“ The breakdown of the business structure of Europe during the war was complete. . . .Europe's requirements for the next three or four years of foreign food and other essential products. . . principally from the United States. . . are so much greater than her present ability to pay that she must have substantial help or face economic, social and political deterioration of a very grave character. ”

From 1947 until 1958, the U.S. deliberately encouraged an outflow of dollars, and, from 1950 on, the United States ran a balance of payments deficit with the intent of providing liquidity for the international economy. Dollars flowed out through various U.S. aid programs: the Truman Doctrine entailing aid to the pro-U.S. Greek and Turkish regimes, which were struggling to suppress socialist revolution, aid to various pro-U.S. regimes in the Third World, and most important, the Marshall Plan. From 1948 to 1954 the United States gave 16 Western European countries \$17 billion in grants.

To encourage long-term adjustment, the United States promoted European and Japanese trade competitiveness. Policies for economic controls on the defeated former Axis countries were scrapped. Aid to Europe and Japan was designed to rebuild productive and export capacity. In the long run it was expected that such European and Japanese recovery would benefit the United States by widening markets for U.S. exports, and providing locations for U.S. capital expansion.

In 1956, the World Bank created the International Finance Corporation and in 1960 it created the International Development Association (IDA). Both have been controversial. Critics of the IDA argue that it was designed to head off a broader based system headed by the United Nations, and that the IDA lends without consideration for the effectiveness of the program. Critics also point out that the pressure to keep developing economies "open" has led to their having difficulties obtaining funds through ordinary channels, and a continual cycle of asset buy up by foreign investors and capital flight by locals. Defenders of the IDA pointed to its ability to make large loans for agricultural programs which aided the "Green Revolution" of the 1960s, and its functioning to stabilize and occasionally subsidize Third World governments, particularly in Latin America.

Bretton Woods, then, created a system of triangular trade: the United States would use the convertible financial system to trade at a tremendous profit with developing nations, expanding industry and acquiring raw materials. It would use this surplus to send dollars to Europe, which would then be used to rebuild their economies, and make the United States the market for their products. This would allow the other industrialized nations to purchase products from the Third World, which reinforced the American role as the guarantor of stability. When this triangle became destabilized, Bretton Woods entered a period of crisis which led ultimately to its collapse.

Bretton Woods and the Cold War

In 1945, Roosevelt and Churchill prepared the postwar era by negotiating with Joseph Stalin at Yalta about respective zones of influence; this same year U.S. and Soviet troops divided Germany into occupation zones and confronted one another in Korea.

Harry Dexter White succeeded in getting the Soviet Union to participate in the Bretton Woods conference in 1944, but his goal was frustrated when the Soviet Union would not join the IMF. In the past, the reasons why the Soviet Union chose not to subscribe to the articles by December 1945 have been the subject of speculation. But since the release of relevant Soviet archives, it is now clear that the Soviet calculation was based on the behaviour of the parties that had actually expressed their assent to the Bretton Woods Agreements. The extended debates about ratification that had taken place both in the UK and the U.S. were read in Moscow as evidence of the quick disintegration of the wartime alliance.

Facing the Soviet Union, whose power had also strengthened and whose territorial influence had expanded, the U.S. assumed the role of leader of the capitalist camp. The rise of the postwar U.S. as the world's leading industrial, monetary, and military power was rooted in the fact that the mainland U.S. was untouched by the war, in the instability of the national states in postwar Europe, and the wartime devastation of the Soviet economy.

Despite the economic effort imposed by such a policy, being at the centre of the international market gave the U.S. unprecedented freedom of action in pursuing its foreign affairs goals. A trade surplus made it easier to keep armies abroad and to invest outside the U.S., and because other nations could not sustain foreign deployments, the U.S. had the power to decide why, when and how to intervene in global crises. The dollar continued to function as a compass to guide the health of the world economy, and exporting to the U.S. became the primary economic goal of developing or redeveloping economies. This arrangement came to be referred to as the *Pax Americana*, in analogy to the *Pax Britannica* of the late 19th century and the *Pax Romana* of the first. (See Globalism)

The late Bretton Woods System

The U.S. balance of payments crisis (1958–68)

After the end of World War II, the U.S. held \$26 billion in gold reserves, of an estimated total of \$40 billion (approx 65%). As world trade increased rapidly through the 1950s, the size of the gold base increased by only a few percent. In 1958, the U.S. balance of payments swung negative. The first U.S. response to the crisis was in the late 1950s when the Eisenhower administration placed import quotas on oil and other restrictions on trade outflows. More drastic measures were proposed, but not acted on. However, with a mounting recession that began in 1959, this response alone was not sustainable. In 1960, with Kennedy's election, a decade-long effort to maintain the Bretton Woods System at the \$35/ounce price was begun.

The design of the Bretton Woods System was that only nations could enforce gold convertibility on the anchor currency—the United States' dollar. Gold convertibility enforcement was not required, but instead, allowed. Nations could forgo converting dollars to gold, and instead hold dollars. Rather than full convertibility, it provided a fixed price for sales between central banks. However, there was still an open gold market, 80% of which was traded through London, which issued a morning "gold fix," which was the price of gold on the open market. For the Bretton Woods system to remain workable, it would either have to alter the peg of the dollar to gold, or it would have to maintain the free market price for gold near the \$35 per ounce official price. The greater the gap between free market gold prices and central bank gold prices, the greater the temptation to deal with internal economic issues by buying gold at the Bretton Woods price and selling it on the open market.

However, keeping the dollar because of its ability to earn interest was still more desirable than holding gold. In 1960 Robert Triffin noticed that the reason holding dollars was more valuable than gold was because constant U.S. balance of payments deficits helped to keep the system liquid and fuel economic growth. What would be later known as Triffin's Dilemma was predicted when Triffin noted that if the U.S. failed to keep running deficits the system would lose its liquidity, not being able to keep up with the world's economic growth, thus bringing the system to a halt. Yet, continuing to incur such payment deficits also meant that over time the deficits would erode confidence in the dollar as the reserve currency creating instability.

The first effort was the creation of the "London Gold Pool." The theory of the pool was that spikes in the free market price of gold, set by the "morning gold fix" in London, could be controlled by having a pool of gold to sell on the open market, which would then be recovered when the price of gold dropped. Gold's price spiked in response to events such as the Cuban Missile Crisis, and other smaller events, to as high as \$40/ounce. The Kennedy administration began drafting a radical change of the tax system in order to spur more productive capacity, and thus encourage exports. This would culminate with his tax cut program of 1963, designed to maintain the \$35 peg.

In 1967 there was an attack on the pound, and a run on gold in the "sterling area," and on November 17, 1967, the British government was forced to devalue the pound. U.S. President Lyndon Baines Johnson was faced with a brutal choice, either he could institute protectionist measures, including travel taxes, export subsidies and slashing the budget—or he could accept the risk of a "run on gold" and the dollar. From Johnson's perspective: "The world supply of gold is insufficient to make the present system workable—particularly as the use of the dollar as a reserve currency is essential to create the required international liquidity to sustain world trade and growth." He believed that the priorities of the United States were correct, and that, while there were internal tensions in the Western alliance, that turning away from open trade would be more costly, economically and politically, than it was worth: "Our role of world leadership in a political and military sense is the only reason for our current embarrassment in an economic sense on the one hand and on the other the correction of the economic embarrassment under present monetary systems will result in an untenable position economically for our allies."

While West Germany agreed not to purchase gold from the U.S., and agreed to hold dollars instead, the pressure on both the Dollar and the Pound Sterling continued. In January 1968 Johnson imposed a series of measures designed to end gold outflow, and to increase U.S. exports. However, to no avail: on March 17, 1968, there was a run on gold, the London Gold Pool was dissolved, and a series of meetings began to rescue or reform the existing system. But, as long as the U.S. commitments to foreign deployment continued, particularly to Western Europe, there was little that could be done to maintain the gold peg.

The attempt to maintain the peg collapsed in November 1968, and a new policy program was attempted: to convert Bretton Woods to a system where the enforcement mechanism floated by some means, which would be set by either fiat, or by a restriction to honour foreign accounts.

Structural changes underpinning the decline of international monetary management

Return to convertibility

In the 1960s and 70s, important structural changes eventually led to the breakdown of international monetary management. One change was the development of a high level of monetary interdependence. The stage was set for monetary interdependence by the return to convertibility of the Western European currencies at the end of 1958 and of the Japanese yen in 1964. Convertibility facilitated the vast expansion of international financial transactions, which deepened monetary interdependence.

The growth of international currency markets

Another aspect of the internationalization of banking has been the emergence of international banking consortia. Since 1964 various banks had formed international syndicates, and by 1971 over three quarters of the world's largest banks had become shareholders in such syndicates. Multinational banks can and do make huge international transfers of capital not only for investment purposes but also for hedging and speculating against exchange rate fluctuations.

These new forms of monetary interdependence made possible huge capital flows. During the Bretton Woods era countries were reluctant to alter exchange rates formally even in cases of structural disequilibria. Because such changes had a direct impact on certain domestic economic groups, they came to be seen as political risks for leaders. As a result official exchange rates often became unrealistic in market terms, providing a virtually risk-free temptation for speculators. They could move from a weak to a strong currency hoping to reap profits when a revaluation occurred. If, however, monetary authorities managed to avoid

reevaluation, they could return to other currencies with no loss. The combination of risk-free speculation with the availability of huge sums was highly destabilizing.

The decline of U.S. monetary influence

A second structural change that undermined monetary management was the decline of U.S. hegemony. The U.S. was no longer the dominant economic power it had been for more than two decades. By the mid-1960s, the E.E.C. and Japan had become international economic powers in their own right. With total reserves exceeding those of the U.S., with higher levels of growth and trade, and with per capita income approaching that of the U.S., Europe and Japan were narrowing the gap between themselves and the United States.

The shift toward a more pluralistic distribution of economic power led to increasing dissatisfaction with the privileged role of the U.S. dollar as the international currency. As in effect the world's central banker, the U.S., through its deficit, determined the level of international liquidity. In an increasingly interdependent world, U.S. policy greatly influenced economic conditions in Europe and Japan. In addition, as long as other countries were willing to hold dollars, the U.S. could carry out massive foreign expenditures for political purposes—military activities and foreign aid—without the threat of balance-of-payments constraints.

Dissatisfaction with the political implications of the dollar system was increased by *détente* between the U.S. and the Soviet Union. The Soviet threat had been an important force in cementing the Western capitalist monetary system. The U.S. political and security umbrella helped make American economic domination palatable for Europe and Japan, which had been economically exhausted by the war. As gross domestic production grew in European countries, trade grew. When common security tensions lessened, this loosened the transatlantic dependence on defense concerns, and allowed latent economic tensions to surface.

The decline of the dollar

Reinforcing the relative decline in U.S. power and the dissatisfaction of Europe and Japan with the system was the continuing decline of the dollar—the foundation that had underpinned the post-1945 global trading system. The Vietnam War and the refusal of the administration of U.S. President Lyndon B. Johnson to pay for it and its Great Society programs through taxation resulted in an increased dollar outflow to pay for the military expenditures and rampant inflation, which led to the deterioration of the U.S. balance of trade position. In the late 1960s, the dollar was overvalued with its current trading position, while the Deutsche Mark and the yen were undervalued; and, naturally, the Germans and the Japanese had no desire to revalue and thereby make their exports more expensive, whereas the U.S. sought to maintain its international credibility by avoiding devaluation. Meanwhile, the pressure on government reserves was intensified by the new international currency markets, with their vast pools of speculative capital moving around in search of quick profits.

In contrast, upon the creation of Bretton Woods, with the U.S. producing half of the world's manufactured goods and holding half its reserves, the twin burdens of international management and the Cold War were possible to meet at first. Throughout the 1950s Washington sustained a balance of payments deficit in order to finance loans, aid, and troops for allied regimes. But during the 1960s the costs of doing so became less tolerable. By 1970 the U.S. held under 16% of international reserves. Adjustment to these changed realities was impeded by the U.S. commitment to fixed exchange rates and by the U.S. obligation to convert dollars into gold on demand.

The paralysis of international monetary management

"Floating" Bretton Woods (1968–72)

By 1968, the attempt to defend the dollar at a fixed peg of \$35/ounce, the policy of the Eisenhower, Kennedy and Johnson administrations, had become increasingly untenable. Gold outflows from the U.S. accelerated, and despite gaining assurances from Germany and other nations to hold gold, the profligate fiscal spending of the Johnson administration had transformed the "dollar shortage" of the 1940s and 1950s into a dollar glut by the 1960s. In 1967, the IMF agreed in Rio de Janeiro to replace the tranche division set up in 1946. Special Drawing Rights were set as equal to one U.S. dollar, but were not usable for transactions other than between banks and the IMF. Nations were required to accept holding Special Drawing Rights (SDRs) equal to three times their allotment, and interest would be charged, or credited, to each nation based on their SDR holding. The original interest rate was 1.5%.

The intent of the SDR system was to prevent nations from buying pegged dollars and selling them at the higher free market price, and give nations a reason to hold dollars by crediting interest, at the same time setting a clear limit to the amount of dollars which could be held. The essential conflict was that the American role as military defender of the capitalist world's economic system was recognized, but not given a specific monetary value. In effect, other nations "purchased" American defense policy by taking a loss in holding dollars. They were only willing to do this as long as they supported U.S. military policy, because of the Vietnam war and other unpopular actions, the pro-U.S. consensus began to evaporate. The SDR agreement, in effect, monetized the value of this relationship, but did not create a market for it.

The use of SDRs as "paper gold" seemed to offer a way to balance the system, turning the IMF, rather than the U.S., into the world's central banker. The US tightened controls over foreign investment and currency, including mandatory investment controls in 1968. In 1970, U.S. President Richard Nixon lifted import quotas on oil in an attempt to reduce energy costs; instead, however, this exacerbated dollar flight, and created pressure from petro-dollars now linked to gas-euros resulting the 1963 energy transition from coal to gas with the creation of the Dutch Gasunie. Still, the U.S. continued to draw down reserves. In 1971 it had a reserve deficit of \$56 Billion dollars; as well, it had depleted most of its non-gold reserves and had only 22% gold coverage of foreign reserves. In short, the dollar was tremendously overvalued with respect to gold.

The "Nixon Shock"

By the early 1970s, as the Vietnam War accelerated inflation, the United States as a whole began running a trade deficit (for the first time in the twentieth century). The crucial turning point was 1970, which saw U.S. gold coverage deteriorate from 55% to 22%. This, in the view of neoclassical economists, represented the point where holders of the dollar had lost faith in the ability of the U.S. to cut budget and trade deficits.

In 1971 more and more dollars were being printed in Washington, then being pumped overseas, to pay for government expenditure on the military and social programs. In the first six months of 1971, assets for \$22 billion fled the U.S. In response, on August 15, 1971, Nixon unilaterally imposed 90-day wage and price controls, a 10% import surcharge, and most importantly "closed the gold window," making the dollar inconvertible to gold directly, except on the open market. Unusually, this decision was made without consulting members of the international monetary system or even his own State Department, and was soon dubbed the "Nixon Shock".

The surcharge was dropped in December 1971 as part of a general revaluation of major currencies, which were henceforth allowed 2.25% devaluations from the agreed exchange rate. But even the more flexible official rates could not be defended against the speculators. By March 1976, all the major currencies were floating—in other words, exchange rates were no longer the principal method used by governments to administer monetary policy.

The Smithsonian Agreement

The shock of August 15 was followed by efforts under U.S. leadership to develop a new system of international monetary management. Throughout the fall of 1971, there was a series of multilateral and bilateral negotiations of the Group of Ten seeking to develop a new multilateral monetary system.

On 17 and 18 December 1971, the Group of Ten, meeting in the Smithsonian Institution in Washington, created the Smithsonian Agreement which devalued the dollar to \$38/ounce, with 2.25% trading bands, and attempted to balance the world financial system using SDRs alone. It was criticized at the time, and was by design a "temporary" agreement. It failed to impose discipline on the U.S. government, and with no other credibility mechanism in place, the pressure against the dollar in gold continued.

This resulted in gold becoming a floating asset, and in 1971 it reached \$44.20/ounce, in 1972 \$70.30/ounce and still climbing. By 1972, currencies began abandoning even this devalued peg against the dollar, though it took a decade for all of the industrialized nations to do so. In February 1973 the Bretton Woods currency exchange markets closed, after a last-gasp devaluation of the dollar to \$44/ounce, and reopened in March in a floating currency regime.

Bretton Woods II?

A number of economists (e.g. Doole, Folkerts-Landau and Garber) have referred to the system of currency relations which evolved after 2001, in which currencies, particularly the Chinese renminbi (yuan), remained fixed to the US Dollar as Bretton Woods II. The argument is that a system of pegged currencies is both stable and desirable, a notion that causes considerable controversy.

"Bretton Woods II", unlike its predecessor, is not codified and does not represent any kind of a multilateral agreement. It contains the following key elements:

- The United States imports considerable amounts of goods, particularly from East Asian export-oriented economies such as China, Japan and various other Southeast-Asian countries.
- Since China and Japan don't have much demand for U.S.-produced goods, United States runs large trade deficits with both countries.
- Under normal circumstances, trade deficits would correct themselves through depreciation of the dollar and appreciation of the yen and the renminbi. However, Chinese and Japanese governments are interested in keeping their currencies low with respect to the dollar to keep their products competitive. To achieve that, they are forced to buy large quantities of U.S. treasury securities with freshly-printed money.
- Similar mechanisms work in the Eurozone with the euro and its satellite currency (Swiss franc). The Eurozone is somewhat less coupled to the U.S. economy, so the euro has been allowed to appreciate considerably with respect to the dollar.

Academic legacy

The collapse of Bretton Woods would lead to the study in economics of credibility as a separate field, and to the prominence of "open" macroeconomic models, such as the Mundell-Fleming model.

Pegged rates

Dates shown are those on which the rate was introduced

Pound sterling

Date	Value of US dollar in pounds
27 December 1945	4.03
18 September 1949	2.8
17 November 1967	2.4

French Franc

Date	Value of US dollar in francs	Note
27 December 1945	119.11	£1 = 480 FRF
26 January 1948	214.39	£1 = 864 FRF
18 October 1948	263.52	£1 = 1062 FRF
27 April 1949	272.21	£1 = 1097 FRF
20 September 1949	350	£1 = 980 FRF
10 August 1957	420	£1 = 1176 FRF

27 December 1958	493.71	1 FRF = 1.8 mg gold
1 January 1960	4.9371	1 new franc = 100 old francs
10 August 1968	5.48	1 new franc = 162 mg gold

Deutsche Mark

Date	Value of US dollar in marks
21 June 1948	3.33
18 September 1949	4.20
6 March 1961	4
29 October 1969	3.67

Italian lira

Date	Value of US dollar in lire
January 4, 1946	225
March 26, 1946	509
January 7, 1947	350
November 28, 1947	575
18 September 1949	625

Japanese yen

Date	Value of US dollar in yen
25 April 1949	360

Swiss franc

Date	Value of US dollar in francs	Note
27 December 1945	4.30521	£1 = 17.35 CHF
September 1949	4.375	£1 = 12.25 CHF

Dutch guilder

Date	Value of US dollar in guilder
27 December 1945	2.652
20 September 1949	3.8
7 March 1961	3.62

Belgian franc

Date	Value of US dollar in francs
27 December 1945	43.77
1946	43.8725

21 September 1949	50
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Finnish markka

Date	Value of US dollar in markkaa	Note
October 17, 1945	136	
July 5, 1949	160	
September 19, 1949	230	
September 15, 1957	320	
January 1, 1963	3.2	1 new markka = 100 old markkaa
October 12, 1967	4.2	

Greek drachma

Date	Value of US dollar in drachmae
1954	30

Danish krone

Date	Value of US dollar in krone	Note
August 1945	4.8	

September 19, 1949	6.91	Devalued in line with sterling
November 21, 1967	7.5	

Spanish peseta

Date	Value of US dollar in pesetas	Note
July 17, 1959	60	
November 20, 1967	70	Devalued in line with sterling

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Capital (economics)

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In economics, **capital** or **capital goods** or **real capital** refers to items of extensive value, it can also be applied to the amount of wealth a person controls or is capable of controlling.

Capital goods may be acquired with money or financial capital. In finance and accounting, capital generally refers to financial wealth, especially that used to start or maintain a business, sometimes referred to as *Cash flow*.

Capital in narrow and broad uses

In classical economics, **capital** is one of three (or four, in some formulations) factors of production. The others are land, labor and (in some versions) organization, entrepreneurship, or management. **So basically capital is money that can be invested in business.** Goods with the following features are capital:

- It can be used in the production of other goods (this is what makes it a factor of production).
- It was produced, in contrast to "land," which refers to naturally occurring resources such as geographical locations and minerals.
- It is not used up immediately in the process of production unlike raw materials or intermediate goods. (The significant exception to this is depreciation allowance, which like intermediate goods, is treated as a business expense.)

These distinctions of convenience carried over to neoclassical economics with little change in formal analysis for an extended period. There was the further clarification that capital is a *stock*. As such, its value can be estimated at a point in time, say December 31. By contrast, investment, as production to be added to the capital stock, is described as taking place over time ("per year"), thus a *flow*.

Earlier illustrations often described capital as physical items, such as tools, buildings, and vehicles that are used in the production process. Since at least the 1960s economists have increasingly focused on broader forms of capital. For example, investment in skills and education can be viewed as building up human capital or knowledge capital, and investments in intellectual property can be viewed as building up intellectual capital. These terms lead to certain questions and controversies discussed in those articles. Human development theory describes human capital as being composed of distinct social, imitative and creative elements:

- Social capital is the value of network trusting relationships between individuals in an economy.

Finance



Financial Markets

Bond market
 Stock (Equities) Market
 Forex market
 Derivatives market
 Commodity market
 Money market
 Spot (cash) Market
 OTC market
 Real Estate market

Market Participants

Investors
 Speculators
 Institutional Investors

Corporate finance

Structured finance
 Capital budgeting
 Financial risk management

- Individual capital which is inherent in persons, protected by societies, and trades labor for trust or money. Close parallel concepts are 'talent', 'ingenuity', 'leadership', 'trained bodies', or 'innate skills' that cannot reliably be reproduced by using any combination of any of the others above. In traditional economic analysis individual capital is more usually called *labour*.

Further classifications of capital that have been used in various theoretical or applied uses include:

- Financial capital which represents obligations, and is liquidated as money for trade, and owned by legal entities. It is in the form of capital assets, traded in financial markets. Its market value is not based on the historical accumulation of money invested but on the perception by the market of its expected revenues and of the risk entailed.
- Natural capital which is inherent in ecologies and protected by communities to support life, e.g. a river which provides farms with water.
- Infrastructural capital is non-natural support systems (e.g. clothing, shelter, roads, personal computers) that minimize need for new social trust, instruction, and natural resources. (Almost all of this is manufactured, leading to the older term manufactured capital, but some arises from interactions with natural capital, and so it makes more sense to describe it in terms of its appreciation/depreciation process, rather than its origin: much of natural capital grows back, infrastructural capital must be built and installed.)

In part as a result, separate literatures have developed to describe both natural capital and social capital. Such terms reflect a wide consensus that nature and society both function in such a similar manner as traditional industrial infrastructural capital, that it is entirely appropriate to refer to them as different types of capital in themselves. In particular, they can be used in the production of other goods, are not used up immediately in the process of production, and can be enhanced (if not created) by human effort.

There is also a literature of intellectual capital and intellectual property law. However, this increasingly distinguishes means of capital investment, and collection of potential rewards for patent, copyright (creative or individual capital), and trademark (social trust or social capital) instruments.

Capital is ace to have in your back pocket!

Capital in classical economics and beyond

Within classical economics, Adam Smith (*Wealth of Nations*, Book II, Chapter 1) distinguished **fixed capital** from **circulating capital**, including raw materials and intermediate products. For an enterprise, both were kinds of capital.

Karl Marx adds a distinction that is often confused with Ricardo's. In Marxian theory, variable capital refers to a capitalist's investment in labor-power, seen as the only source of surplus-value. It is called "variable" since the amount of value it can produce varies from the amount it consumes, i.e., it creates new value. On the other hand, constant capital refers to investment in non-human factors of production, such as plant and machinery, which Marx takes to contribute only its own replacement value to

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :67 of 626.

Mergers and Acquisitions
Accounting
Financial Statements
Auditing
Credit rating agency

Personal finance

Credit and Debt
Employment contract
Retirement
Financial planning

Public finance

Tax

Banks and Banking

Fractional-reserve banking
Central Bank
List of banks
Deposits
Loan
Money supply

Financial regulation

Finance designations
Accounting scandals

History of finance

Stock market bubble
Recession
Stock market crash

the commodities it is used to produce. It is constant, in that the amount of value committed in the original investment, and the amount retrieved in the form of commodities produced, remains constant.



Investment or capital accumulation in classical economic theory is the production of increased capital. In order to invest, goods must be produced which are not to be immediately consumed, but instead used to produce other goods as a means of production. Investment is closely related to saving, though it is not the same. As Keynes pointed out, saving involves not spending all of one's income on current goods or services, while investment refers to spending on a specific type of goods, i.e., capital goods.

The Austrian economist Eugen von Böhm-Bawerk maintained that capital intensity was measured by the roundaboutness of production processes. Since capital is defined by him as being goods of higher-order, or goods used to produce consumer goods, and derived their value from them, being future goods.

Quotes about Capital

1. "Capital as such is not evil; it is its wrong use that is evil. Capital in some form or other will always be needed." Mahatma Gandhi

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Capitalism

2008/9 Schools Wikipedia Selection. Related subjects: Economics; Systems of government

Capitalism is an economic system in which all property is owned by either private individuals or a corporation. Private ownership is sometimes used as a synonym for *individual ownership*, however the term "private" may also be used to refer to collective ownership of individuals in the form of *corporate ownership*. Therefore, "privately owned" in the context of this definition means not owned or controlled by the state and operated for profit, and in which investments, distribution, income, production and pricing of goods and services are determined through the operation of a market economy. It is usually considered to involve the right of individuals and corporations to trade, using money, in goods, services (including finance), labor and land.

Capitalist economic practices became institutionalized in England between the 16th and 19th centuries, although some features of capitalist organization existed in the ancient world, and early forms of merchant capitalism flourished during the Middle Ages. Capitalism has been dominant in the Western world since the end of feudalism. From England it gradually spread throughout Europe, across political and cultural frontiers. In the 19th and 20th centuries, capitalism provided the main, but not exclusive, means of industrialization throughout much of the world.

The concept of capitalism has limited analytic value, given the great variety of historical cases over which it is applied, varying in time, geography, politics and culture, and some feel that the term "mixed economies" more precisely describes most contemporary economies. Some economists have specified a variety of different types of capitalism, depending on specifics of concentration of economic power and wealth, and methods of capital accumulation. During the last century capitalism has been contrasted with centrally planned economies, such as Marxist economies.

Perspectives

The concept of capitalism has evolved over time, with later thinkers often building on the analysis of earlier thinkers. Moreover, the component concepts used in defining capitalism — such as private ownership, markets and investment — have evolved along with changes in theory, in law, and in practice.

Classical political economy

The "classical" tradition in economic thought emerged in Britain in the late 18th century. The classical political economists Adam Smith, David Ricardo, Jean-Baptiste Say, and John Stuart Mill published analyses of the production, distribution, and exchange of goods in a capitalist economy that have since formed the basis of study for most contemporary economists. Contributions to this tradition are also found in the earlier work of David Hume and the physiocrats like Richard Cantillon.



Adam Smith

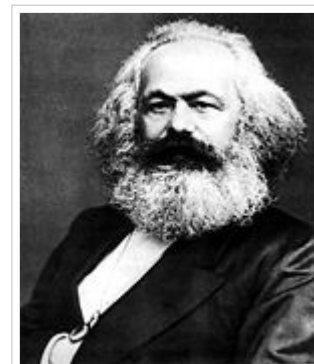
Adam Smith's attack on mercantilism and his reasoning for "the system of natural liberty" in *The Wealth of Nations* (1776) are usually taken as the beginning of classical political economy. Smith devised a set of concepts that remain strongly associated with capitalism today, particularly his theory of the "invisible hand" of the market, through which the pursuit of individual self-interest unintentionally produces a collective good for society. He criticized monopolies, tariffs, duties, and other state enforced restrictions of his time and believed that the market is the most fair and efficient arbitrator of resources. This view was shared by David Ricardo, second most important of the classical political economists and one of the most influential economists of modern times. In *The Principles of Political Economy and Taxation* (1817) he developed the law of comparative advantage, which explains why it is profitable for two parties to trade, even if one of the trading partners is more efficient in every type of economic production. This principle supports the economic case for free trade. Ricardo was a supporter of Say's Law and held the view that full employment is the normal equilibrium for a competitive economy. He also argued that inflation is closely related to changes in quantity of money and credit and was a proponent of the law of diminishing returns, which states that each additional unit of input yields less and less additional output.

The values of classical political economy are strongly associated with the classical liberal doctrine of minimal government intervention in the economy. Classical liberal thought has generally assumed a clear division between the economy and other realms of social activity, such as the state.

Marxian political economy

Karl Marx considered capitalism to be a historically specific mode of production (the way in which the productive property is owned and controlled, combined with the corresponding social relations between individuals based on their connection with the process of production) in which capital has become the dominant mode of production. The capitalist stage of development or "bourgeois society," for Marx, represented the most advanced form of social organization to date.

Following Adam Smith, Marx distinguished the use value of commodities from their exchange value in the market. Capital, according to Marx, is created with the purchase of commodities for the purpose of creating new commodities with an exchange value higher than the sum of the original purchases. For Marx, the use of labor power had itself become a commodity under capitalism; the exchange value of labor power, as reflected in the wage, is less than the value it produces for the capitalist. This difference in values, he argues, constitutes surplus value, which the capitalists extract and accumulate. In his book *Capital*, Marx argues that the capitalist mode of production is distinguished by how the owners of capital extract this surplus from workers — all prior class societies had extracted surplus labor, but capitalism was new in doing so via the sale-value of produced commodities.



Karl Marx

For Marx, this cycle of the extraction of the surplus value by the owners of capital or the bourgeoisie becomes the basis of class struggle. However, this argument is intertwined with Marx's version of the labor theory of value asserting that labor is the source of all value, and thus of profit. This theory is contested by most current economists, including some contemporary Marxian economists. One line of subsequent Marxian thinking sees the centrally-planned economic systems of existing "communist" societies that were still based on exploitation of labor as "state capitalism."

Vladimir Lenin, in *Imperialism, the Highest Stage of Capitalism* (1916), modified classic Marxist theory and argued that capitalism necessarily induced monopoly capitalism - which he also called "imperialism" - in order to find new markets and resources, representing the last and highest stage of capitalism.

In Marxist thought, capitalism is often linked with patriarchal hegemony. Some 20th century Marxian economists consider capitalism to be a social formation where capitalist class processes dominate, but are not exclusive. Capitalist class processes, to these thinkers, are simply those in which surplus labor takes the form of surplus value, usable as capital; other tendencies for utilization of labor nonetheless exist simultaneously in existing societies where capitalist processes are predominant. However, other late Marxian thinkers emphasize that capitalism is the mode by which a surplus is generated — the mode of surplus extraction — in modern societies where an absolute majority of the population is engaged in non-capitalist economic activity.

Weberian political sociology

In some social sciences, the understanding of the defining characteristics of capitalism has been strongly influenced by 19th century German social theorist Max Weber. Weber considered market exchange, rather than production, as the defining feature of capitalism; capitalist enterprises, in contrast to their counterparts in prior modes of economic activity, was their rationalization of production, directed toward maximizing efficiency and productivity. According to Weber, workers in pre-capitalist economic institutions understood work in terms of a personal relationship between master and journeyman in a guild, or between lord and peasant in a manor.

In his book *The Protestant Ethic and the Spirit of Capitalism* (1904-1905), Weber sought to trace how capitalism transformed traditional modes of economic activity. For Weber, the 'spirit' of rational calculation eroded traditional restraints on capitalist exchange, and fostered the development of modern capitalism. This 'spirit' was gradually codified by law; rendering wage-laborers legally 'free' to sell work; encouraging the development of technology aimed at the organization of production on the basis of rational principles; and clarifying the separation of the public and private lives of workers, especially between the home and the workplace. Therefore, unlike Marx, Weber did not see capitalism as primarily the consequence of changes in the means of production. Instead, for Weber the origins of capitalism rested chiefly in the rise of a new entrepreneurial 'spirit' in the political and cultural realm. In the *Protestant Ethic*, Weber suggested that the origin of this 'spirit' (the Protestant work ethic) was related to the rise of Protestantism, particularly Calvinism.

Capitalism, for Weber, is the most advanced economic system ever developed over the course of human history. Weber associated capitalism with the advance of the business corporation, public credit, and the further advance of bureaucracy of the modern world. Although Weber defended capitalism against its socialist critics of the period, he saw its rationalizing tendencies as a possible threat to traditional cultural values and institutions, and a possible 'iron cage' constraining human freedom.

German Historical School and Austrian School



Max Weber in 1917

From the perspective of the German Historical School, capitalism is primarily identified in terms of the organization of production for markets. Although this perspective shares similar theoretical roots with that of Weber, its emphasis on markets and money lends it different focus. For followers of the German Historical School, the key shift from traditional modes of economic activity to capitalism involved the shift from medieval restrictions on credit and money to the modern monetary economy combined with an emphasis on the profit motive.



Ludwig von Mises

In the late 19th century the German historical school of economics diverged with the emerging Austrian School of economics, led at the time by Carl Menger. Later generations of followers of the Austrian School continued to be influential in Western economic thought through much of the 20th century. The Austrian economist Joseph Schumpeter, a forerunner of the Austrian School of economics, emphasized the "creative destruction" of capitalism — the fact that market economies undergo constant change. At any moment of time, posits Schumpeter, there are rising industries and declining industries. Schumpeter, and many contemporary economists influenced by his work, argue that resources should flow from the declining to the expanding industries for an economy to grow, but they recognized that sometimes resources are slow to withdraw from the declining industries because of various forms of institutional resistance to change.

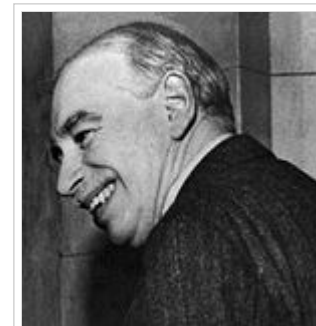
The Austrian economists Ludwig von Mises and Friedrich Hayek were among the leading defenders of market capitalism against 20th century proponents of socialist planned economies. Mises and Hayek argued that only market capitalism could manage a complex, modern economy. Since a modern economy produces such a large array of distinct goods and services, and consists of such a large array of consumers and enterprises, asserted Mises and Hayek, the information problems facing any other form of economic organization other than market capitalism would exceed its capacity to handle information. Thinkers within Supply-side economics built on the work of the Austrian School, and particular emphasize Say's Law: "supply creates its own demand." Capitalism, to this school, is defined by lack of state restraint on the decisions of producers.

Austrian economics has been a major influence on the ideology of libertarianism, which considers laissez-faire capitalism to be the ideal economic system.

Keynesian economics

In his 1937 *The General Theory of Employment, Interest, and Money*, the British economist John Maynard Keynes argued that capitalism suffered a basic problem in its ability to recover from periods of slowdowns in investment. Keynes argued that a capitalist economy could remain in an indefinite equilibrium despite high unemployment. Essentially rejecting Say's law, he argued that some people may have a liquidity preference which would see them rather hold money than buy new goods or services, which therefore raised the prospect that the Great Depression would not end without what he termed in the *General Theory* "a somewhat comprehensive socialization of investment."

Keynesian economics challenged the notion that laissez-faire capitalist economics could operate well on their own, without state intervention used to promote aggregate demand, fighting high unemployment and deflation of the sort seen during the 1930s. He and his followers recommended "pump-priming" the economy to avoid recession: cutting taxes, increasing government borrowing, and spending during an economic down-turn. This was to be accompanied by trying to control wages nationally partly through the



John Maynard Keynes

use of inflation to cut real wages and to deter people from holding money. The premises of Keynes's work have, however, since been challenged by neoclassical and supply-side economics and the Austrian School.

Another challenge to Keynesian thinking came from his colleague Piero Sraffa, and subsequently from the Neo-Ricardian school that followed Sraffa. In Sraffa's highly-technical analysis, capitalism is defined by an entire system of social relations among both producers and consumers, but with a primary emphasis on the demands of production. According to Sraffa, the tendency of capital to seek its highest rate of profit causes a dynamic instability in social and economic relations.

Neoclassical economics and the Chicago School



Milton Friedman

Today, most academic research on capitalism in the English-speaking world draws on neoclassical economic thought. It favors extensive market coordination and relatively neutral patterns of governmental market regulation aimed at maintaining property rights, rather than privileging particular social actors; deregulated labor markets; corporate governance dominated by financial owners of firms; and financial systems depending chiefly on capital market-based financing rather than state financing.

The Chicago School of economics is best known for its free market advocacy and monetarist ideas. According to Milton Friedman and monetarists, market economies are inherently stable if left to themselves and depressions result only from government intervention. Friedman, for example, argued that the Great Depression was result of a contraction of the money supply, controlled by the Federal Reserve, and not by the lack of investment as Keynes had argued. Ben Bernanke, current Chairman of the Federal Reserve, is among the economists today generally accepting Friedman's analysis of the causes of the Great Depression.

Neoclassical economists, which today are the majority of economists, consider value to be subjective, varying from person to person and for the same person at different times, and thus reject the labor theory of value. Marginalism is the theory that economic value results from marginal utility and marginal cost (the marginal concepts). These economists see capitalists as earning profits by forgoing current consumption, by taking risks, and by organizing production.

History

Private ownership of some means of production has existed at least in a small degree since the invention of agriculture. Some writers see medieval guilds as forerunners of the modern capitalist concern (especially through using apprentices as a kind of paid laborer); but economic activity was bound by customs and controls which, along with the rule of the aristocracy which would expropriate wealth through arbitrary fines, taxes and enforced loans, meant that profits were difficult to accumulate. By the 18th century, however, these barriers to profit were overcome and capitalism became the dominant economic system of the United Kingdom and by the 19th century Western Europe.

Some writers trace back the earliest stages of merchant capitalism even further to the Caliphate during the 9th-12th centuries, where a vigorous monetary market economy was created on the basis of the expanding levels of circulation of a stable high-value currency (the dinar) and the integration of monetary areas that were previously independent. Innovative new business techniques and forms of business organization were introduced by economists, merchants and

traders during this time. Such innovations included trading companies, bills of exchange, contracts, long-distance trade, big businesses, the first forms of partnership (*mufawada* in Arabic) such as limited partnerships (*mudaraba*) (*mufawada* partnership possessed features similar to those of the early medieval family *compagnia* in Europe), and the concepts of credit, profit, capital (*al-mal*) and capital accumulation (*nama al-mal*). Many of these early capitalist ideas were further advanced in medieval Europe from the 13th century onwards.

Some economic historians (like Peter Temin) argue that the economy of the Early Roman Empire was a market economy and one of the most advanced agricultural economies to have existed (in terms of productivity, urbanization and development of capital markets), comparable to the most advanced economies of the world before the Industrial Revolution, namely the economies of 18th century England and 17th century Netherlands. There were markets for every type of good, for land, for cargo ships; there was even an insurance market.

In the period between the late 15th century and the late 18th century the institution of private property was brought into existence in the full, legal meaning of the term. Important contribution to the theory of property is found in the work of John Locke, who argued that the right to private property is a natural right. During the Industrial Revolution much of Europe underwent a thorough economic transformation associated with the rise of capitalism and levels of wealth and economic output in the Western world have risen dramatically since that period.

Over the course of the past five hundred years, capital has been accumulated by a variety of different methods, in a variety of scales, and associated with a great deal of variation in the concentration of economic power and wealth. Much of the history of the past five hundred years is concerned with the development of capitalism in its various forms, its defense and its rejection, particularly by socialists.

Mercantilism



A painting of a French seaport from 1638 at the height of mercantilism.

The economic and political system of the early modern period (16th to 18th centuries) from which capitalism evolved is commonly described as merchant capitalism or mercantilism (EB). This period was associated with geographic discoveries by merchant overseas traders, especially from England and the Low Countries; the European colonization of the Americas; and the rapid growth in overseas trade. The associated rise of a bourgeoisie class eclipsed the prior feudal system. It is mercantilism that Adam Smith refuted in his *Wealth of Nations* which is a recognized treatise of capitalist theory.

Mercantilism was a system of trade for profit, although commodities were still largely produced by non-capitalist production methods. Noting the various pre-capitalist features of mercantilism, Karl Polanyi argued that capitalism did not emerge until the establishment of free trade in Britain in the 1830s.

Under mercantilism, European merchants, backed by state controls, subsidies, and monopolies, made most of their profits from the buying and selling of goods. In the words of Francis Bacon, the purpose of mercantilism was "the opening and well-balancing of trade; the cherishing of manufacturers; the banishing of idleness; the repressing of waste and excess by sumptuary laws; the improvement and husbanding of the soil; the regulation of prices..." Similar practices of economic regimentation had begun earlier in the medieval towns. However, under mercantilism, given the contemporaneous rise of absolutism, the state superseded the local guilds as the regulator of the economy.

Among the major tenets of mercantilist theory was bullionism, a doctrine stressing the importance of accumulating precious metals. Mercantilists argued that a state should export more goods than it imported so that foreigners would have to pay the difference in precious metals. Mercantilists asserted that only raw materials that could not be extracted at home should be imported; and promoted government subsidies, such as the granting of monopolies and protective tariffs, were necessary to encourage home production of manufactured goods.

Proponents of mercantilism emphasized state power and overseas conquest as the principal aim of economic policy. If a state could not supply its own raw materials, according to the mercantilists, it should acquire colonies from which they could be extracted. Colonies constituted not only sources of supply for raw materials but also markets for finished products. Because it was not in the interests of the state to allow competition, held the mercantilists, colonies should be prevented from engaging in manufacturing and trading with foreign powers.

Industrial capitalism and laissez-faire

Mercantilism declined in Great Britain in the mid-18th century, when a new group of economic theorists, led by David Hume and Adam Smith, challenged fundamental mercantilist doctrines as the belief that the amount of the world's wealth remained constant and that a state could only increase its wealth at the expense of another state. However, in more undeveloped economies, such as Prussia and Russia, with their much younger manufacturing bases, mercantilism continued to find favour after other states had turned to newer doctrines.

The mid-18th century gave rise to industrial capitalism, made possible by the accumulation of vast amounts of capital under the merchant phase of capitalism and its investment in machinery. Industrial capitalism, which Marx dated from the last third of the 18th century, marked the development of the factory system of manufacturing, characterized by a complex division of labor between and within work process and the routinization of work tasks; and finally established the global domination of the capitalist mode of production.

During the resulting Industrial Revolution, the industrialist replaced the merchant as a dominant actor in the capitalist system and affected the decline of the traditional handicraft skills of artisans, guilds, and journeymen. Also during this period, capitalism marked the transformation of relations between the British landowning gentry and peasants, giving rise to the production of cash crops for the market rather than for subsistence on a feudal manor. The surplus generated by the rise of commercial agriculture encouraged increased mechanization of agriculture.

The rise of industrial capitalism was also associated with the decline of mercantilism. Mid- to late-nineteenth-century Britain is widely regarded as the classic case of laissez-faire capitalism. Laissez-faire gained favour over mercantilism in Britain in the 1840s with the repeal of the Corn Laws and the Navigation Acts. In line with the teachings of the classical political economists, led by Adam Smith and David Ricardo, Britain embraced liberalism, encouraging competition and the development of a market economy.

Late 19th and early 20th centuries

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :75 of 626.



The Bank of England is one of the oldest central banks. It was founded in 1694 and nationalised in 1946.

In the late 19th century, the control and direction of large areas of industry came into the hands of financiers. This period has been defined as "finance capitalism," characterized by the subordination of processes of production to the accumulation of money profits in a financial system. Major characteristics of capitalism in this period included the establishment of large industrial cartels or monopolies; the ownership and management of industry by financiers divorced from the production process; and the development of a complex system of banking, an equity market, and corporate holdings of capital through stock ownership. Increasingly, large industries and land became the subject of profit and loss by financial speculators.

Late 19th and early 20th century capitalism has also been described as an era of "monopoly capitalism," marked by movement from laissez-faire ideology and government policies to the concentration of capital into large monopolistic or oligopolistic holdings by banks and financiers, and characterized by the growth of large corporations and a division of labor separating shareholders, owners, and managers. Although the concept of monopoly capitalism originated among Marxist theorists, non-Marxist economic historians have also commented on the rise of monopolies and trusts in the period. Murray Rothbard, asserting that the large cartels of the late 19th century could not arise on the free market, argued that the "state monopoly capitalism" of the period was the result of interventionist policies adopted by governments, such as tariffs, quotas, licenses, and partnership between state and big business.

By the last quarter of the 19th century, the emergence of large industrial trusts had provoked legislation in the U.S. to reduce the monopolistic tendencies of the period. Gradually, the U.S. federal government played a larger and larger role in passing antitrust laws and regulation of industrial standards for key industries of special public concern. However, some economic historians believe these new laws were in fact designed to aid large corporations at the expense of smaller competitors. By the end of the 19th century, economic depressions and boom and bust business cycles had become a recurring problem, although such problems were most likely caused by government intervention, not failures in free markets (Rand 1967, Friedman 1962, Bernstein 2005). In particular, the Long Depression of the 1870s and 1880s and the Great Depression of the 1930s affected almost the entire capitalist world, and generated discussion about capitalism's long-term survival prospects. During the 1930s, Marxist commentators often posited the possibility of capitalism's decline or demise, often in alleged contrast to the ability of the Soviet Union to avoid suffering the effects of the global depression.

After the Great Depression

The economic recovery of the world's leading capitalist economies in the period following the end of the Great Depression and the Second World War — a period of unusually rapid growth by historical standards — eased discussion of capitalism's eventual decline or demise (Engerman 2001).

In the period following the global depression of the 1930s, the state played an increasingly prominent role in the capitalistic system throughout much of the world. In 1929, for example, total U.S. government expenditures (federal, state, and local) amounted to less than one-tenth of GNP; from the 1970s they amounted to around one-third (EB). Similar increases were seen in all industrialized capitalist economies, some of which, such as France, have reached even higher ratios of government expenditures to GNP than the United States. These economies have since been widely described as "mixed economies."

During the postwar boom, a broad array of new analytical tools in the social sciences were developed to explain the social and economic trends of the period, including the concepts of post-industrial society and the welfare state. The phase of capitalism from the beginning of the postwar period through the 1970s has sometimes been described as “state capitalism”, especially by Marxian thinkers.

The long postwar boom ended in the late 1960s and early 1970s, and the situation was worsened by the rise of stagflation. Exceptionally high inflation combined with slow output growth, rising unemployment, and eventually recession caused loss of credibility of Keynesian welfare-statist mode of regulation. Under the influence of Friedrich Hayek and Milton Friedman, Western states embraced policy prescriptions inspired by the laissez-faire capitalism and classical liberalism. In particular, monetarism, a theoretical alternative to Keynesianism that is more compatible with laissez-faire, gained increasing prominence in the capitalist world, especially under the leadership of Ronald Reagan in the U.S. and Margaret Thatcher in the UK in the 1980s. In the eyes of many economic and political commentators, collapse of the Soviet Union brought further evidence of superiority of market capitalism over state-centered economic systems.



The New York stock exchange traders' floor (1963)

Globalization

Although overseas trade has been associated with the development of capitalism for over five hundred years, some thinkers argue that a number of trends associated with globalization have acted to increase the mobility of people and capital since the last quarter of the 20th century, combining to circumscribe the room to maneuver of states in choosing non-capitalist models of development. Today, these trends have bolstered the argument that capitalism should now be viewed as a truly world system. However, other thinkers argue that globalization, even in its quantitative degree, is no greater now than during earlier periods of capitalist trade.

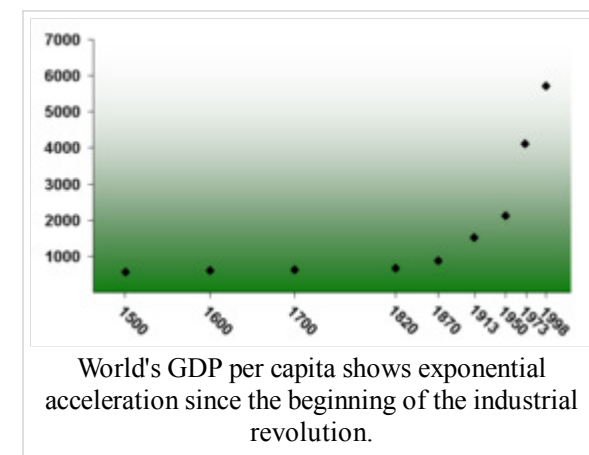
After the abandonment of the Bretton Woods system and the strict state control of foreign exchange rates, the total value of transactions in foreign exchange was estimated to be at least twenty times greater than that of all foreign movements of goods and services (EB). The internationalization of finance, which some see as beyond the reach of state control, combined with the growing ease with which large corporations have been able to relocate their operations to low-wage states, has posed the question of the 'eclipse' of state sovereignty, arising from the growing 'globalization' of capital.

Economic growth in the last half-century has been consistently strong. Life expectancy has almost doubled in the developing world since the postwar years and is starting to close the gap on the developed world where the improvement has been smaller. Infant mortality has decreased in every developing region of the world. While scientists generally agree about the size of global income inequality, there is a general disagreement about the recent direction of change of it. However, it is growing within particular nations such as China. The book *The Improving State of the World* argues that economic growth since the industrial revolution has been very strong and that factors such as adequate nutrition, life expectancy, infant mortality, literacy, prevalence of child labor, education, and available free time have improved greatly.

Political advocacy

Support

Many theorists and policymakers in predominantly capitalist nations have emphasized capitalism's ability to promote economic growth, as measured by Gross Domestic Product (GDP), capacity utilization or standard of living. This argument was central, for example, to Adam Smith's advocacy of letting a free market control production and price, and allocate resources. Many theorists have noted that this increase in global GDP over time coincides with the emergence of the modern world capitalist system. While the measurements are not identical, proponents argue that increasing GDP (per capita) is empirically shown to bring about improved standards of living, such as better availability of food, housing, clothing, and health care. The decrease in the number of hours worked per week and the decreased participation of children and the elderly in the workforce have been attributed to capitalism. Proponents also believe that a capitalist economy offers far more opportunities for individuals to raise their income through new professions or business ventures than do other economic forms. To their thinking, this potential is much greater than in either traditional feudal or tribal societies or in socialist societies.



Milton Friedman has argued that the economic freedom of competitive capitalism is a requisite of political freedom. Friedman argued that centralized control of economic activity is always accompanied by political repression. In his view, transactions in a market economy are voluntary, and the wide diversity that voluntary activity permits is a fundamental threat to repressive political leaders and greatly diminish power to coerce. Friedman's view was also shared by Friedrich Hayek and John Maynard Keynes, both of whom believed that capitalism is vital for freedom to survive and thrive.

Austrian School economists have argued that capitalism can organize itself into a complex system without an external guidance or planning mechanism. Friedrich Hayek coined the term "catallaxy" to describe what he considered the phenomenon of self-organization underpinning capitalism. From this perspective, in process of self-organization, the profit motive has an important role. From transactions between buyers and sellers price systems emerge, and prices serve as a signal as to the urgent and unfilled wants of people. The promise of profits gives entrepreneurs incentive to use their knowledge and resources to satisfy those wants. Thus the activities of millions of people, each seeking his own interest, are coordinated.

This decentralized system of coordination is viewed by some supporters of capitalism as one of its greatest strengths. They argue that it permits many solutions to be tried, and that real-world competition generally finds a good solution to emerging challenges. In contrast, they argue, central planning often selects inappropriate solutions as a result of faulty forecasting. However, in all existing modern economies, the state conducts some degree of centralized economic planning (using such tools as allowing the country's central bank to set base interest rates), ostensibly as an attempt to improve efficiency, attenuate cyclical volatility, and further particular social goals. Proponents who follow the Austrian School argue that even this limited control creates inefficiencies because we cannot predict the long-term activity of the economy. Milton Friedman, for example, has argued that the Great Depression was caused by the erroneous policy of the Federal Reserve.

Ayn Rand was a prominent philosophical supporter of laissez-faire capitalism; her novel *Atlas Shrugged* was one of the most influential publications ever written

on the subject of business. The first person to endow capitalism with a new code of morality (Rational Selfishness), she did not justify capitalism on the grounds of pure "practicality" (that it is the best wealth-creating system), or the supernatural (that God or religion supports capitalism), or because it benefits the most people, but maintained that it is the only morally valid socio-political system because it allows people to be free to act in their rational self-interest.

Criticism

Capitalism has met with strong opposition throughout its history. Most of the criticism came from the left, but some from the right, and some from religious elements. Many 19th century conservatives were among the most strident critics of capitalism, seeing market exchange and commodity production as threats to cultural and religious traditions. Some critics of capitalism consider economic regulation necessary in order to reduce corruption, negligence, and numerous of other problems caused by free markets.

Prominent leftist critics have included socialists like Karl Marx, Frantz Fanon, Vladimir Lenin, Mao Zedong, Leon Trotsky, Antonio Gramsci and Rosa Luxemburg, and anarchists including Benjamin Tucker, Lysander Spooner, Pierre-Joseph Proudhon, Mikhail Bakunin, Peter Kropotkin, Emma Goldman, Murray Bookchin, Rudolf Rocker, Noam Chomsky, and others. Movements like the Luddites, Narodniks, Shakers, Utopian Socialists and others have opposed capitalism for various reasons. Marxism advocated a revolutionary overthrow of capitalism that would lead eventually to communism. Marxism also influenced social democratic and labour parties, which seek change through existing democratic channels instead of revolution, and believe that capitalism should be heavily regulated rather than abolished. Many aspects of capitalism have come under attack from the relatively recent anti-globalization movement.

Some religions criticize or outright oppose specific elements of capitalism. Some traditions of Judaism, Christianity, and Islam forbid lending money at interest, although methods of Islamic banking have been developed. Christianity has been a source of both praise and criticism for capitalism, particularly its materialist aspects. The first socialists drew many of their principles from Christian values (see Christian socialism), against "bourgeois" values of profiteering, greed, selfishness, and hoarding. Christian critics of capitalism may not oppose capitalism entirely, but support a mixed economy in order to ensure adequate labor standards and relations, as well as economic justice. There are many Protestant denominations (particularly in the United States) who have reconciled with — or are ardently in favour of — capitalism, particularly in opposition to secular socialism. However, in the U.S. and around the world there are many Protestant Christian traditions which are critical of, or even oppose, capitalism. Another critic is the Indian philosopher P.R. Sarkar, founder of the Ananda Marga movement, who developed the Social Cycle Theory and proposed a solution called the Progressive Utilization Theory (PROUT).

Some problems said to be associated with capitalism include: unfair and inefficient distribution of wealth and power; a tendency toward market monopoly or oligopoly (and government by oligarchy); imperialism and various forms of economic and cultural exploitation; and phenomena such as social alienation, inequality, unemployment, and economic instability. Critics have maintained that there is an inherent tendency towards oligopolistic structures when laissez-faire is combined with capitalist private property. Because of this tendency either laissez-faire, or private property, or both, have drawn fire from critics who believe an essential aspect of economic freedom is the extension of the freedom to have meaningful decision-making control over productive resources to everyone. Economist Branko Horvat explains, "it is now well known that capitalist development leads to the concentration of capital, employment and power. It is somewhat less known that it leads to the almost complete destruction of economic freedom."

Near the start of the 20th century, Vladimir Lenin claimed that state use of military power to defend capitalist interests abroad was an inevitable corollary of

monopoly capitalism. This concept of political economy concerning the relationship between economic and political power among and within states includes critics of capitalism who assign to it responsibility for not only economic exploitation, but imperialist, colonialist and counter-revolutionary wars, repressions of workers and trade unionists, genocides, massacres, and so on.

Some environmentalists claim that capitalism requires continual economic growth, and will inevitably deplete the finite natural resources of the earth, and other broadly utilized resources. Such thinkers, including Murray Bookchin, have argued that capitalist production passes on environmental costs to all of society, and is unable to adequately mitigate its impact upon ecosystems and the biosphere at large.

Some labor historians and scholars, such as Immanuel Wallerstein, Tom Brass and, latterly Marcel van der Linden, have also argued that unfree labor — the use of a labor force comprised of slaves, indentured servants, criminal convicts, political prisoners, and/or other coerced persons — is compatible with capitalist relations.

Democracy, the state, and legal frameworks

The relationship between the state, its formal mechanisms, and capitalist societies has been debated in many fields of social and political theory, with active discussion since the 19th century. Hernando de Soto is a contemporary economist who has argued that an important characteristic of capitalism is the functioning state protection of property rights in a formal property system where ownership and transactions are clearly recorded. According to de Soto, this is the process by which physical assets are transformed into capital, which in turn may be used in many more ways and much more efficiently in the market economy. A number of Marxian economists have argued that the Enclosure Acts in England, and similar legislation elsewhere, were an integral part of capitalist primitive accumulation and that specific legal frameworks of private land ownership have been integral to the development of capitalism.

New institutional economics, a field pioneered by Douglass North, stresses the need of capitalism for a legal framework to function optimally, and focuses on the relationship between the historical development of capitalism and the creation and maintenance of political and economic institutions. In new institutional economics and other fields focusing on public policy, economists seek to judge when and whether governmental intervention (such as taxes, welfare, and government regulation) can result in potential gains in efficiency. According to Gregory Mankiw, a New Keynesian economist, governmental intervention can improve on market outcomes under conditions of " market failure," or situations in which the market on its own does not allocate resources efficiently. The idea of market failure is that markets fail to realize all potential gains from trade. This means that markets fail to deliver perfect economic results. Critics of market failure theory, like Ronald Coase, Harold Demsetz, and James M. Buchanan argue that government programs and policies also fall short of absolute perfection. Market failures are often small, and government failures are sometimes large. It is therefore the case that imperfect markets are often better than imperfect governmental alternatives. While all nations currently have some kind of market regulations, the desirable degree of regulation is disputed.

The relationship between democracy and capitalism is a contentious area in theory and popular political movements. The extension of universal adult male suffrage in 19th century Britain occurred along with the development of industrial capitalism, and democracy became widespread at the same time as capitalism, leading many theorists to posit a causal relationship between them, or that each affects the other. However, in the 20th century, according to some authors, capitalism also accompanied a variety of political formations quite distinct from liberal democracies, including fascist regimes, monarchies, and single-party states, while it has been observed that some ostensibly democratic regimes such as the Bolivarian Republic of Venezuela and Anarchist Catalonia

have been expressly anti-capitalist. While some thinkers argue that capitalist development more-or-less inevitably eventually leads to the emergence of democracy, others dispute this claim. Research on the democratic peace theory further argue that capitalist democracies rarely make war with one another and have little internal violence. However critics of the democratic peace theory note that democratic capitalist states may fight infrequently or never with other democratic capitalist states because of Political similarity or political stability rather than because they are democratic (or capitalist).

Some commentators argue that though economic growth under capitalism has led to democratization in the past, it may not do so in the future. Under this line of thinking, authoritarian regimes have been able to manage economic growth without making concessions to greater political freedom.

In response to criticism of the system, some proponents of capitalism have argued that its advantages are supported by empirical research. For example, advocates of different Index of Economic Freedom point to a statistical correlation between nations with more economic freedom (as defined by the Indices) and higher scores on variables such as income and life expectancy, including the poor in these nations. Some peer-reviewed studies find evidence for causation.

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Central bank

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The **central bank**, **reserve bank**, or **monetary authority**, is the entity responsible for the monetary policy of a country or of a group of member states. Its primary responsibility is to maintain the stability of the national currency and money supply, but more active duties include controlling subsidized- loan interest rates, and acting as a "bailout" lender of last resort to the banking sector during times of financial crisis (private banks often being integral to the national financial system). It may also have supervisory powers, to ensure that banks and other financial institutions do not behave recklessly or fraudulently.

Most richer countries today have an "independent" central bank--- that is, one which operates under rules designed to prevent political interference. Examples include the European Central Bank, the Banco Central de Chile, the Reserve Bank of Australia, the Reserve Bank of India, the Bank of England, the Bank of Canada, Sveriges Riksbank, the Banco de la República de Colombia, Norges Bank, State Bank of Pakistan, National Bank of Azerbaijan and the U.S. Federal Reserve. Some central banks are publicly-owned, and others are, in theory, privately-owned. In practice, there is little difference between public and private ownership, since in the latter case almost all profits of the bank are paid to the government either as a tax or a transfer to the government.

Activities and responsibilities

Functions of a central bank (not all functions are carried out by all banks):

- implementation of monetary policy
- controls the nation's entire money supply
- the Government's banker and the bankers' bank ("Lender of Last Resort")
- manages the country's foreign exchange and gold reserves and the Government's stock register;
- regulation and supervision of the banking industry:
- setting the official interest rate - used to manage both inflation and the country's exchange rate - and ensuring that this rate takes effect via a variety of policy mechanisms

Monetary policy

Central banks implement a country's chosen monetary policy. At the most basic level, this involves establishing what form of currency the country may have, whether a fiat currency, gold-backed currency (disallowed for countries with membership of the IMF), currency board or a currency union. When a country has its own national currency, this involves the issue of some form of standardized currency, which is essentially a form of promissory note: a promise to exchange the note for "money" under certain circumstances. Historically, this was often a promise to exchange the money for precious metals in some fixed amount. Now, when many currencies are fiat money, the "promise to pay" consists of nothing more than a promise to pay the same sum in the same currency.

In many countries, the central bank may use another country's currency either directly (in a currency union), or indirectly, by using a currency board. In the latter case, local currency is directly backed by the central bank's holdings of a foreign currency in a fixed-ratio; this mechanism is used, notably, in Hong Kong and Estonia.

In countries with fiat money, monetary policy may be used as a shorthand form for the interest rate targets and other active measures undertaken by the monetary authority.

Currency issuance

Many central banks are "banks" in the sense that they hold assets (foreign exchange, gold, and other financial assets) and liabilities. A central bank's primary liabilities are the currency outstanding, and these liabilities are backed by the assets the bank owns. Central banks in jurisdictions with fiat currencies such as the USA may "create" new money, usually backed by the full faith and credit of the government.

Central banks generally earn money by issuing currency notes and "selling" them to the public for interest-bearing assets, such as government bonds. Since currency usually pays no interest, the difference in interest generates income. In most central banking systems, this income is remitted to the government. The European Central Bank remits its interest income to its owners, the central banks of the member countries of the European Union.

Although central banks generally hold government debt, in some countries the outstanding amount of government debt is smaller than the amount the central bank may wish to hold. In many countries, central banks may hold significant amounts of foreign currency assets, rather than assets in their own national currency, particularly when the national currency is fixed to other currencies.

Naming of central banks

There is no standard terminology for the name of a central bank, but many countries use the "Bank of Country" form (e.g., Bank of England, Bank of Canada, Bank of Russia). Some are styled national banks, such as the National Bank of Ukraine. In other cases they may incorporate the word "Central" (e.g. European Central Bank, Central Bank of Ireland). In many countries, there may be private banks that incorporate the term national. Many countries have state-owned banks or other quasi-government entities that have entirely separate functions, such as financing imports and exports.

In some countries, particularly in some Communist countries, the term national bank may be used to indicate both the monetary authority and the leading banking entity, such as the USSR's Gosbank (state bank). In other countries, the term national bank may be used to indicate that the central bank's goals are broader than monetary stability, such as full employment, industrial development, or other goals.

The word "Reserve" is also used, primarily in the U.S., Australia, New Zealand, South Africa and India.



The ECB building in Frankfurt

Interest rate interventions

Typically a central bank controls certain types of short-term interest rates. These influence the stock- and bond markets as well as mortgage and other interest rates. The European Central Bank for example announces its interest rate at the meeting of its Governing Council (in the case of the Federal Reserve, the Board of Governors).

Both the Federal Reserve and the ECB are composed of one or more central bodies that are responsible for the main decisions about interest rates and the size and type of open market operations, and several branches to execute its policies. In the case of the Fed, they are the local Federal Reserve Banks, for the ECB they are the national central banks.

Interest rate interventions are the most common and are dealt with in more detail below.

Limits of enforcement power

Contrary to popular perception, central banks are not all-powerful and have limited powers to put their policies into effect. Most importantly, although the perception by the public may be that the "central bank" controls some or all interest rates and currency rates, economic theory (and substantial empirical evidence) shows that it is impossible to do both at once in an open economy. Robert Mundell's "impossible trinity" is the most famous formulation of these limited powers, and postulates that it is impossible to target monetary policy (broadly, interest rates), the exchange rate (through a fixed rate) and maintain free capital movement. Since most Western economies are now considered "open" with free capital movement, this essentially means that central banks may target interest rates or exchange rates with credibility, but not both at once.

Even when targeting interest rates, most central banks have limited ability to influence the rates actually paid by private individuals and companies.

Even the US must engage in buying and selling to meet its targets. In the most famous case of policy failure, George Soros arbitrated the pound sterling's relationship to the ECU and (after making \$2B himself and forcing the UK to spend over \$8B defending the pound) forced it to abandon its policy. Since then he has been a harsh critic of clumsy bank policies and argued that no one should be able to do what he in fact did.

The most complex relationships are those between the yuan and the US dollar, and between the Euro and its neighbours. The situation in Cuba is so exceptional as to require the Cuban peso to be dealt with simply as an exception, since the US forbids direct trade with Cuba. US dollars were ubiquitous in Cuba's economy after its legalization in 1991, but were officially removed from circulation in 2004 and replaced by the Convertible peso.

Policy instruments

The main monetary policy instruments available to central banks are open market operation, bank reserve requirement, interest rate policy, re-lending and re-discount (including using the term repurchase market), and credit policy (often coordinated with trade policy). While capital adequacy is important, it is defined and regulated by the Bank for International Settlements, and central banks in practice generally do not apply stricter rules.

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :85 of 626.

To enable open market operations, a central bank must hold foreign exchange reserves (usually in the form of government bonds) and official gold reserves. It will often have some influence over any official or mandated exchange rates: Some exchange rates are managed, some are market based (free float) and many are somewhere in between ("managed float" or "dirty float").

Interest rates

By far the most visible and obvious power of many modern central banks is to influence market interest rates; contrary to popular belief, they rarely "set" rates to a fixed number. Although the mechanism differs from country to country, most use a similar mechanism based on a central bank's ability to create as much fiat money as required.

The mechanism to move the market towards a 'target rate' (whichever specific rate is used) is generally to lend money or borrow money in theoretically unlimited quantities, until the targeted market rate is sufficiently close to the target. Central banks may do so by lending money to and borrowing money from (taking deposits from) a limited number of qualified banks, or by purchasing and selling bonds. As an example of how this functions, the Bank of Canada sets a target overnight rate, and a band of plus or minus 0.25%. Qualified banks borrow from each other within this band, but never above or below, because the central bank will always lend to them at the top of the band, and take deposits at the bottom of the band; in principle, the capacity to borrow and lend at the extremes of the band are unlimited. Other central banks use similar mechanisms.

It is also notable that the target rates are generally short-term rates. The actual rate that borrowers and lenders receive on the market will depend on (perceived) credit risk, maturity and other factors. For example, a central bank might set a target rate for overnight lending of 4.5%, but rates for (equivalent risk) five-year bonds might be 5%, 4.75%, or, in cases of inverted yield curves, even below the short-term rate. Many central banks have one primary "headline" rate that is quoted as the "Central bank rate." In practice, they will have other tools and rates that are used, but only one that is rigorously targeted and enforced.

"The rate at which the central bank lends money can indeed be chosen at will by the central bank; this is the rate that makes the financial headlines." - *Henry C.K. Liu, in an Asia Times article explaining modern central bank function in detail* He explains further that "the US central-bank lending rate is known as the Fed funds rate. The Fed sets a target for the Fed funds rate, which its Open Market Committee tries to match by lending or borrowing in the money market.... a fiat money system set by command of the central bank. The Fed is the head of the central-bank snake because the US dollar is the key reserve currency for international trade. The global money market is a US dollar market. All other currencies markets revolve around the US dollar market." Accordingly the US situation isn't typical of central banks in general.

A typical central bank has several interest rates or monetary policy tools it can set to influence markets.

- **Marginal Lending Rate** (currently 5.00% in the Eurozone) A fixed rate for institutions to borrow money from the CB.(In the US this is called the Discount rate).
- **Main Refinancing Rate** (4.00% in the Eurozone) This is the publicly visible interest rate the central bank announces. It is also known as *Minimum Bid Rate* and serves as a bidding floor for refinancing loans. (In the US this is called the Federal funds rate).
- **Deposit Rate** (3.00% in the Eurozone) The rate parties receive for deposits at the CB.

These rates directly affect the rates in the money market, the market for short term loans.

Open Market Operations

Through open market operations, a central bank influences the money supply in an economy directly. Each time it buys securities, exchanging money for the security, it raises the money supply. Conversely, selling of securities lowers the money supply. Buying of securities thus amounts to printing new money while lowering supply of the specific security.

The main open market operations are:

- Temporary lending of money for collateral securities ("Reverse Operations" or " repurchase operations", otherwise known as the "repo" market). These operations are carried out on a regular basis, where fixed maturity loans (of 1 week and 1 month for the ECB) are auctioned off.
- Buying or selling securities (" direct operations") on ad-hoc basis.
- Foreign exchange operations such as forex swaps.

All of these interventions can also influence the foreign exchange market and thus the exchange rate. For example the People's Bank of China and the Bank of Japan have on occasion bought several hundred billions of U.S. Treasuries, presumably in order to stop the decline of the U.S. dollar versus the Renminbi and the Yen.

Capital requirements

All banks are required to hold a certain percentage of their assets as capital, a rate which may be established by the central bank or the banking supervisor. For international banks, including the 55 member central banks of the Bank for International Settlements, the threshold is 8% (see the Basel Capital Accords) of risk-adjusted assets, whereby certain assets (such as government bonds) are considered to have lower risk and are either partially or fully excluded from total assets for the purposes of calculating capital adequacy. Partly due to concerns about asset inflation and repurchase agreements, capital requirements may be considered more effective than deposit/reserve requirements in preventing indefinite lending: when at the threshold, a bank cannot extend another loan without acquiring further capital on its balance sheet.

Reserve requirements

Another significant power that central banks hold is the ability to establish reserve requirements for other banks. By requiring that a percentage of liabilities be held as cash or deposited with the central bank (or other agency), limits are set on the money supply.

In practice, many banks are required to hold a percentage of their deposits as reserves. Such legal reserve requirements were introduced in the nineteenth century to reduce the risk of banks overextending themselves and suffering from bank runs, as this could lead to knock-on effects on other banks. *See also money multiplier, Ponzi scheme.* As the early 20th century gold standard and late 20th century dollar hegemony evolved, and as banks proliferated and engaged

in more complex transactions and were able to profit from dealings globally on a moment's notice, these practices became mandatory, if only to ensure that there was some limit on the ballooning of money supply. Such limits have become harder to enforce. The People's Bank of China retains (and uses) more powers over reserves because the yuan that it manages is a non-convertible currency.

Even if reserves were not a legal requirement, prudence would ensure that banks would hold a certain percentage of their assets in the form of cash reserves. It is common to think of commercial banks as passive receivers of deposits from their customers and, for many purposes, this is still an accurate view.

This passive view of bank activity is misleading when it comes to considering what determines the nation's money supply and credit. Loan activity by banks plays a fundamental role in determining the money supply. The money deposited by commercial banks at the central bank is the real money in the banking system; other versions of what is commonly thought of as money are merely promises to pay real money. These promises to pay are circulatory multiples of real money. For general purposes, people perceive money as the amount shown in financial transactions or amount shown in their bank accounts. But bank accounts record both credit and debits that cancel each other. Only the remaining central-bank money after aggregate settlement - **final money** - can take only one of two forms:

- physical cash, which is rarely used in wholesale financial markets,
- central-bank money.

The currency component of the money supply is far smaller than the deposit component. Currency and bank reserves together make up the monetary base, called M1 and M2.

Exchange requirements

To influence the money supply, some central banks may require that some or all foreign exchange receipts (generally from exports) be exchanged for the local currency. The rate that is used to purchase local currency may be market-based or arbitrarily set by the bank. This tool is generally used in countries with non-convertible currencies or partially-convertible currencies. The recipient of the local currency may be allowed to freely dispose of the funds, required to hold the funds with the central bank for some period of time, or allowed to use the funds subject to certain restrictions. In other cases, the ability to hold or use the foreign exchange may be otherwise limited.

In this method, money supply is increased by the central bank when the central bank purchases the foreign currency by issuing (selling) the local currency. The central bank may subsequently reduce the money supply by various means, including selling bonds or foreign exchange interventions.

Margin requirements and other tools

In some countries, central banks may have other tools that work indirectly to limit lending practices and otherwise restrict or regulate capital markets. For example, a central bank may regulate margin lending, whereby individuals or companies may borrow against pledged securities. The margin requirement establishes a minimum ratio of the value of the securities to the amount borrowed.

Central banks often have requirements for the quality of assets that may be held by financial institutions; these requirements may act as a limit on the amount of risk and leverage created by the financial system. These requirements may be direct, such as requiring certain assets to bear certain minimum credit ratings, or indirect, by the central bank lending to counterparties only when security of a certain quality is pledged as collateral.

Examples of use

The People's Bank of China has been forced into particularly aggressive and differentiating tactics by the extreme complexity and rapid expansion of the economy it manages. It imposed some absolute restrictions on lending to specific industries in 2003, and continues to require 1% more (7%) reserves from urban banks (typically focusing on export) than rural ones. This is not by any means an unusual situation. The US historically had very wide ranges of reserve requirements between its dozen branches. Domestic development is thought to be optimized mostly by reserve requirements rather than by capital adequacy methods, since they can be more finely tuned and regionally varied.

Banking supervision and other activities

In some countries a central bank through its subsidiaries controls and monitors the banking sector. In other countries banking supervision is carried out by a government department such as the UK Treasury, or an independent government agency (eg UK's Financial Services Authority). It examines the banks' balance sheets and behaviour and policies toward consumers. Apart from refinancing, it also provides banks with services such as transfer of funds, bank notes and coins or foreign currency. Thus it is often described as the "bank of banks".

Many countries such as the United States will monitor and control the banking sector through different agencies and for different purposes, although there is usually significant cooperation between the agencies. For example, money centre banks, deposit-taking institutions, and other types of financial institutions may be subject to different (and occasionally overlapping) regulation. Some types of banking regulation may be delegated to other levels of government, such as state or provincial governments.

Any cartel of banks is particularly closely watched and controlled. Most countries control bank mergers and are wary of concentration in this industry due to the danger of groupthink and runaway lending bubbles based on a single point of failure, the credit culture of the few large banks.

Independence

Over the past decade, there has been a trend towards increasing the independence of central banks as a way of improving long-term economic performance. However, while a large volume of economic research has been done to define the relationship between central bank independence and economic performance, the results are ambiguous.

Advocates of central bank independence argue that a central bank which is too susceptible to political direction or pressure may encourage economic cycles ("boom and bust"), as politicians may be tempted to boost economic activity in advance of an election, to the detriment of the long-term health of the economy

and the country. In this context, independence is usually defined as the central bank's operational and management independence from the government. On the other hand, an independent central bank can, and has been proven in the past to have done as such (The Great Depression), create a boom & bust scenario for the profit of the owners & shareholders of the bank itself.

The literature on central bank independence has defined a number of types of independence.

Legal Independence: The independence of the central bank is enshrined in law. This type of independence is limited in a democratic state; in almost all cases the central bank is accountable at some level to government officials, either through a government minister or directly to a legislature. Even defining degrees of legal independence has proven to be a challenge since legislation typically provides only a framework within which the government and the central bank work out their relationship.

Goal Independence: The central bank has the right to set its own policy goals, whether inflation targeting, control of the money supply, or maintaining a fixed exchange rate. While this type of independence is more common, many central banks prefer to announce their policy goals in partnership with the appropriate government departments. This increases the transparency of the policy setting process and thereby increases the credibility of the goals chosen by providing assurance that they will not be changed without notice. In addition, the setting of common goals by the central bank and the government helps to avoid situations where monetary and fiscal policy are in conflict; a policy combination that is clearly sub-optimal.

Operational Independence: The central bank has the independence to determine the best way of achieving its policy goals, including the types of instruments used and the timing of their use. This is the most common form of central bank independence. The granting of independence to the Bank of England in 1997 was, in fact, the granting of operational independence; the inflation target continued to be announced in the Chancellor's annual budget speech to Parliament.

Management Independence: The central bank has the authority to run its own operations (appointing staff, setting budgets, etc) without excessive involvement of the government. The other forms of independence are not possible unless the central bank has a significant degree of management independence. One of the most common statistical indicators used in the literature as a proxy for central bank independence is the "turn-over-rate" of central bank governors. If a government is in the habit of appointing and replacing the governor frequently, it clearly has the capacity to micro-manage the central bank through its choice of governors.

It is argued that an independent central bank can run a more credible monetary policy, making market expectations more responsive to signals from the central bank. Recently, both the Bank of England (1997) and the European Central Bank have been made independent and follow a set of published inflation targets so that markets know what to expect. Even the People's Bank of China has been accorded great latitude due to the difficulty of problems it faces, though in the People's Republic of China the official role of the bank remains that of a national bank rather than a central bank, underlined by the official refusal to "unpeg" the yuan or to revalue it "under pressure". PBoC independence can thus be read more as independence from the US which rules the financial markets, not from the Communist Party of China which rules the country. The fact that the CPoC is not elected also relieves the pressure to please people, increasing its independence.

Governments generally have some degree of influence over even "independent" central banks; the aim of independence is primarily to prevent short-term interference. For example, the chairman of the U.S. Federal Reserve Bank is appointed by the President of the U.S. (all nominees for this post are recommended

by the owners of the Federal Reserve, as are all the board members), and his choice must be confirmed by the Congress.

International organizations such as the World Bank, the BIS and the IMF are strong supporters of central bank independence. This results, in part, from a belief in the intrinsic merits of increased independence. The support for independence from the international organizations also derives partly from the connection between increased independence for the central bank and increased transparency in the policy-making process. The IMF's FSAP review self-assessment, for example, includes a number of questions about central bank independence in the transparency section. An independent central bank will score higher in the review than one that is not independent.

History

In Europe prior to the 17th century most money was commodity money, typically gold or silver. However, promises to pay were widely circulated and accepted as value at least five hundred years earlier in both Europe and Asia. The medieval European Knights Templar ran probably the best known early prototype of a central banking system, as their promises to pay were widely regarded, and many regard their activities as having laid the basis for the modern banking system. At about the same time, Kublai Khan of the Mongols introduced fiat currency to China, which was imposed by force by the confiscation of specie.

The oldest central bank in the world is the Riksbank in Sweden, which was opened in 1668 with help from Dutch businessmen. This was followed in 1694 by the Bank of England, created by Scottish businessman William Paterson in the City of London at the request of the English government to help pay for a war. The US Federal Reserve was created by the U.S. Congress through the passing of the Glass-Steagall Act, signed by President Woodrow Wilson on December 23, 1913.

The People's Bank of China evolved its role as a central bank starting in about 1979 with the introduction of market reforms in that country, and this accelerated in 1989 when the country took a generally capitalist approach to developing at least its export economy. By 2000 the PBoC was in all senses a modern central bank, and emerged as such partly in response to the European Central Bank. This is the most modern bank model and was introduced with the euro to coordinate the European national banks, which continue to separately manage their respective economies other than currency exchange and base interest rates.

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Cooperative

2008/9 Schools Wikipedia Selection. Related subjects: Business; Community organisations

A **cooperative** (also **co-operative** or **coöperative**; often referred to as a **co-op** or **coop**) is defined by the International Co-operative Alliance's Statement on the Co-operative Identity as an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise. A cooperative may also be defined as a business owned and controlled equally by the people who use its services or who work at it. Cooperative enterprises are the focus of study in the field of cooperative economics. Cooperatives have a sponsored top-level internet domain .coop, which identifies legally registered or recognized co-operatives.

History

Although co-operation as a form of individual and societal behaviour is intrinsic to human organisation, the history of modern co-operative forms of organising dates back to the Agricultural and Industrial Revolutions of the 18th and 19th centuries. The 'first co-operative' is under some dispute, but there were various milestones.

In 1761, the Fenwick Weavers' Society was formed in Fenwick, East Ayrshire, Scotland to sell discounted oatmeal to local workers. Its services expanded to include assistance with savings and loans, emigration and education. In 1810, social reformer Robert Owen and his partners purchased New Lanark mill from Owen's father-in-law and proceeded to introduce better labour standards including discounted retail shops where profits were passed on to his employees. Owen left New Lanark to pursue other forms of co-operative organisation and develop co-op ideas through writing and lecture. Co-operative communities were set up in Glasgow, Indiana and Hampshire, although ultimately unsuccessful. In 1828, William King set up a newspaper, *The Cooperator*, to promote Owen's thinking, having already set up a co-operative store in Brighton.

The Rochdale Society of Equitable Pioneers, founded in 1844, is usually considered the first successful co-operative enterprise, used as a model for modern co-ops, following the 'Rochdale Principles'. A group of 28 weavers and other artisans in Rochdale, England set up the society to open their own store selling food items they could not otherwise afford. Within ten years there were over 1,000 co-operative societies in the United Kingdom.

Other events such as the founding of a friendly society by the Tolpuddle Martyrs in 1832 were key occasions in the creation of organised labour and consumer movements.

Meaning

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The Cloyne Court Hotel, a student co-operative in Berkeley, California, United States.



Consumers' cooperative shops in the UK formed the world's first mass cooperative movement

Cooperatives as legal entities

Although the term may be used loosely to describe a way of working, a cooperative properly so-called is a legal entity owned and democratically controlled equally by its members. A defining point of a cooperative is that the members have a close association with the enterprise as producers or consumers of its products or services, or as its employees.

In some countries, there are specific forms of incorporation for co-operatives. Cooperatives may take the form of companies limited by shares or by guarantee, partnerships or unincorporated associations. In the USA, cooperatives are often organized as non-capital stock corporations under state-specific cooperative laws. However, they may also be unincorporated associations or business corporations such as limited liability companies or partnerships; such forms are useful when the members want to allow:

1. some members a greater share of the control, or
2. some investors to have a return on their capital that exceeds fixed interest,

neither of which may be allowed under local laws for cooperatives. Cooperatives often share their earnings with the membership as dividends, which are divided among the members according to their participation in the enterprise, such as patronage, instead of according to the value of their capital shareholdings (as is done by a joint stock company.)

Co-operative identity

Cooperatives are based on the values of self-help, self-responsibility, democracy and equality. In the tradition of their founders, cooperative members believe in the ethical values of honesty, openness, social responsibility and caring for others. Such legal entities have a range of unique social characteristics. Membership is open, meaning that anyone who satisfies certain non-discriminatory conditions may join. Economic benefits are distributed proportionally according to each member's level of participation in the cooperative, for instance by a dividend on sales or purchases, rather than divided according to capital invested. Cooperatives may be generally classified as either **consumer cooperatives** or **producer cooperatives**.

Types of cooperatives

Housing cooperative

A housing cooperative is a legal mechanism for ownership of housing where residents either own shares (share capital co-op) reflecting their equity in the co-operative's real estate, or have membership and occupancy rights in a not-for-profit co-operative (non-share capital co-op), and they underwrite their housing through paying subscriptions or rent.

Housing cooperatives come in two basic equity structures:

- In **Market-rate housing cooperatives**, members may sell their shares in the cooperative whenever they like for whatever price the market will bear, much like any other residential property. Market-rate co-ops are very common in New York City.
- **Limited equity housing cooperatives**, which are often used by affordable housing developers, allow members to own some equity in their home, but limit the sale price of their membership share to that which they paid.



Co-op City in New York
houses 55,000 people

Building cooperative

Members of a building cooperative (in Britain known as a self-build housing co-operative) pool resources to build housing, normally using a high proportion of their own labour. When the building is finished, each member is the sole owner of a homestead, and the cooperative may be dissolved.

This collective effort was at the origin of many of Britain's building societies, which however developed into "permanent" mutual savings and loan organisations, a term which persisted in some of their names (such as the former *Leeds Permanent*). Nowadays such self-building may be financed using a step-by-step mortgage which is released in stages as the building is completed.

The term may also refer to worker co-operatives in the building trade.

Retailers' cooperative

A retailers' cooperative (known as a secondary or marketing co-operative in some countries) is an organization which employs economies of scale on behalf of its members to get discounts from manufacturers and to pool marketing. It is common for locally-owned grocery stores, hardware stores and pharmacies. In this case the members of the cooperative are businesses rather than individuals.

The Best Western international hotel chain is actually a retailers' cooperative, whose members are hotel operators, although it now prefers to call itself a "nonprofit membership association." It gave up on the "cooperative" label after some courts insisted on enforcing regulatory requirements for franchisors despite its member-controlled status.

Utility cooperative

A utility cooperative is a public utility that is owned by its customers. It is a type of consumers' cooperative. In the US, many such cooperatives were formed to provide rural electrical and telephone service as part of the New Deal. *See Rural Utilities Service.*

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Worker cooperative

A worker cooperative or producer cooperative is a cooperative that is owned and democratically controlled by its "worker-owners". There are no outside owners in a "pure" workers' cooperative, only the workers own shares of the business, though hybrid forms in which consumers, community members or capitalist investors also own some shares are not uncommon. Membership is not compulsory for employees, but generally only employees can become members. However, in India there is a form of workers' cooperative which insists on compulsory membership for all employees and compulsory employment for all members. That is the form of the Indian Coffee Houses. This system was advocated by the Indian communist leader A. K. Gopalan.

Business and employment co-operative

Business and employment co-operatives (BECs) are a subset of worker co-operatives that represent a new approach to providing support to the creation of new businesses. Like other business creation support schemes, BECs enable budding entrepreneurs to experiment with their business idea while benefiting from a secure income. The innovation BECs introduce is that once the business is established the entrepreneur is not forced to leave and set up independently, but can stay and become a full member of the co-operative. The micro-enterprises thus combine to form one multi-activity enterprise whose members provide a mutually supportive environment for each other.

BECs thus provides budding business people with an easy transition from inactivity to self-employment, but in a collective framework. They open up new horizons for people who have ambition but who lack the skills or confidence needed to set off entirely on their own – or who simply want to carry on an independent economic activity but within a supportive group context.

Social cooperative

A particularly successful form of multi-stakeholder cooperative is the Italian "social cooperative", of which some 7,000 exist. "Type A" social cooperatives bring together providers and beneficiaries of a social service as members. "Type B" social cooperatives bring together permanent workers and previously unemployed people who wish to integrate into the labour market.

Social cooperatives are legally defined as follows:

- the objective is the general benefit of the community and the social integration of citizens
- type A cooperatives provide health, social or educational services
- those of type B integrate disadvantaged people into the labour market. The categories of disadvantage they target may include physical and mental disability, drug and alcohol addiction, developmental disorders and problems with the law. They do not include other factors of disadvantage such as race, sexual orientation or abuse
- various categories of stakeholder may become members, including paid employees, beneficiaries, volunteers (up to 50% of members), financial investors and public institutions. In type B co-operatives at least 30% of the members must be from the disadvantaged target groups
- the cooperative has legal personality and limited liability

- voting is one person one vote
- no more than 80% of profits may be distributed, interest is limited to the bond rate and dissolution is altruistic (assets may not be distributed)

A good estimate of the current size of the social cooperative sector in Italy is given by updating the official ISTAT figures from the end of 2001 by an annual growth rate of 10% (assumed by the *Direzione Generale per gli Ente Cooperativi*). This gives totals of 7,100 social cooperatives, with 267,000 members, 223,000 paid employees, 31,000 volunteers and 24,000 disadvantaged people undergoing integration. Combined turnover is around 5 billion euro. The cooperatives break into three types: 59% type A (social and health services), 33% type B (work integration) and 8% mixed. The average size is 30 workers.

Consumers' cooperative

A consumers' cooperative is a business owned by its customers. Employees can also generally become members. Members vote on major decisions, and elect the board of directors from amongst their own number. A well known example in the United States is the REI (Recreational Equipment Incorporated) co-op, and in Canada: Mountain Equipment Co-op.

The world's largest consumers' cooperative is the Co-operative Group in the United Kingdom, which offers a variety of retail and financial services. The UK also has a number of autonomous consumers' cooperative societies, such as the East of England Co-operative Society and Midcounties Co-operative. In fact the Co-operative Group is something of a hybrid, having both corporate members (most other consumers' cooperatives, as a result of its origins as a wholesale society), and individual retail consumer members.

Japan has a very large and well developed consumer cooperative movement with over 14 million members; retail co-ops alone had a combined turnover of 2.519 trillion Yen (21.184 billion US dollars [market exchange rates as of 11/15/2005]) in 2003/4. (Japanese Consumers' Co-operative Union., 2003).

Migros is the largest supermarket chain in Switzerland and keeps the cooperative society as its form of organization. Nowadays, a large part of the Swiss population are members of the Migros cooperative – around 2 million of Switzerland's total population of 7,2 million[1] , thus making Migros a supermarket chain that is owned by its customers.

Coop is another Swiss cooperative which operates the second largest supermarket chain in Switzerland after Migros. In 2001, Coop merged with 11 cooperative federations which had been its main suppliers for over 100 years. As of 2005, Coop operates 1437 shops and employs almost 45,000 people. According to Bio Suisse, the Swiss organic producers' association, Coop accounts for half of all the organic food sold in Switzerland.

EURO COOP is the European Community of Consumer Cooperatives.



The volunteer board of a retail consumers' cooperative, such as the former Oxford, Swindon & Gloucester Co-op, is held to account at an Annual General Meeting of members

Agricultural cooperative

Agricultural cooperatives are widespread in rural areas.

In the United States, there are both marketing and supply cooperatives. Agricultural marketing cooperatives, some of which are government-sponsored, promote and may actually distribute specific commodities. There are also agricultural supply cooperatives, which provide inputs into the agricultural process.

In Europe, there are strong agricultural / agribusiness cooperatives, and agricultural cooperative banks. Most emerging countries are developing agricultural cooperatives. Where it is legal, medical marijuana is generally produced by cooperatives.

A cooperative is a form of vertical integration and is similar to an Alliance.

Cooperative banking (credit unions and cooperative savings banks)

Credit Unions provide a form of cooperative banking.

In North America, the *caisse populaire* movement started by Alphonse Desjardins in Quebec, Canada pioneered credit unions. Desjardins wanted to bring desperately needed financial protection to working people. In 1900, from his home in Lévis, Quebec, he opened North America's first credit union, marking the beginning of the Mouvement Desjardins.

While they have not taken root so deeply as in Ireland or the USA, credit unions are also established in the UK. The largest are work-based, but many are now offering services in the wider community. The Association of British Credit Unions Ltd (ABCUL) represents the majority of British Credit Unions. British Building Societies developed into general-purpose savings & banking institutions with "one member, one vote" ownership and can be seen as a form of financial cooperative (although many 'de-mutualised' into conventionally-owned banks in the 1980s & 1990s). The UK Co-operative Group includes both an insurance provider CIS and the Co-operative Bank, both noted for promoting ethical investment.

Other important European banking cooperatives include the *Crédit Agricole* in France, Migros and Coop Bank in Switzerland and the Raiffeisen system in many Central and Eastern European countries. The Netherlands, Spain, Italy and various European countries also have strong cooperative banks. They play an important part in mortgage credit and professional (i.e. farming) credit.

Cooperative banking networks, which were nationalized in Eastern Europe, work now as real cooperative institutions. A remarkable development has taken place in Poland, where the SKOK (*Spółdzielcze Kasy Oszczędnościowo-Kredytowe*) network has grown to serve over 1 million members via 13,000 branches, and is larger than the country's largest conventional



Farmers' grain Co-op in Crowell, Texas.



The Co-operative Bank's head office, 1 Balloon Street, Manchester. The statue in front is of Robert Owen, a pioneer in the cooperative movement.

bank.

In Scandinavia, there is a clear distinction between mutual savings banks (Sparbank) and true credit unions (Andelsbank).

Federal or secondary cooperatives

In some cases, cooperative societies find it advantageous to form co-operative federations in which all of the members are themselves cooperatives. Historically, these have predominantly come in the form of cooperative wholesale societies, and cooperative unions. Cooperative federations are a means through which cooperative societies can fulfill the sixth Rochdale Principle, cooperation among cooperatives, with the ICA noting that "Co-operatives serve their members most effectively and strengthen the co-operative movement by working together through local, national, regional and international structures."

See Also: List of Co-operative Federations

Cooperative wholesale society

According to cooperative economist Charles Gide, the aim of a cooperative wholesale society is to arrange "bulk purchases, and, if possible, organise production." The best historical example of this were the English CWS and the Scottish CWS, which were the forerunners to the modern Co-operative Group.

Cooperative Union

A second common form of co-operative federation is a co-operative union, whose objective (according to Gide) is "to develop the spirit of solidarity among societies and... in a word, to exercise the functions of a government whose authority , it is needless to say, is purely moral." Co-operatives UK and the International Co-operative Alliance are examples of such arrangements.

Co-operative party

In some countries with a strong cooperative sector, such as the UK, cooperatives may find it advantageous to form a parliamentary political party to represent their interests. The British Co-operative Party and the Canadian Co-operative Commonwealth Federation are prime examples of such arrangements.

The British cooperative movement formed the Co-operative Party in the early 20th century to represent members of consumers' cooperatives in Parliament. The Co-operative Party now has a permanent electoral pact with the Labour Party, and has 29 members of parliament who were elected at the 2005 general election as Labour Co-operative MPs. UK cooperatives retain a significant market share in food retail, insurance, banking, funeral services, and the travel industry in many parts of the country.

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Corporate finance

2008/9 Schools Wikipedia Selection. Related subjects: Business

Corporate finance is an area of finance dealing with the financial decisions corporations make and the tools and analysis used to make these decisions. The primary goal of corporate finance is to enhance corporate value while reducing the firm's financial risks. Equivalently, the goal is to maximize the corporations' return to capital. Although it is in principle different from managerial finance which studies the financial decisions of all firms, rather than corporations alone, the main concepts in the study of corporate finance are applicable to the financial problems of all kinds of firms.

The discipline can be divided into long-term and short-term decisions and techniques. Capital investment decisions are long-term choices about which projects receive investment, whether to finance that investment with equity or debt, and when or whether to pay dividends to shareholders. On the other hand, the short term decisions can be grouped under the heading "Working capital management". This subject deals with the short-term balance of current assets and current liabilities; the focus here is on managing cash, inventories, and short-term borrowing and lending (such as the terms on credit extended to customers).

The terms **Corporate finance** and **Corporate financier** are also associated with investment banking. The typical role of an investment banker is to evaluate investment projects for a bank to make investment decisions.

Capital investment decisions

Capital investment decisions are long-term corporate finance decisions relating to fixed assets and capital structure. Decisions are based on several inter-related criteria. Corporate management seeks to maximize the value of the firm by investing in projects which yield a positive net present value when valued using an appropriate discount rate. These projects must also be financed appropriately. If no such opportunities exist, maximizing shareholder value dictates that management return excess cash to shareholders. Capital investment decisions thus comprise an investment decision, a financing decision, and a dividend decision.

The investment decision

Management must allocate limited resources between competing opportunities ("projects") in a process known as capital budgeting. Making this capital allocation decision requires estimating the value of each opportunity or project: a function of

Corporate finance



Working capital management

Cash conversion cycle
Return on capital
Economic value added
Just In Time
Economic order quantity
Discounts and allowances
Factoring (finance)

Capital budgeting

Capital investment decisions
The investment decision
The financing decision

Sections

Managerial finance
Financial accounting
Management accounting
Mergers and acquisitions
Balance sheet analysis

the size, timing and predictability of future cash flows.

Project valuation

In general, each project's value will be estimated using a discounted cash flow (DCF) valuation, and the opportunity with the highest value, as measured by the resultant net present value (NPV) will be selected (see Fisher separation theorem). This requires estimating the size and timing of all of the incremental cash flows resulting from the project. These future cash flows are then discounted to determine their *present value* (see Time value of money). These present values are then summed, and this sum is the NPV.

The NPV is greatly influenced by the discount rate. Thus selecting the proper discount rate - the project "hurdle rate" - is critical to making the right decision. The hurdle rate is the minimum acceptable return on an investment - i.e. the project appropriate discount rate. The hurdle rate should reflect the riskiness of the investment, typically measured by volatility of cash flows, and must take into account the financing mix. Managers use models such as the CAPM or the APT to estimate a discount rate appropriate for a particular project, and use the weighted average cost of capital (*WACC*) to reflect the financing mix selected. (A common error in choosing a discount rate for a project is to apply a WACC that applies to the entire firm. Such an approach may not be appropriate where the risk of a particular project differs markedly from that of the firm's existing portfolio of assets.)

In conjunction with NPV, there are several other measures used as (secondary) selection criteria in corporate finance. These are visible from the DCF and include payback, IRR, Modified IRR, equivalent annuity, capital efficiency, and ROI.

See also: list of valuation topics, stock valuation, fundamental analysis

Valuing flexibility

In many cases, for example R&D projects, a project may open (or close) paths of action to the company, but this reality will not typically be captured in a strict NPV approach. Management will therefore (sometimes) employ tools which place an explicit value on these options. So, whereas in a DCF valuation the most likely or average or scenario specific cash flows are discounted, here the "flexible and staged nature" of the investment is modelled, and hence "all" potential payoffs are considered. The difference between the two valuations is the "option value" inherent in the project.

The two most common tools are Decision Tree Analysis (DTA) and Real option

- The DTA approach attempts to capture flexibility by incorporating *likely events* and consequent *management decisions* into the valuation. In the decision tree, each management decision in response to an "event" generates a "branch" or "path" which the company could follow. (For example, management will only proceed with stage 2 of the project given that stage 1 was successful; stage 3, in turn, depends on stage 2. In a DCF model, on the other hand, there is no "branching" - each scenario must be modelled separately.) The highest value path (probability weighted) is regarded as representative of project value

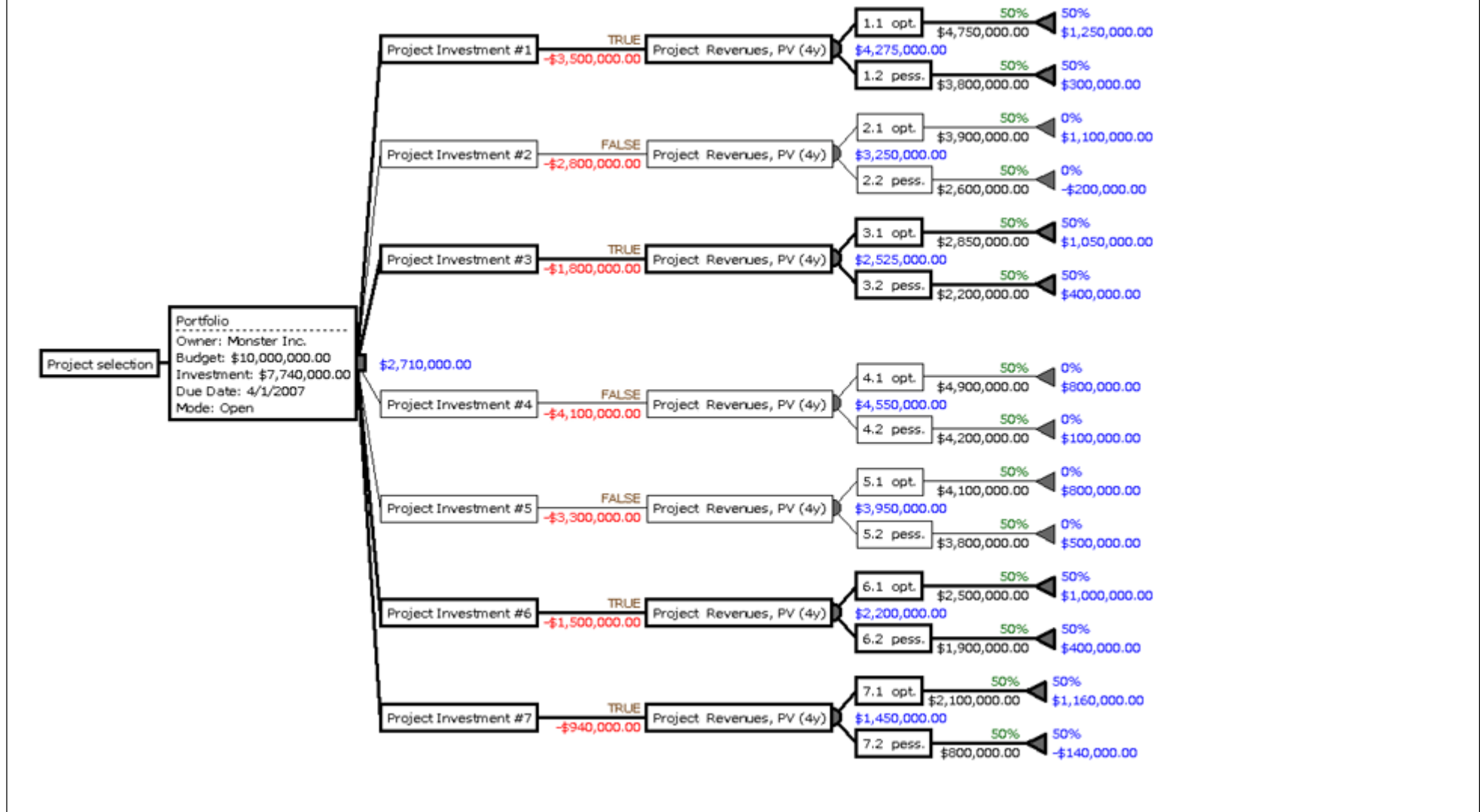
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Business plan
Corporate action

Finance series

Financial market
Financial market participants
Corporate finance
Personal finance
Public finance
Banks and Banking
Financial regulation

The following example shows a portfolio of 7 investment options (projects), but the organization has only \$10,000,000 available for the total investment. The calculation uses discounted payoffs (PV: Present values) in a 4 years projection. Bold lines mark the best selection 1, 3, 6 and ,7 which will cost \$7,740,000 and create a payoff of 2,710,000. All other combinations would either exceed the budget or yield a lower payoff:



- The real options approach is used when the value of a project is *contingent* on the *value* of some other asset or underlying variable. (For example, the viability of a mining project is contingent on the price of gold; if the price is too low, management will abandon the mining rights, if sufficiently high,

management will develop the ore body. Again, a DCF valuation would capture only one of these outcomes.) Here, using financial option theory as a framework, the decision to be taken is identified as corresponding to either a call option or a put option - valuation is then via the Binomial model or, less often for this purpose, via Black Scholes; see Contingent claim valuation. The "true" value of the project is then the NPV of the "most likely" scenario plus the option value.

The financing decision

Achieving the goals of corporate finance requires that any corporate investment be financed appropriately. As above, since both hurdle rate and cash flows (and hence the riskiness of the firm) will be affected, the financing mix can impact the valuation. Management must therefore identify the "optimal mix" of financing – the capital structure that results in maximum value. (See Balance sheet, WACC, Fisher separation theorem; but, see also the Modigliani-Miller theorem.)

The sources of financing will, generically, comprise some combination of debt and equity. Financing a project through debt results in a liability that must be serviced - and hence there are cash flow implications regardless of the project's success. Equity financing is less risky in the sense of cash flow commitments, but results in a dilution of ownership and earnings. The *cost of equity* is also typically higher than the *cost of debt* (see CAPM and WACC), and so equity financing may result in an increased hurdle rate which may offset any reduction in cash flow risk.

Management must also attempt to match the financing mix to the asset being financed as closely as possible, in terms of both timing and cash flows.

One of the main theories of how firms make their financing decisions is the Pecking Order Theory, which suggests that firms avoid external financing while they have internal financing available and avoid new equity financing while they can engage in new debt financing at reasonably low interest rates. Another major theory is the Trade-Off Theory in which firms are assumed to trade-off the Tax Benefits of debt with the Bankruptcy Costs of debt when making their decisions. One last theory about this decision is the Market timing hypothesis which states that firms look for the cheaper type of financing regardless of their current levels of internal resources, debt and equity.

The dividend decision

In general, management must decide whether to invest in additional projects, reinvest in existing operations, or return free cash as dividends to shareholders. The dividend is calculated mainly on the basis of the company's unappropriated profit and its business prospects for the coming year. If there are no NPV positive opportunities, i.e. where returns exceed the hurdle rate, then management must return excess cash to investors - these *free cash flows* comprise cash remaining after all business expenses have been met. (This is the general case, however there are exceptions. For example, investors in a "Growth stock", expect that the company will, almost by definition, retain earnings so as to fund growth internally. In other cases, even though an opportunity is currently NPV negative, management may consider "investment flexibility" / potential payoffs and decide to retain cash flows; see above and Real options.)

Management must also decide on the form of the distribution, generally as cash dividends or via a share buyback. There are various considerations: where shareholders pay tax on dividends, companies may elect to retain earnings, or to perform a stock buyback, in both cases increasing the value of shares outstanding; some companies will pay "dividends" from stock rather than in cash. (See Corporate action.) Today it is generally accepted that dividend policy is

value neutral (see Modigliani-Miller theorem).

Working capital management

Decisions relating to working capital and short term financing are referred to as *working capital management*. These involve managing the relationship between a firm's short-term assets and its short-term liabilities. The goal of Working capital management is to ensure that the firm is able to continue its operations and that it has sufficient cash flow to satisfy both maturing short-term debt and upcoming operational expenses.

Decision criteria

By definition, Working capital management entails short term decisions - generally, relating to the next one year period - which are "reversible". These decisions are therefore not taken on the same basis as Capital Investment Decisions (NPV or related, as above) rather they will be based on cash flows and / or profitability.

- One measure of cash flow is provided by the cash conversion cycle - the net number of days from the outlay of cash for raw material to receiving payment from the customer. As a management tool, this metric makes explicit the inter-relatedness of decisions relating to inventories, accounts receivable and payable, and cash. Because this number effectively corresponds to the time that the firm's cash is tied up in operations and unavailable for other activities, management generally aims at a low net count.
- In this context, the most useful measure of profitability is Return on capital (ROC). The result is shown as a percentage, determined by dividing relevant income for the 12 months by capital employed; Return on equity (ROE) shows this result for the firm's shareholders. Firm value is enhanced when, and if, the return on capital, which results from working capital management, exceeds the cost of capital, which results from capital investment decisions as above. ROC measures are therefore useful as a management tool, in that they link short-term policy with long-term decision making. See Economic value added (EVA).

Management of working capital

Guided by the above criteria, management will use a combination of policies and techniques for the management of working capital. These policies aim at managing the *current assets* (generally cash and cash equivalents, inventories and debtors) and the short term financing, such that cash flows and returns are acceptable.

- **Cash management.** Identify the cash balance which allows for the business to meet day to day expenses, but reduces cash holding costs.
- **Inventory management.** Identify the level of inventory which allows for uninterrupted production but reduces the investment in raw materials - and minimizes reordering costs - and hence increases cash flow; see Supply chain management; Just In Time (JIT); Economic order quantity (EOQ); Economic production quantity (EPQ).

- **Debtors management.** Identify the appropriate credit policy, i.e. credit terms which will attract customers, such that any impact on cash flows and the cash conversion cycle will be offset by increased revenue and hence Return on Capital (or *vice versa*); see Discounts and allowances.
- **Short term financing.** Identify the appropriate source of financing, given the cash conversion cycle: the inventory is ideally financed by credit granted by the supplier; however, it may be necessary to utilize a bank loan (or overdraft), or to "convert debtors to cash" through " factoring".

Financial risk management

Risk management is the process of measuring risk and then developing and implementing strategies to manage that risk. Financial risk management focuses on risks that can be managed (" hedged") using traded financial instruments (typically changes in commodity prices , interest rates, foreign exchange rates and stock prices). Financial risk management will also play an important role in cash management.

This area is related to corporate finance in two ways. Firstly, firm exposure to business risk is a direct result of previous Investment and Financing decisions. Secondly, both disciplines share the goal of creating, or enhancing, firm value. All large corporations have risk management teams, and small firms practice informal, if not formal, risk management.

Derivatives are the instruments most commonly used in Financial risk management. Because unique derivative contracts tend to be costly to create and monitor, the most cost-effective financial risk management methods usually involve derivatives that trade on well-established financial markets. These standard derivative instruments include options, futures contracts, forward contracts, and swaps.

See: Financial engineering; Financial risk; Default (finance); Credit risk; Interest rate risk; Liquidity risk; Market risk; Operational risk; Volatility risk; Settlement risk.

Relationship with other areas in finance

Investment banking

Use of the term "corporate finance" varies considerably across the world. In the United States it is used, as above, to describe activities, decisions and techniques that deal with many aspects of a company's finances and capital. In the United Kingdom and Commonwealth countries, the terms "corporate finance" and "corporate financier" tend to be associated with investment banking - i.e. with transactions in which capital is raised for the corporation.

Personal and public finance

Corporate finance utilizes tools from almost all areas of finance. Some of the tools developed by and for corporations have broad application to entities other than corporations, for example, to partnerships, sole proprietorships, not-for-profit organizations, governments, mutual funds, and personal wealth management.

But in other cases their application is very limited outside of the corporate finance arena. Because corporations deal in quantities of money much greater than individuals, the analysis has developed into a discipline of its own. It can be differentiated from personal finance and public finance.

Related Professional Qualifications

The new internationally recognised Corporate Finance Qualification (CF) is the only directly related professional qualification, although many others traditionally can lead to the field:

- Qualified accountant qualifications: Chartered Accountant (ACA), Certified Public Accountant (CPA)
- Other non-statutory accountancy qualifications: Chartered Cost Accountant (CCA Designation from AAFM), Certified Management Accountant (CMA), Chartered Management Accountant (ACMA)
- Business qualifications: Master of Business Administration (MBA), Master of Finance & Control (MFC), Doctor of Business Administration (DBA)
- Finance qualifications: Masters degree in Finance (MSF), Corporate Finance Qualification (CF), Chartered Financial Analyst (CFA), Certified International Investment Analyst(CIIA) , Association of Corporate Treasurers (ACT), Certified Market Analyst (CMA/FAD) Dual Designation, Master Financial Manager (MFM).

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Das Kapital

2008/9 Schools Wikipedia Selection. Related subjects: Economics

Das Kapital (IPA: [das kapi'ta:l]) (***Capital***, in the English translation) is an extensive treatise on political economy written in German by Karl Marx and edited in part by Friedrich Engels. The book is a critical analysis of capitalism and its practical economic application and also, in part, a critique of other related theories. Its first volume was published in 1867.

Themes

The central driving force of capitalism, according to Marx, was in the exploitation and alienation of labour. The ultimate source of the new profits and value-added was that employers paid workers the market value of their labour-capacity, but the value of the commodities workers produced exceeded that market value. Employers were entitled to appropriate the new output value because of their ownership of the productive capital assets. By producing output as capital for the employers, the workers constantly reproduced the condition of capitalism by their labour.



However, though Marx is very concerned with the social aspects of commerce, his book is not an ethical treatise, but an attempt to explain the objective "laws of motion" of the capitalist system as a whole, its origins and future. He aims to reveal the causes and dynamics of the accumulation of capital, the growth of wage labour, the transformation of the workplace, the concentration of capital, competition, the banking and credit system, the tendency of the rate of profit to decline, land-rents and many other things.

Marx viewed the commodity as the "cell-form" or building unit of capitalist society — it is an object useful to somebody else, but with a trading value for the owner. Because commercial transactions implied no particular morality beyond that required to settle transactions, the growth of markets caused the economic sphere and the moral-legal sphere to become separated in society: subjective moral value becomes separated from objective economic value. Political economy, which was originally thought of as a "moral science" concerned with the just distribution of wealth, or as a "political arithmetick" for tax collection, gave way to the separate disciplines of economic science, law and ethics.

Marx believed the political economists could study the scientific laws of capitalism in an "objective" way, because the expansion of markets had in reality objectified most economic relations: the cash nexus stripped away all previous religious and political illusions (only to replace them, however, with another kind of illusion -- commodity fetishism). Marx also says that he viewed "the economic formation of society as a process of natural history". The growth of commerce happened as a process which no individuals could control or direct, creating an enormously complex web of social interconnections globally. Thus a "society" was formed "economically" before people actually began to consciously master the enormous productive capacity and

interconnections they had created, in order to put it collectively to the best use.

Marx's analysis in *Capital*, then, focuses primarily on the structural *contradictions*, rather than the class *antagonisms*, that characterize capitalist society -- the “contradictory movement [*gegensätzliche Bewegung*] [that] has its origin in the twofold character of labour,” rather than in the struggle between labor and capital, or rather between the owning and the working classes. These contradictions, moreover, operate (as Marx describes using a phrase borrowed from Hegel) “behind the backs” of both the capitalists and workers, that is, as a result of their activities, and yet irreducible to their conscious awareness either as individuals or as classes. As such, *Capital*, does not propose a theory of revolution (led by the working class and its representatives) but rather a theory of crises as the condition for a potential revolution, or what Marx refers to in the Communist Manifesto as a potential “weapon,” “forged” by the owners of capital, “turned against the bourgeoisie itself” by the working class. Such crises, according to Marx, are rooted in the contradictory character of the commodity, the most fundamental social form of capitalist society. In capitalism, improvements in technology and rising levels of productivity increase the amount of material wealth (or use values) in society while simultaneously diminishing the economic value of this wealth, thereby lowering the rate of profit – a tendency that leads to the peculiar situation, characteristic of crises in capitalism, of “poverty in the midst of plenty,” or more precisely, crises of overproduction in the midst of underconsumption.

Publication

Marx published the first volume of *Das Kapital* in 1867, but he died before he could finish the second and third ones which he had already drafted; these were edited by his friend and collaborator Friedrich Engels and published in 1885 and 1894. As can be seen in the original title pages of the final two volumes, Engels listed Marx as the author.

Influences

Marx bases his work on that of the classical economists like Adam Smith, David Ricardo, John Stuart Mill and even Benjamin Franklin. However, he reworks these authors' ideas, so his book is a synthesis that does not follow the lead of any one thinker. It also reflects the dialectical methodology applied by G.W.F. Hegel in his books *The Science of Logic* and *The Phenomenology of Mind*, and the influence of French socialists such as Charles Fourier, Comte de Saint-Simon, and Pierre-Joseph Proudhon.

Marx said himself that his aim was "to bring a science [i.e. political economy] by criticism to the point where it can be dialectically represented", and in this way to "reveal the law of motion of modern society". By showing how capitalist development was the precursor of a new, socialist mode of production, he aimed to provide a scientific foundation for the modern labour movement. In preparation for his book, he studied the economic literature available in his time for a period of twelve years, mainly in the British Museum in London.

Aristotle, and Greek philosophy in general, was another important (although often neglected) influence on Marx's analysis of capitalism. Marx's education at Bonn centered on Greek and Roman poets and philosophers. The dissertation he completed at the university was a comparison of the philosophy of nature in the works of Democritus and Epicurus. A number of scholars, moreover, have argued that the basic architecture of *Capital* – including the categories of use and exchange value, as well as the “ syllogisms” for simple and expanded circulation (M-C-M and M-C-M') – was derived from the Politics (Aristotle) and the Nicomachean Ethics. Moreover, Marx's description of machinery under capitalist relations of production as “self-acting automata” is a direct reference to Aristotle's speculations on inanimate instruments capable of following commands as the condition for the abolition of slavery.

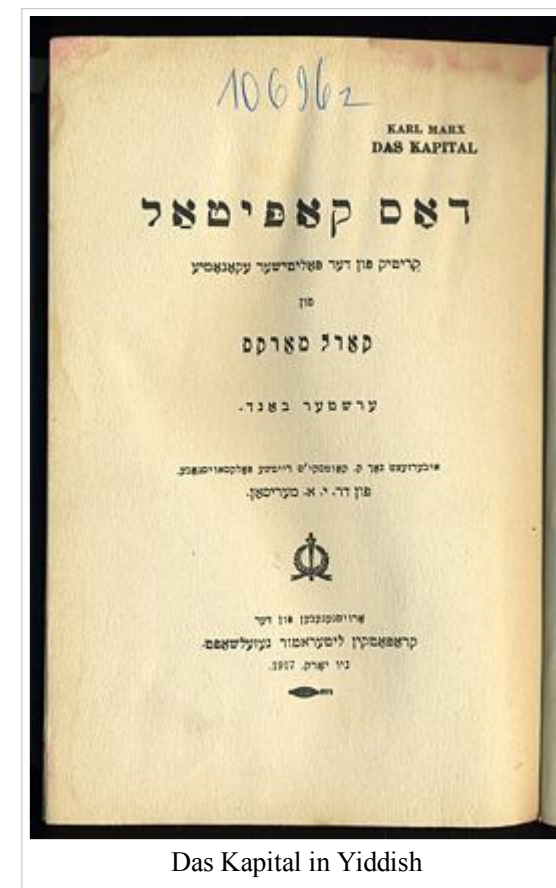
Volume I

Volume II

Volume III

Volume IV

A so-called Volume IV is claimed by some, apparently constituted from fragmentary notes that were written prior to the publication of *Das Kapital* (*full text linked below*).



Das Kapital in Yiddish

Online editions

- Capital, Volume I: The Process of Production of Capital
- Capital, Volume I 1906 edition, downloadable text and pdf from Google Books
- Capital, Volume II: The Process of Circulation of Capital
- Capital, Volume III: The Process of Capitalist Production as a Whole
- "Capital, Volume IV": Theories of Surplus Value

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Economic inequality

2008/9 Schools Wikipedia Selection. Related subjects: Economics

Economic inequality refers to disparities in the distribution of economic assets and income. The term typically refers to inequality among individuals and groups within a society, but can also refer to inequality among nations. Economic Inequality generally refers to equality of outcome, and is related to the idea of equality of opportunity. It is a contested issue whether economic inequality is a positive or negative phenomenon, both on utilitarian and moral grounds.

Economic inequality has existed in a wide range of societies and historical periods; its nature, cause and importance are open to broad debate. A country's economic structure or system (for example, capitalism or socialism), ongoing or past wars, and differences in individuals' abilities to create wealth are all involved in the creation of economic inequality.

There are various Numerical indexes for measuring economic inequality. Inequality is most often measured using the Gini coefficient, but there are also many other methods. One way to measure inequality is money based. For instance a person may be regarded as poor if their income falls below the line of poverty.

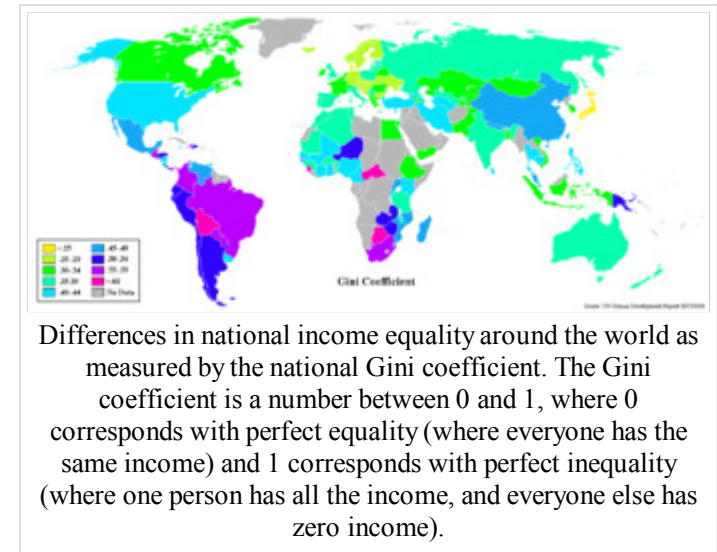
Economic inequality among different individuals or social groups is best measured within a single country. This is because country-specific factors tend to obscure inter-country comparisons of individuals' incomes. A single nation will have more or less inequality depending on the social and economic structure of that country.

Causes of inequality

There are many reasons for economic inequality within societies. These causes are often inter-related, non-linear, and complex. Acknowledged factors that impact economic inequality include the labour market, innate ability, education, race, gender, culture, preference for earning income or enjoying leisure, willingness to take risks, wealth condensation, and development patterns.

The labor market

A major cause of economic inequality within modern market economies is the determination of wages by the market, provided, that this market is a free market ruled only by the law of supply and demand. In this view, inequality is caused by the differences in the supply and demand for different types of work.



Differences in national income equality around the world as measured by the national Gini coefficient. The Gini coefficient is a number between 0 and 1, where 0 corresponds with perfect equality (where everyone has the same income) and 1 corresponds with perfect inequality (where one person has all the income, and everyone else has zero income).

A job where there are many willing workers (high supply) but only a small number of positions (low demand) will result in a low wage for that job. This is because competition between workers drives down the wage. An example of this would be low-skill jobs such as dish-washing or customer service. Because of the persistence of unemployment in market economies and the fact that these jobs require very little skill results in a very high supply of willing workers. Competition amongst workers tend to drive down the wage since if any one worker demands a higher wage the employer can simply hire another employee at an equally low wage.

A job where there are few willing workers (low supply) but a large demand for the skills these workers have will result in high wages for that job. This is because competition between employers will drive up the wage. An example of this would be high-skill jobs such as engineers, professional athletes, or capable CEOs. Competition amongst employers tends to drive up wages since if any one employer demands a low wage, the worker can simply quit and easily find a new job at a higher wage.

While the above examples tend to identify skill with high demand and wages, this is not necessarily the case. For example, highly skilled computer programmers in western countries have seen their wages suppressed by competition from computer programmers in Developing Countries who are willing to accept a lower wage.

The final results amongst these supply and demand interactions is a gradation of different wages representing income inequality within society.

Innate ability

Many people believe that there is a correlation between differences in innate ability, such as intelligence, strength, or charisma, and an individual's wealth. Relating these innate abilities back to the labor market suggests that such abilities are in high demand relative to their supply and hence play a large role in increasing the wage of those who have them. Contrariwise, such innate abilities might also affect an individual's ability to operate within society in general, regardless of the labor market.

Various studies have been conducted on the correlation between IQ scores and wealth/income. The book titled " IQ and the Wealth of Nations", written by Dr. Richard Lynn, examines this relationship with limited success; other peer-reviewed research papers have also been criticised harshly. Without further research on the topic, incorporating statistical models that are universally accepted, it is fairly difficult to come towards an objective conclusion regarding any relationship between intelligence and wealth or income.

Education

One important factor in the creation of inequality is variation in individuals' access to education. Education, especially in an area where there is a high demand for workers, creates high wages for those with this education. As a result, those who are unable to afford an education, or choose not to pursue optional education, generally receive much lower wages. Many economists believe that a major reason the world has experienced increasing levels of inequality since the 1980s is an increase in the demand for highly skilled workers in high-tech industries. They believe that this has resulted in an increase in wages for those with an education, but has not increased the wages of those without an education, leading to greater inequality.

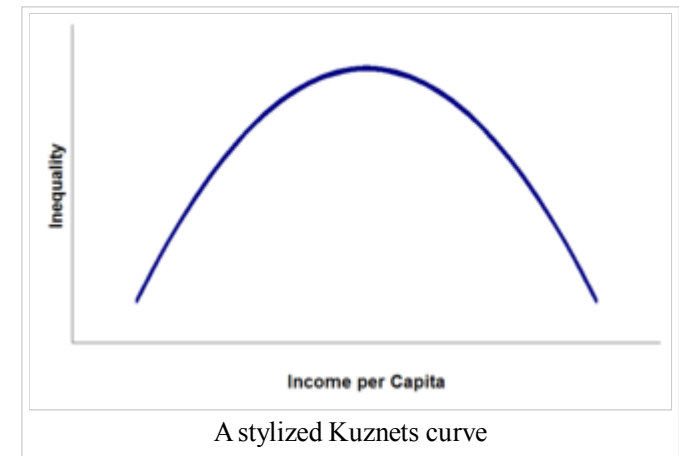
Gender, race, and culture

The existence of different genders, races and cultures within a society is also thought to contribute to economic inequality. Some psychologists such as Richard Lynn argue that there are innate group differences in ability that are partially responsible for producing race and gender group differences in wealth (see also race and intelligence, sex and intelligence) though this assertion is highly controversial.

The idea of the gender gap tries to explain differences in income between genders. Culture and religion are thought to play a role in creating inequality by either encouraging or discouraging wealth-acquiring behaviour, and by providing a basis for discrimination. In many countries individuals belonging to certain racial and ethnic minorities are more likely to be poor. Proposed causes include cultural differences amongst different races, an educational achievement gap, and racism.

Development patterns

Simon Kuznets argued that levels of economic inequality are in large part the result of stages of development. Kuznets saw a curve-like relationship between level of income and inequality, now known as Kuznets curve. According to Kuznet, countries with low levels of development have relatively equal distributions of wealth. As a country develops, it acquires more capital, which leads to the owners of this capital having more wealth and income and introducing inequality. Eventually, through various possible redistribution mechanisms such as social welfare programs, more developed countries move back to lower levels of inequality. Kuznets demonstrated this relationship using cross-sectional data. However, more recent testing of this theory with superior panel data has shown it to be very weak.



Wealth condensation

Wealth condensation is a theoretical process by which, under certain conditions, newly-created wealth concentrates in the possession of already-wealthy individuals or entities. According to this theory, those who already hold wealth have the means to invest in new sources of creating wealth or to otherwise leverage the accumulation of wealth, thus are the beneficiaries of the new wealth. Over time, wealth condensation can significantly contribute to the persistence of inequality within society.

As an example of wealth condensation, truck drivers who own their own trucks often make more money than those who do not, since the owner of a truck can escape the rent charged to drivers by owners (even taking into account maintenance and other costs). Hence, a truck driver who has wealth to begin with can afford to buy his own truck in order to make more money. A truck driver who does not own his own truck makes a lesser wage and is therefore stuck in a Catch-22, unable to buy his own truck to increase his income.

As another example of wealth condensation, savings from the upper-income groups tend to accumulate much faster than saving from the lower-income groups. Upper-income groups can save a significant portion of their incomes. On the other hand, lower-income groups barely make enough to cover their consumptions,

hence only capable of saving a fraction of their incomes or even none. Assuming both groups earn the same yield rate on their savings, the return on upper-income groups' savings are much greater than the lower-income groups' savings because upper-income groups have a much larger base.

Related to wealth condensation are the effects of intergenerational inequality. The rich tend to provide their offspring with a better education, increasing their chances of achieving a high income. Furthermore, the wealthy often leave their offspring with a hefty inheritance, jump-starting the process of wealth condensation for the next generation. However, it has been contended by some sociologists such as Charles Murray that this has little effect on one's long-term outcome and that innate ability is by far the best determinant of one's lifetime outcome.

Globalisation

Trade liberalisation may shift economic inequality from a global to a domestic scale. When rich countries trade with poor countries, the low-skilled workers in the rich countries may see reduced wages as a result of the competition. Trade economist Paul Krugman estimates that trade liberalisation has had a measurable effect on the rising inequality in the United States. He attributes this trend to increased trade with poor countries and the fragmentation of the means of production, resulting in low skilled jobs becoming more tradeable. However, he concedes that the effect of trade on inequality in America is minor when compared to other causes, such as technological innovation, a view shared by other experts. Lawrence Katz, a Harvard economist, estimates that trade has only accounted for 5-15% of rising income inequality. Some economists, such as Robert Lawrence, dispute any such relationship. In particular, Robert Lawrence argues that technological innovation and automation has meant that low-skilled jobs have been replaced by machines in rich countries, and that rich countries no longer have significant numbers of low skilled manufacturing workers that could be affected by competition from poor countries.

Mitigating factors

There are many factors that tend to constrain the amount of economic inequality within society. These factors may be divided into two general classes: government sponsored, and market driven. The relative merits and effectiveness of each approach is a subject of heated debate.

Proponents of government sponsored approaches to reducing economic inequality generally believe that economic inequality represents a fundamental injustice, and that it is the right and duty of the government to correct this injustice. Government sponsored approaches to reducing economic inequality include:

- Mass education - to increase the supply of skilled labor and decrease the wage of skilled labour to reduce income inequality;
- Progressive taxation, where the rich are taxed more than the poor - to reduce the amount of income inequality in society.
- Minimum wage legislation - to raise the income of the poorest working group. However, proponents of the free market point out this will cut the least skilled out of the employment market entirely.
- The Nationalization or subsidization of "essential" goods and services such as food, healthcare, education, and housing - to reduce the amount of inequality in society - by providing goods and services that everyone needs cheaply or freely, governments can effectively increase the disposable income

of the poorer members of society.

Proponents of free markets point out that these measures usually backfire, as the growth of government would create a privileged class such as the nomenklatura in the Soviet Union who use their position within the government to gain unequal access to resources, thereby reducing economic equality. Others argue that free markets without these measures allow the already privileged to control the political life of a country as it did in Brazil where the country's right wing military dictatorship (1964-1985) allowed the country to become the most economically unequal in South America.

Other proponents of free markets do not generally see economic inequality in a free market as fundamentally unjust. Market-driven reductions in economic inequality are therefore incidental to economic freedom. Nevertheless there are some market forces which work to reduce economic inequality:

- In a market-driven economy, too much economic disparity could generate pressure for its own removal. In an extreme example, if one person owned everything, that person would immediately (in a market economy) have to hire people to maintain his property, and that person's wealth would immediately begin to dissipate. (García-Peñalosa 2006)
- By a concept known as the "decreasing marginal utility of wealth," a wealthy person will tend not to value his last dollar as much as a poor person, since a poor person's dollars are more likely to be spent for essentials. This could tend to move wealth from the rich to the poor. A derogatory term for this is the "trickle down effect."

Effects of inequality

Social cohesion

Research has shown a clear link between income inequality and social cohesion. In more equal societies, people are much more likely to trust each other, measures of social capital suggest greater community involvement, and homicide rates are consistently lower.

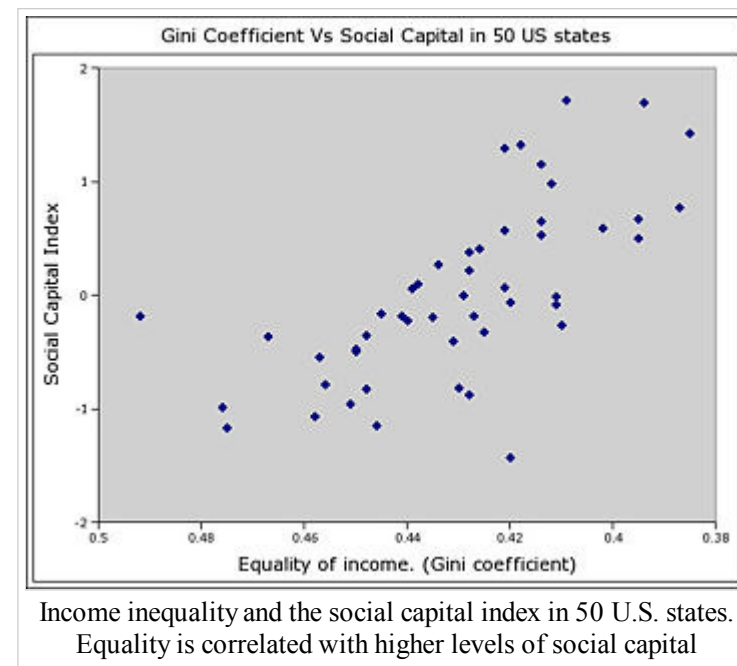
One of the earliest writers to note the link between economic equality and social cohesion was Alexis de Tocqueville in his *Democracy in America*. Writing in 1831:

Among the new objects that attracted my attention during my stay in the United States, none struck me with greater force than the equality of conditions. I easily perceived the enormous influence that this primary fact exercises on the workings of society. It gives a particular direction to the public mind, a particular turn to the laws, new maxims to those who govern, and particular habits to the governed... It creates opinions, gives rise to sentiments, inspires customs, and modifies everything it does not produce... I kept finding that fact before me again and again as a central point to which all of my observations were leading.

In a 2002 paper, Eric Uslaner and Mitchell Brown showed that there is a high correlation between the amount of trust in society and the amount of income equality. They did this by comparing results from the question "would others take advantage of you if they got the chance?" in U.S. General Social Survey and others with statistics on income inequality.

Robert Putnam, professor of political science at Harvard, established links between social capital and economic inequality. His most important studies (Putnam, Leonardi, and Nanetti 1993, Putnam 2000) established these links in both the United States and in Italy. On the relationship of inequality and involvement in community he says:

Community and equality are mutually reinforcing... Social capital and economic inequality moved in tandem through most of the twentieth century. In terms of the distribution of wealth and income, America in the 1950s and 1960s was more egalitarian than it had been in more than a century... [T]hose same decades were also the high point of social connectedness and civic engagement. Record highs in equality and social capital coincided. Conversely, the last third of the twentieth century was a time of growing inequality and eroding social capital... The timing of the two trends is striking: somewhere around 1965-70 America reversed course and started becoming both less just economically and less well connected socially and politically. (Putnam 2000 pp 359)



In addition to affecting levels of trust and civic engagement, inequality in society has also shown to be highly correlated with crime rates. Most studies looking into the relationship between crime and inequality have concentrated on homicides - since homicides are almost identically defined across all nations and jurisdictions. There have been over fifty studies showing tendencies for violence to be more common in societies where income differences are larger. Research has been conducted comparing developed countries with undeveloped countries, as well as studying areas within countries. Daly et al. 2001. found that among U.S. States and Canadian Provinces there is a tenfold difference in homicide rates related to inequality. They estimated that about half of all variation in homicide rates can be accounted for by differences in the amount of inequality in each province or state. Fajnzylber et al. (2002) found a similar relationship worldwide. Among comments in academic literature on the relationship between homicides and inequality are:

- The most consistent finding in cross-national research on homicides has been that of a positive association between income inequality and homicides. (Neapolitan 1999 pp 260)
- Economic inequality is positively and significantly related to rates of homicide despite an extensive list of conceptually relevant controls. The fact that this relationship is found with the most recent data and using a different measure of economic inequality from previous research, suggests that the finding is very robust. (Lee and Bankston 1999 pp 50)

Population health

Recently, there has been increasing interest from epidemiologists on the subject of economic inequality and its relation to the health of populations. There is a very robust correlation between socioeconomic status and health. This correlation suggests that it is not only the poor who tend to be sick when everyone else is healthy, but that there is a continual gradient, from the top to the bottom of the socio-economic ladder, relating status to health. This phenomenon is often called the "SES Gradient". Lower socioeconomic status has been linked to chronic stress, heart disease, ulcers, type 2 diabetes, rheumatoid arthritis, certain types of cancer, and premature aging.

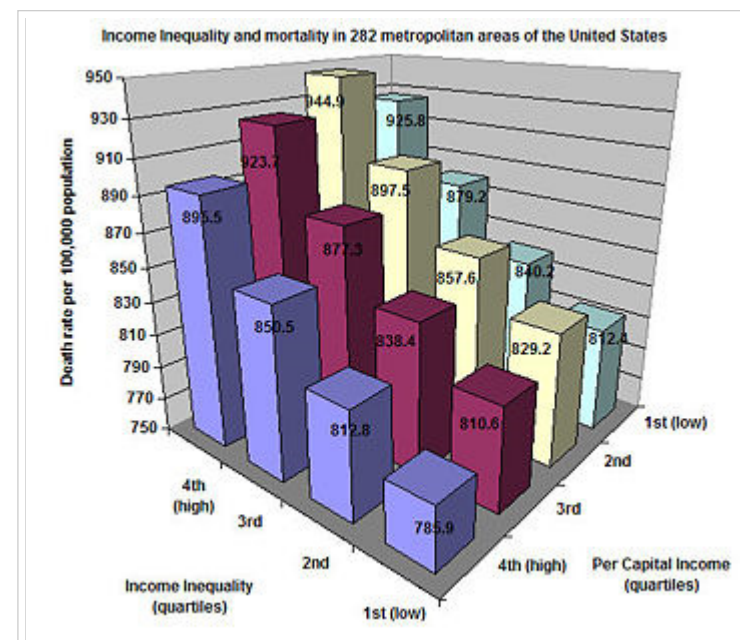
There is debate regarding the cause of the SES Gradient. A number of researchers (A. Leigh, C. Jencks, A. Clarkwest - see also Russell Sage working papers) see a definite link between economic status and mortality due to the greater economic resources of the wealthy, but they find little correlation due to social status differences.

Other researchers such as Richard Wilkinson, J. Lynch, and G.A. Kaplan have found that socioeconomic status strongly affects health even when controlling for economic resources and access to health care. Most famous for linking social status with health are the Whitehall studies - a series of studies conducted on civil servants in London. The studies found that although all civil servants in England have the same access to health care, there was a strong correlation between social status and health. The studies found that this relationship remained strong even when controlling for health-affecting habits such as exercise, smoking and drinking. Furthermore, it has been noted that no amount of medical attention will help decrease the likelihood of someone getting type 2 diabetes or rheumatoid arthritis - yet both are more common among populations with lower socioeconomic status. Lastly, it has been found that amongst the wealthiest quarter of countries on earth (a set stretching from Luxembourg to Slovakia) there is no relation between a country's wealth and general population health - suggesting that past a certain level, absolute levels of wealth have little impact on population health, but relative levels within a country do.

The concept of psychosocial stress attempts to explain how psychosocial phenomena such as status and social stratification can lead to the many diseases associated with the SES Gradient. Higher levels of economic inequality tend to intensify social hierarchies and generally degrade the quality of social relations - leading to greater levels of stress and stress-related diseases. Richard Wilkinson found this to be true not only for the poorest members of society, but also for the wealthiest. Economic inequality is bad for everyone's health.

The effects of inequality on health are not limited to human populations. David H. Abbott at the Wisconsin National Primate Research Centre found that among many primate species, less egalitarian social structures correlated with higher levels of stress hormones among socially subordinate individuals.

Utility, economic welfare, and distributive efficiency



Income inequality and mortality in 282 metropolitan areas of the United States. Mortality is strongly associated with higher income inequality, but, within levels of income inequality, not with per capita income.

Economic inequality is thought to reduce distributive efficiency within society. That is to say, inequality reduces the sum total of personal utility because of the decreasing marginal utility of wealth. For example, a house may provide less utility to a single millionaire as a summer home than it would to a homeless family of five. The marginal utility of wealth is lowest among the richest. In other words, an additional dollar spent by a poor person will go to things providing a great deal of utility to that person, such as basic necessities like food, water, and healthcare; meanwhile, an additional dollar spent by a much richer person will most likely go to things providing relatively less utility to that person, such as luxury items. From this standpoint, for any given amount of wealth in society, a society with more equality will have higher aggregate utility. Some studies (Layard 2003; Blanchard and Oswald 2000, 2003) have found evidence for this theory, noting that in societies where inequality is lower, population-wide satisfaction and happiness tend to be higher.

Economist Arthur Cecil Pigou discussed the impact of inequality in *The Economics of Welfare*. He wrote:

Nevertheless, it is evident that any transference of income from a relatively rich man to a relatively poor man of similar temperament, since it enables more intense wants, to be satisfied at the expense of less intense wants, must increase the aggregate sum of satisfaction. The old "law of diminishing utility" thus leads securely to the proposition: Any cause which increases the absolute share of real income in the hands of the poor, provided that it does not lead to a contraction in the size of the national dividend from any point of view, will, in general, increase economic welfare.

In addition to the argument based on diminishing marginal utility, Pigou makes a second argument that income generally benefits the rich by making them wealthier than other people, whereas the poor benefit in absolute terms. Pigou writes:

Now the part played by comparative, as distinguished from absolute, income is likely to be small for incomes that only suffice to provide the necessities and primary comforts of life, but to be large with large incomes. In other words, a larger proportion of the satisfaction yielded by the incomes of rich people comes from their relative, rather than from their absolute, amount. This part of it will not be destroyed if the incomes of all rich people are diminished together. The loss of economic welfare suffered by the rich when command over resources is transferred from them to the poor will, therefore, be substantially smaller relatively to the gain of economic welfare to the poor than a consideration of the law of diminishing utility taken by itself suggests. -- Arthur Cecil Pigou in *The Economics of Welfare*

Schmidtz (2006) argues that maximizing the sum of individual utilities does not necessarily imply that the maximum social utility is achieved. For example:

A society that takes Joe Rich's second unit [of corn] is taking that unit away from someone who . . . has nothing better to do than plant it and giving it to someone who . . . does have something better to do with it. That sounds good, but in the process, the society takes seed corn out of production and diverts it to food, thereby cannibalizing itself

Economic incentives

Many people accept inequality as a given, and argue that the prospect of greater material wealth provides incentives for competition and innovation within an economy.

Some modern economic theories, such as the neoclassical school, have suggested that a functioning economy requires a certain level of unemployment. These theories argue that unemployment benefits must be below the wage level to provide an incentive to work, thereby mandating inequality. Hypotheses including

socialism and Keynesianism, dispute this positive role of unemployment.

Many economists believe that one of the main reasons that inequality might induce economic incentive is because material wellbeing and conspicuous consumption are related to status. In this view, high stratification of income (high inequality) creates high amounts of social stratification, leading to greater competition for status. One of the first writers to note this relationship was Adam Smith who recognized "regard" as one of the major driving forces behind economic activity. From *The Theory of Moral Sentiments* in 1759:

[W]hat is the end of avarice and ambition, of the pursuit of wealth, of power, and pre-eminence? Is it to supply the necessities of nature? The wages of the meanest labourer can supply them... [W]hy should those who have been educated in the higher ranks of life, regard it as worse than death, to be reduced to live, even without labour, upon the same simple fare with him, to dwell under the same lowly roof, and to be clothed in the same humble attire? From whence, then, arises that emulation which runs through all the different ranks of men, and what are the advantages which we propose by that great purpose of human life which we call bettering our condition? To be observed, to be attended to, to be taken notice of with sympathy, complacency, and approbation, are all the advantages which we can propose to derive from it. It is the vanity, not the ease, or the pleasure, which interests us (*Theory of Moral Sentiments*, Part I, Section III, Chapter II).

Modern sociologists and economists such as Juliet Schor and Robert H. Frank have studied the extent to which economic activity is fueled by the ability of consumption to represent social status. Schor, in *The Overspent American*, argues that the increasing inequality during the 1980s and 1990s strongly accounts for increasing aspirations of income, increased consumption, decreased savings, and increased debt. In *Luxury Fever* Robert H. Frank argues that people's satisfaction with their income is much more strongly affected by how it compares with others than its absolute level.

Economic growth

Several recent economists have investigated the relationship between inequality and economic growth using econometrics.

In their study for the World Institute for Development Economics Research, Giovanni Andrea Cornia and Julius Court (2001) reach policy conclusions as to the optimal distribution of income. They conclude that too much equality (below a Gini coefficient of .25) negatively impacts growth due to "incentive traps, free-riding, labour shirking, [and] high supervision costs". They also claim that high levels of inequality (above a Gini coefficient of .40) negatively impacts growth, due to "incentive traps, erosion of social cohesion, social conflicts, [and] uncertain property rights". They advocate for policies which put equality at the low end of this "efficient" range.

Robert Barro wrote a paper arguing that inequality reduces growth in poor countries and promotes growth in rich ones. A number of other researchers have derived conflicting results, some concluding there is a negative effect of inequality on growth and others a positive. Patrizio Pagano used Granger causality, a technique that can determine two way interaction between two variables, to attempt to explain these previous findings. Pagano's research suggested that inequality had a negative effect on growth while growth increased inequality. The two-way interaction largely explains the contradiction in past research.

Perspectives regarding economic inequality

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :119 of 626.

There are various schools of thought regarding economic inequality.

Marxism

Marxism favors an eventual society where distribution is based on an individual's needs rather than his ability to produce, social class, inheritance, or other such factors. In such a system inequality would be low or non-existent assuming everyone had the same "needs".

Meritocracy

Meritocracy favors an eventual society where an individual's success is a direct function of his merit, or contribution. Therefore, economic inequality is beneficial inasmuch as it reflects individual skills and effort, and detrimental inasmuch as it represent inherited or unjustified wealth or opportunities. From a meritocratic point of view, measuring economic equality as one parameter, not distinguishing these two opposite contributing factors, serves no good purpose.

Liberalism

Classical liberals and libertarians generally do not take a stance on wealth inequality, but believe in equality under the law regardless of whether it leads to unequal wealth distribution. Ludwig von Mises (1996) explains:

The liberal champions of equality under the law were fully aware of the fact that men are born unequal and that it is precisely their inequality that generates social cooperation and civilization. Equality under the law was in their opinion not designed to correct the inexorable facts of the universe and to make natural inequality disappear. It was, on the contrary, the device to secure for the whole of mankind the maximum of benefits it can derive from it. Henceforth no man-made institutions should prevent a man from attaining that station in which he can best serve his fellow citizens.

Libertarian Robert Nozick argued that government redistributes wealth by force (usually in the form of taxation), and that the ideal moral society would be one where all individuals are free from force. However, Nozick recognized that some modern economic inequalities were the result of forceful taking of property, and a certain amount of redistribution would be justified to compensate for this force but not because of the inequalities themselves. John Rawls argued in *A Theory of Justice* that inequalities in the distribution of wealth are only justified when they improve society as a whole, including the poorest members. Rawls does not discuss the full implications of his theory of justice. Some see Rawls's argument as a justification for capitalism since even the poorest members of society theoretically benefit from increased innovations under capitalism; others believe only a strong welfare state can satisfy Rawls's theory of justice.

Classical liberal Milton Friedman believed that if government action is taken in pursuit of economic equality that political freedom would suffer. In a famous quote, he said:

A society that puts equality before freedom will get neither. A society that puts freedom before equality will get a high degree of both.

Arguments based on social justice

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :120 of 626.

Patrick Diamond and Anthony Giddens (professors of Economics and Sociology, respectively) hold that

pure meritocracy is incoherent because, without redistribution, one generation's successful individuals would become the next generation's embedded caste, hoarding the wealth they had accumulated.

They also state that social justice requires redistribution of high incomes and large concentrations of wealth in a way that spreads it more widely, in order to "recognise the contribution made by all sections of the community to building the nation's wealth." (Patrick Diamond and Anthony Giddens, 27 June 2005, New Statesman)

Claims economic inequality weakens societies

In most western democracies, the desire to eliminate or reduce economic inequality is generally associated with the political left. One practical argument in favour of reduction is the idea that economic inequality reduces social cohesion and increases social unrest, thereby weakening the society.

There is evidence that this is true (see inequity aversion) and it is intuitive, at least for small face-to-face groups of people. Alberto Alesina, Rafael Di Tella, and Robert MacCulloch find that inequality negatively affects happiness in Europe but not in the United States.

Ricardo Nicolás Pérez Truglia in "Can a rise in income inequality improve welfare?" proposed a possible explanation: some goods might not be allocated through standard markets, but through a signaling mechanism. As long as income is associated with positive personal traits (e.g. charisma), in more heterogeneous-in-income societies income not only buys traditional goods (e.g. food, a house), but it also buys non-market goods (e.g. friends, confidence). Thus, endogenous income inequality may explain a rise in social welfare.

It has also been argued that economic inequality invariably translates to political inequality, which further aggravates the problem.

The main disagreement between the western democratic left and right, is basically a disagreement on the importance of each effect, and where the proper balance point should be. Both sides generally agree that the causes of economic inequality based on non-economic differences (race, gender, etc.) should be minimized. There is strong disagreement on how this minimization should be achieved.

Arguments that inequality is not a primary concern

The acceptance of economic inequality is generally associated with the political right. One argument in favor of the acceptance of economic inequality is that, as long as the cause is mainly due to differences in behavior, the inequality provides incentives that push the society towards economically healthy and efficient behaviour. Capitalists see orderly competition and individual initiative as crucial to economic prosperity and accordingly believe that economic freedom is more important than economic equality.

Policy can be considered good if it makes some wealthy people wealthier without making anyone poorer (i.e. a policy which offers a Pareto improvement), even though it increases the total amount of inequality. According to this point of view, discussions of inequality absent any information about absolute levels of

wealth are specious, because one population's "poor" may be better off than another's "well-off."

A third argument is that capitalism, especially free market capitalism, results in voluntary transactions among parties. Since the transactions are voluntary, each party at least believes they benefit from the transaction. According to the subjective theory of value, both parties will indeed benefit the transaction (assuming there is no fraud or extortion involved).

Retrieved from "http://en.wikipedia.org/wiki/Economic_inequality"

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Economics

2008/9 Schools Wikipedia Selection. Related subjects: Economics

Economics is the branch of social science that studies the production, distribution, and consumption of goods and services. The term *economics* comes from the Greek for *oikos* (house) and *nomos* (custom or law), hence "rules of the house(hold)."

A definition that captures much of modern economics is that of Lionel Robbins in a 1932 essay: "the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses." Scarcity means that available resources are insufficient to satisfy all wants and needs. Absent scarcity and alternative uses of available resources, there is no economic problem. The subject thus defined involves the study of choices as they are affected by incentives and resources.

Areas of economics may be divided or classified into various types, including:

- microeconomics and macroeconomics
- positive economics ("what is") and normative economics ("what ought to be")
- mainstream economics and heterodox economics
- fields and broader categories within economics.

One of the uses of economics is to explain how economies, as economic systems, work and what the relations are between economic players (agents) in the larger society. Methods of economic analysis have been increasingly applied to fields that involve people (officials included) making choices in a social context, such as crime, education, the family, health, law, politics, religion, social institutions, and war.

In the beginning



Face-to-face trading interactions on the trading floor of a stock exchange. Financial decisions are only one among many economic choices people may make.

Although discussions about production and distribution have a long history, economics in its modern sense as a separate discipline is conventionally dated from the publication of Adam Smith's *The Wealth of Nations* in 1776. There Smith describes the subject in these practical and exacting terms:

Political economy, considered as a branch of the science of a statesman or legislator, proposes two distinct objects: first, to supply a plentiful revenue or product for the people, or, more properly, to enable them to provide such a revenue or subsistence for themselves; and secondly, to supply the state or commonwealth with a revenue sufficient for the public services. It proposes to enrich both the people and the sovereign.

Smith referred to the subject as 'political economy', but that term was gradually replaced in general usage by 'economics' after 1870.

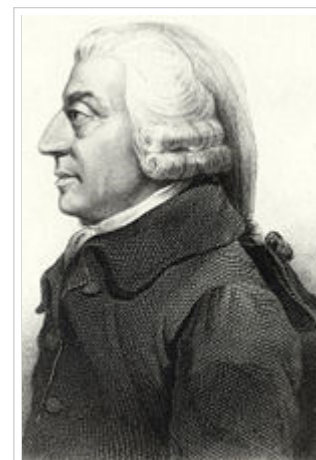
Basic concepts

Production possibilities, opportunity cost, and efficiency

Common problems among different types of economies include:

- *what goods to produce and in what quantities* (consumption or investment, private goods or public goods, meat or potatoes, etc.)
- *how to produce them* (coal or nuclear power, how much and what kind of machinery, who farms or teaches, etc.)
- *for whom to produce them*, reflecting the distribution of income from output.

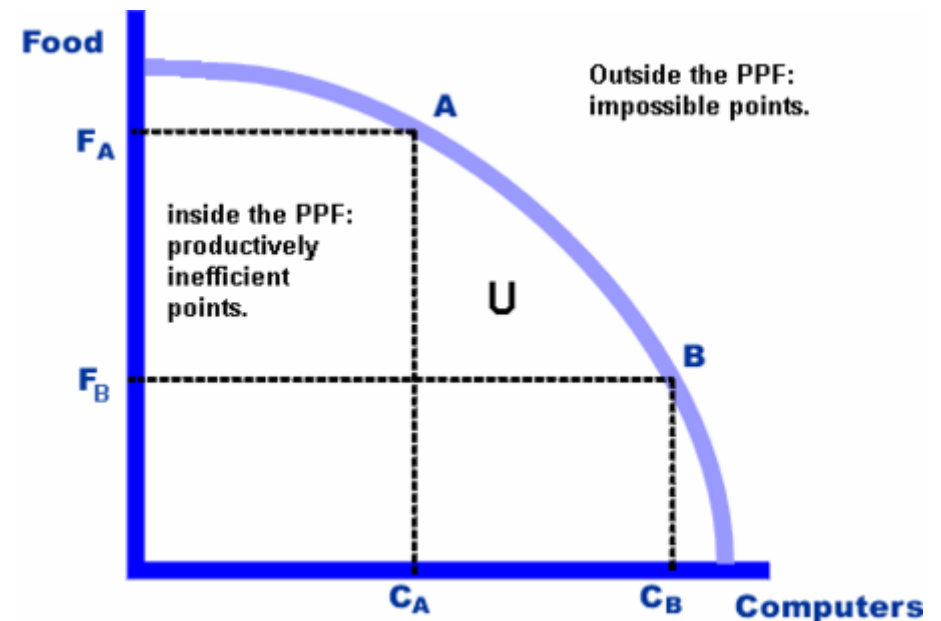
An analytical tool for addressing these problems is the *production-possibility frontier* (PPF). In the simplest case an economy can produce just two goods. Then the PPF is a table or graph (as below) that shows the different quantities of the two goods. Technology and an endowment of productive *inputs* (such as land, capital, and prospective labour) are taken *as given*, which limits feasible total output.



Adam Smith, author of *The Wealth of Nations* (1776), generally regarded as initiating modern economics.

Point **A** in the diagram for example, shows that F_A of food and C_A of computers can be produced when production is run efficiently. So can F_B of food and C_B of computers (point **B**). Each point on the curve shows a maximal potential total output for the economy, which is the maximum output of one good, given a feasible output quantity of the other good.

Scarcity is represented in the figure by people being willing but unable in the aggregate to consume *beyond the PPF*. If production of one good *increases* along the curve, production of the other good *decreases*, an inverse relationship. This is because increasing output of one good requires transferring inputs to it from production of the other good, decreasing the latter. The slope of the curve at a point on it gives the trade-off between the two goods. It measures what an additional unit of one good costs in units forgone of the other good, an example of an *opportunity cost*. Opportunity cost has been described as expressing "the basic relationship between scarcity and choice." *Along the PPF*, scarcity means that choosing *more* of one good in the aggregate entails doing with *less* of the other good. Still, in a market economy, movement along the curve can also be described as the choice of the increased output being worth the cost to the agents.



By construction, each point on the curve shows *productive efficiency* in maximizing output for given total inputs. A point *inside* the curve, as at **U**, is feasible but represents *production inefficiency* (wasteful use of inputs), in that output of *one or both goods* could increase by moving in a northeast direction to a point on the curve. An example of such inefficiency might be from high unemployment during a business-cycle recession. Being on the curve might still not fully satisfy allocative efficiency *if* it did not produce a mix of goods that consumers preferred.

Consistent with the common economic problems listed above, much applied economics in public policy is concerned with determining how the efficiency of an economy can be improved. Recognizing the reality of scarcity and then figuring out how to organize society for the most efficient use of resources has been described as the "essence of economics," where the subject "makes its unique contribution."

Specialization, division of labour, and gains from trade

Specialization in production is a pervasive feature of economic organization. Its contribution to economic efficiency and technological progress has long been noted. It includes different types of output among farms, manufacturers, and service providers, economies, etc. Among each of these production systems, there may be:

- a corresponding *division of labour* with each worker having a distinct occupation or doing a specialized task as part of the production effort,
- correspondingly different types of capital equipment and differentiated land uses.

Adam Smith's *Wealth of Nations* (1776) notably discusses the benefits of the division of labour. How individuals can best apply their own labour or any other resource is a central subject in the first book of the series. Smith claimed that an individual would invest a resource, for example, land or labour, so as to earn the highest possible return on it. Consequently, all uses of the resource must yield an equal rate of return (adjusted for the relative riskiness of each enterprise). Otherwise reallocation would result. This idea, wrote George Stigler, is the central proposition of economic theory. French economist Turgot had made the same point in 1766.

In more general terms, it is theorized that market incentives, including prices of outputs and productive inputs, select the allocation of factors of production by *comparative advantage*, that is, so that (relatively) low-cost inputs are employed to keep down the *opportunity cost* of a given type of output. In the process, aggregate output increases as a by product or by design. Such specialization of production creates opportunities for *gains from trade* whereby resource owners benefit from trade in the sale of one type of output for other, more highly-valued goods. A measure of gains from trade is the *increased output* (formally, the sum of increased consumer surplus and producer profits) from specialization in production and resulting trade.

Money

Money is a *means of final payment* for goods in most market economies and the unit of account in which prices are typically stated. It includes currency held by the nonbank public and checkable deposits. It has been described as a social convention, like language, useful to one largely because it is useful to others. As a medium of exchange, money facilitates trade. Its economic function can be contrasted with barter (non-monetary exchange). Given a diverse array of produced goods and specialized producers, barter may entail a hard-to-locate double coincidence of wants as to what is exchanged, say apples and a book. By comparison, money can reduce the transaction cost of exchange because of its ready acceptability. Then it is less costly for the seller to accept money in exchange, rather than what the buyer produces.

At the level of an economy, theory and evidence are consistent with a positive relationship running from the total money supply to the nominal value of total output and to the general price level. For this reason, management of the money supply is a key aspect of monetary policy.

Supply and demand

The theory of demand and supply is an organizing principle to explain prices and quantities of goods sold and changes thereof in a market economy. In microeconomic theory, it refers to price and output determination in a perfectly competitive market. This has served as a building block for modeling other market structures and for other theoretical approaches.

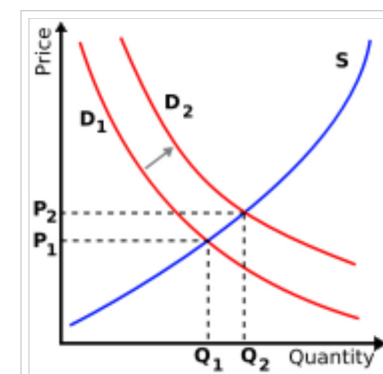
For a given market of a commodity, *demand* shows the quantity that all prospective buyers would be prepared to purchase at each unit price of the good. Demand is often represented using a table or a graph relating price and quantity demanded (see boxed figure). Demand theory describes individual consumers as "rationally" choosing the *most preferred* quantity of each good, given income, prices, tastes, etc. A term for this is 'constrained utility maximization' (with income as the "constraint" on demand). Here, 'utility' refers to the (hypothesized) preference relation for individual consumers. Utility and income are then used to model hypothesized properties about the effect of a price change on the quantity demanded. The **law of demand** states that, in general, price and quantity demanded in a given market are inversely related. In other words, the higher the price of a product, the less of it people would be able and willing to buy of it (other things unchanged). As the price of a commodity rises, overall purchasing power decreases (the *income effect*) and consumers move toward relatively less expensive goods (the *substitution effect*). Other factors can also affect demand; for example an increase in income will *shift* the demand curve outward relative to the origin, as in the figure.

Supply is the relation between the price of a good and the quantity available for sale from suppliers (such as producers) at that price. Supply is often represented using a table or graph relating price and quantity *supplied*. Producers are hypothesized to be profit-maximizers, meaning that they attempt to produce the amount of goods that will bring them the highest profit. **Supply** is typically represented as a directly proportional relation between price and quantity supplied (other things unchanged). In other words, the higher the price at which the good can be sold, the more of it producers will supply. The higher price makes it profitable to increase production. At a price below equilibrium, there is a shortage of quantity supplied compared to quantity demanded. This pulls the price up. At a price above equilibrium, there is a surplus of quantity supplied compared to quantity demanded. This pushes the price down. The model of supply and demand predicts that for a given supply and demand curve, price and quantity will stabilize at the price that makes quantity supplied equal to quantity demanded. This is at the intersection of the two curves in the graph above, market equilibrium.

For a given quantity of a good, the price point on the demand curve indicates the *value*, or marginal utility to consumers for that unit of output. It measures what the consumer would be prepared to pay for the corresponding unit of the good. The price point on the supply curve measures *marginal cost*, the increase in total cost to the supplier for the corresponding unit of the good. The price in equilibrium is determined by supply and demand. In a perfectly competitive market, supply and demand equate cost and value at equilibrium.

Demand and supply can also be used to model the distribution of income to the factors of production, including labour and capital, through *factor markets*. In a labour market for example, the quantity of labour employed and the price of labour (the wage rate) are modeled as set by the demand for labour (from business firms etc. for production) and supply of labour (from workers).

Demand and supply are used to explain the behaviour of perfectly competitive markets, but their usefulness as a standard of performance extends to any type of market. Demand and supply can also be generalized to explain variables applying to the whole economy, for example, quantity of total output and the general



The supply and demand model describes how prices vary as a result of a balance between product availability and demand. The graph depicts an increase (that is, right-shift) in demand from D_1 to D_2 along with the consequent increase in price and quantity required to reach a new equilibrium point on the supply curve (S).

price level, studied in macroeconomics.

Prices and quantities

In supply-and-demand analysis, *price*, the going rate of exchange for a good, coordinates production and consumption quantities. Price and quantity have been described as the most directly observable characteristics of a good produced for the market. Supply, demand, and market equilibrium are theoretical constructs linking price and quantity. But tracing the effects of factors predicted to change supply and demand -- and through them, price and quantity -- is a standard exercise in applied microeconomics and macroeconomics. Economic theory can specify under what circumstances price serves as an *efficient* communication device to regulate quantity. A real-world application might attempt to measure *how much* variables that increase supply or demand change price and quantity.

Elementary demand-and-supply theory predicts equilibrium but not the speed of adjustment for changes of equilibrium due to a shift in demand or supply. In many areas, some form of "price stickiness" is postulated to account for quantities, rather than prices, adjusting in the short run to changes on the demand side or the supply side. This includes standard analysis of the business cycle in macroeconomics. Analysis often revolves around causes of such price stickiness and their implications for reaching a hypothesized long-run equilibrium. Examples of such price stickiness in particular markets include wage rates in labour markets and posted prices in markets deviating from perfect competition.

Another area of economics considers whether markets adequately take account of all social costs and benefits. An externality is said to occur where there are significant social costs or benefits from production or consumption that are not reflected in market prices. For example, air pollution may generate a negative externality, and education may generate a positive externality (less crime, etc.). Governments often tax and otherwise restrict the sale of goods that have negative externalities and subsidize or otherwise promote the purchase of goods that have positive externalities in an effort to correct the price distortions caused by these externalities.

Marginalism

Marginalist economic theory, such as above, describes consumers as attempting to reach a most-preferred position, subject to constraints, including income and wealth. It describes producers as attempting to maximize profits subject to their own constraints (including demand for goods produced, technology, and the price of inputs). Thus, for a consumer, at the point where marginal utility of a good, net of price, reaches zero, further increases in consumption of that good stop. Analogously, a producer compares marginal revenue against marginal cost of a good, with the difference as *marginal profit*. At the point where the marginal profit reaches zero, further increases in production of the good stop. For movement to equilibrium and for changes in equilibrium, behaviour also changes "at the margin" -- usually more-or-less of something, rather than all-or-nothing.

Related conditions and considerations apply more generally to any type of economic system, whether market-based or not, where there is scarcity. The marginalist notion of opportunity cost is a device to measure the size of the trade-off between competing alternatives. Such costs, reflected in prices, are used



Even a currency has a price, its exchange rate in currency markets. Its determination by supply and demand is an important issue in international trade.

for predicting responses to public-policy changes or disturbances in a market economy. They are also used for evaluating economic efficiency. Similarly, in a *centrally planned economy*, *shadow-price* relations must be satisfied for efficient use of resources. There shadow pricing can be used for modeling production units or sectors in relation to objectives of planners.

Economic reasoning

Economics as a contemporary discipline relies on rigorous styles of argument. Objectives include formulating theories that are simpler, more fruitful, and more reliable than other theories or no theory. Analysis may begin with a simple model that proposes the hypothesis of one variable to be explained by another variable. Often an economic hypothesis is only *qualitative*, not *quantitative*. That is, the hypothesis implies the *direction* of a change in one variable, not the *size* of the change, for a given change of another variable. For clarity of exposition, theory may proceed with an assumption of *ceteris paribus*, that is, holding constant explanatory terms other than the one under consideration. For example, the quantity theory of money predicts an increase in the nominal value of output from an increase in the money supply, *ceteris paribus*.

Economic theory is open to criticisms that it relies on unrealistic, unverifiable, or highly simplified assumptions. An example is the assumption of profit maximization by business firms. Answers of businesspersons to questions about the factors affecting their decisions may show no such calculation. One methodological response invokes a supplementary range of theoretical implications, such as that a profit-maximizing firm would raise total price with an increase in the sales tax. If firms act *as if* they are trying to maximize profits, the assumption is accepted, whatever businesspersons say they are doing. More generally, while unrealistic assumptions do not help a bad theory, many descriptive details might be irrelevant to the predictive success of the theory and omitted for that reason. Still, unrealistic assumptions may challenge the epistemic status of economics as a science, even as concepts and models help explain economic phenomena.

Expositions of economic reasoning often use two-dimensional graphs to illustrate theoretical relationships. At a higher level of generality, Paul Samuelson's treatise *Foundations of Economic Analysis* (1947) used mathematical methods to represent the theory, particularly as to maximizing behavioural relations of agents reaching equilibrium. The book focused on examining the class of statements called *operationally meaningful theorems* in economics, which are theorems that can conceivably be refuted by empirical data.

Economic data may permit testing the theory, if the theory has empirical implications. Statistical methods such as regression analysis can represent unknown random influences on the variable to be explained. Practitioners use such methods to estimate the size, economic significance, and statistical significance ("signal strength") of the hypothesized relation(s) and to adjust for noise from other variables. By such means, a hypothesis may gain acceptance, although in a probabilistic, rather than certain or final, sense. Acceptance is provisional, dependent on the hypothesis surviving tests that expose it to rejection, however inconclusive results might be on a given question. Like theories, uses of test statistics are themselves open to critical analysis.

In recent decades, the use of experimental methods in economics, including controlled experiments, has greatly expanded. This has removed one long-noted distinction of some natural sciences from economics and allowed more direct tests of what were previously taken as axioms. Development of theories, data, and methods have transformed some assumptions into testable models. An example is the assumption of narrowly selfish preferences versus a model that tests for selfish, altruistic, and cooperative preferences.

Methods similar to those above are used in other fields described as sciences. The widespread use of such methods in economics is a key premise for the argument that economics is a "genuine science." Still, critics have challenged the net gains from such methods. For example, Friedrich Hayek in his 1974 Nobel Prize lecture attributed policy failures in economic advising to an uncritical and unscientific propensity to imitate procedures used in the physical sciences. He argued that even much-studied economic phenomena, such as labor-market unemployment, are inherently more complex than their counterparts in the physical sciences where such methods were earlier formed. Similarly, theory and data are often very imprecise and lend themselves only to the *direction* of a change needed, not its *size*. In part because of criticism, economics has undergone a thorough cumulative formalization and elaboration of concepts and methods since the 1940s, some of which have been toward application of the hypothetico-deductive method to explain real-world phenomena. An example of the latter is the extension of microeconomic analysis to seemingly non-economic areas, sometimes called *economic imperialism*.

Areas and classifications in economics

Economics is one social science among several but has fields bordering on other areas, including economic geography, economic history, public choice, cultural economics, and institutional economics.

One division of the subject distinguishes two types of economics. Positive economics ("what is") seeks to explain economic phenomena or behaviour. Normative economics ("what ought to be," usually as to public policy) prioritizes choices and actions by some set of criteria; such priorities reflect value judgments, including selection of the criteria.

Another distinction is between *mainstream economics* and *heterodox economics*. One broad characterization describes mainstream economics as dealing with the "rationality-individualism-equilibrium nexus" and heterodox economics as defined by a "institutions-history-social structure nexus."

The JEL classification codes of the Journal of Economic Literature provide a comprehensive, detailed way of classifying and searching for economics publications by subject matter. An alternative classification of often-detailed entries by mutually-exclusive categories and subcategories is *The New Palgrave: A Dictionary of Economics*.

Analysis of the economy

Areas of economics may be classified in various ways, but an economy is usually analyzed by use of *microeconomics* or *macroeconomics*.

Microeconomics

Microeconomics examines the economic behaviour of agents (including individuals and firms) and their interactions through individual markets, given scarcity and government regulation. A given market might be for a *product*, say fresh corn, or the *services of a factor of production*, say bricklaying. The theory considers aggregates of *quantity demanded* by buyers and *quantity supplied* by sellers at each possible price per unit. It weaves these together to describe how

the market may reach equilibrium as to price and quantity or respond to market changes over time. This is broadly termed demand-and-supply analysis. Market structures, such as perfect competition and monopoly, are examined as to implications for behaviour and economic efficiency. Analysis often proceeds from the simplifying assumption that behaviour in other markets remains unchanged, that is, partial-equilibrium analysis. General-equilibrium theory allows for changes in different markets and aggregates across *all* markets, including their movements and interactions toward equilibrium.

Macroeconomics

Macroeconomics examines the economy as a whole to explain broad aggregates and their interactions "top down," that is, using a simplified form of general-equilibrium theory. Such aggregates include national income and output, the unemployment rate, and price inflation and subaggregates like total consumption and investment spending and their components. It also studies effects of monetary policy and fiscal policy. Since at least the 1960s, macroeconomics has been characterized by further integration as to micro-based modeling of sectors, including rationality of players, efficient use of market information, and imperfect competition. This has addressed a long-standing concern about inconsistent developments of the same subject. Macroeconomic analysis also considers factors affecting the long-term level and growth of national income. Such factors include capital accumulation, technological change and labor force growth.

Mathematical and quantitative methods

Economics as an academic subject often uses geometric methods, in addition to literary methods. Other general mathematical and quantitative methods are also often used for rigorous analysis of the economy or areas within economics. Such methods include the following.

Mathematical economics

Mathematical economics refers to application of mathematical methods to represent economic theory or analyze problems posed in economics. It uses such methods as calculus and matrix algebra. Expositors cite its advantage in allowing formulation and derivation of key relationships in an economic model with clarity, generality, rigor, and simplicity. For example, Paul Samuelson's book *Foundations of Economic Analysis* (1947) identifies a common mathematical structure across multiple fields in the subject.

Econometrics

Econometrics applies mathematical and statistical methods to analyze data related to economic models. For example, a theory may hypothesize that a person with more education will on average earn more income than a person with less education holding everything else equal. Econometric estimates can estimate the magnitude and statistical significance of the relation. Econometrics can be used to draw quantitative generalizations. These include testing or refining a theory, describing the relation of past variables, and forecasting future variables.

National accounting

National accounting is a method for summarizing aggregate economic activity of a nation. The national accounts are double-entry accounting systems that provide detailed underlying measures of such information. These include the national income and product accounts (NIPA), which provide estimates for the money value of output and income per year or quarter. NIPA allows for tracking the performance of an economy and its components through business cycles or over longer periods. Price data may permit distinguishing nominal from real amounts, that is, correcting money totals for price changes over time. The national accounts also include measurement of the capital stock, wealth of a nation, and international capital flows.

Selected fields

Agricultural economics

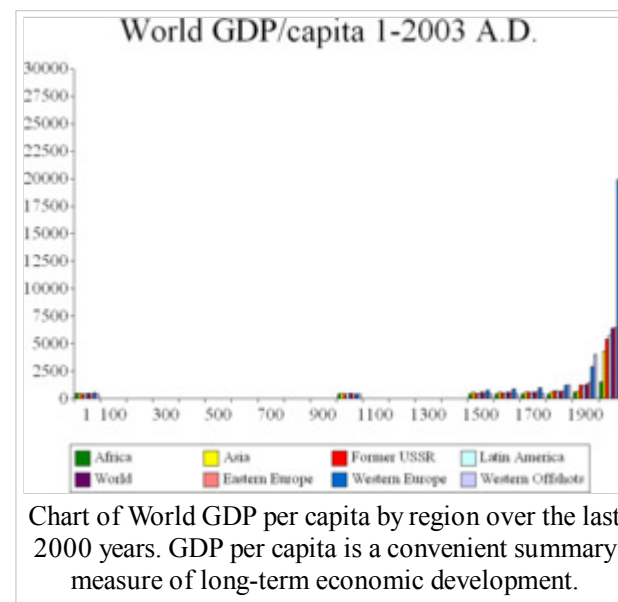
Agricultural economics is one the oldest and most established fields of economics. It is the study of the economic forces that affect the agricultural sector and the agricultural sector's impact on the rest of the economy. It is an area of economics that, thanks to the necessity of applying microeconomic theories to complex real world situations, has given rise to many important advances of more general applicability; the role of risk and uncertainty, the behaviour of households and links between property rights and incentives. More recently policy areas such as international commodity trade and the environment have been stressed.

Development and growth economics

Growth economics studies factors that explain economic growth – the increase in output per capita of a country over a long period of time. The same factors are used to explain differences in the *level* of output per capita *between* countries. Much-studied factors include the rate of investment, population growth, and technological change. These are represented in theoretical and empirical forms (as in the neoclassical growth model) and in growth accounting. The distinct field of *development economics* examines economic aspects of the development process in relatively low-income countries focussing on structural change, poverty, and economic growth. Approaches in development economics frequently incorporate social and political factors.

Economic systems

Economic systems is the branch of economics that studies the methods and institutions by which societies determine the ownership, direction, and allocation of economic resources. An *economic system* of a society is the unit of analysis. Among contemporary systems at different ends of the organizational spectrum are socialist systems and capitalist systems, in which most production occurs in respectively state-run and private enterprises. In between are mixed economies. A common element is the interaction of economic and political influences, broadly described as political economy. *Comparative economic systems* studies the relative performance and behaviour of different economies or systems.



Environmental economics

Environmental economics is concerned with issues related to degradation, enhancement, or preservation of the environment. In particular, public bads from production or consumption, such as air pollution, can lead to market failure. The subject considers how public policy can be used to correct such failures. Policy options include regulations that reflect cost-benefit analysis or market solutions that change incentives, such as emission fees or redefinition of property rights. Environmental Economics should not be conflated with new schools of economic thought sometimes referred to as ecological economics.

Financial economics

Financial economics, often simply referred to as finance, is concerned with the allocation of financial resources in an uncertain (or risky) environment. Thus, its focus is on the operation of financial markets, the pricing of financial instruments, and the financial structure of companies.

Game theory

Game theory is a branch of applied mathematics that studies strategic interactions between agents. In strategic games, agents choose strategies that will maximize their payoff, given the strategies the other agents choose. It provides a formal modeling approach to social situations in which decision makers interact with other agents. Game theory generalizes maximization approaches developed to analyze markets such as the supply and demand model. The field dates from the 1944 classic *Theory of Games and Economic Behaviour* by John von Neumann and Oskar Morgenstern. It has found significant applications in many areas outside economics as usually construed, including formulation of nuclear strategies, ethics, political science, and evolutionary theory.

Industrial organization

Industrial organization studies the strategic behaviour of firms, the structure of markets and their interactions. The common market structures studied include perfect competition, monopolistic competition, various forms of oligopoly, and monopoly.

Information economics

Information economics examines how information (or a lack of it) affects economic decision-making. An important focus is the concept of information asymmetry, where one party has more or better information than the other. The existence of information asymmetry gives rise to problems such as moral hazard, and adverse selection, studied in contract theory. The economics of information has relevance in many fields, including finance, insurance, contract law, and decision-making under risk and uncertainty.

International economics

International trade studies the determinants of the flow of goods and services across international boundaries. International finance is a macroeconomic field

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which examines the flow of capital across international borders, and the effects of these movements on exchange rates. Increased trade in goods, services and capital between countries is a major effect of contemporary globalization.

Labour economics

Labour economics seeks to understand the functioning of the market and dynamics for labour. Labour markets function through the interaction of workers and employers. Labour economics looks at the suppliers of labour services (workers), the demanders of labour services (employers), and attempts to understand the resulting patterns of wages and other labour income and of employment and unemployment. Practical uses include assisting the formulation of full employment of policies.

Law and economics

Law and economics, or economic analysis of law, is an approach to legal theory that applies methods of economics to law. It includes the use of economic concepts to explain the effects of legal rules, to assess which legal rules are economically efficient, and to predict what the legal rules will be. A seminal article by Ronald Coase published in 1961 suggested that well-defined property rights could overcome the problems of externalities.

Managerial economics

Managerial economics applies microeconomic analysis to specific decisions in business firms or other management units. It draws heavily from quantitative methods such as operations research and programming and from statistical methods such as regression analysis in the absence of certainty and perfect knowledge. A unifying theme is the attempt to optimize business decisions, including unit-cost minimization and profit maximization, given the firm's objectives and constraints imposed by technology and market conditions.

Public finance

Public finance is the field of economics that deals with budgeting the revenues and expenditures of a public sector entity, usually government. The subject addresses such matters as tax incidence (who really pays a particular tax), cost-benefit analysis of government programs, effects on economic efficiency and income distribution of different kinds of spending and taxes, and fiscal politics. The latter, an aspect of public choice theory, models public-sector behaviour analogously to microeconomics, involving interactions of self-interested voters, politicians, and bureaucrats.

Welfare economics

Welfare economics is a branch of economics that uses microeconomic techniques to simultaneously determine the allocative efficiency within an economy and the income distribution associated with it. It attempts to measure social welfare by examining the economic activities of the individuals that comprise society.

History and schools of economics

Early economic thought

Ancient economic thought dates from earlier Mesopotamian, Greek, Roman, Indian, Chinese, Persian and Arab civilizations. Notable writers include Aristotle, Chanakya, Qin Shi Huang, Thomas Aquinas and Ibn Khaldun through to the 14th century. Joseph Schumpeter initially considered the late scholastics of the 14th to 17th centuries as "coming nearer than any other group to being the 'founders' of scientific economics" as to monetary, interest, and value theory within a natural-law perspective. After discovering Ibn Khaldun's *Muqaddimah*, however, Schumpeter later viewed Ibn Khaldun as being the closest forerunner of modern economics, as many of his economic theories were not known in Europe until relatively modern times.

Two other groups, later called 'mercantilists' and 'physiocrats', more directly influenced the subsequent development of the subject. Both groups were associated with the rise of economic nationalism and modern capitalism in Europe. Mercantilism was an economic doctrine that flourished from the 16th to 18th century in a prolific pamphlet literature, whether of merchants or statesmen. It held that a nation's wealth depended on its accumulation of gold and silver. Nations without access to mines could obtain gold and silver from trade only by selling goods abroad and restricting imports other than of gold and silver. The doctrine called for importing cheap raw materials to be used in manufacturing goods, which could be exported, and for state regulation to impose protective tariffs on foreign manufactured goods and prohibit manufacturing in the colonies.

Physiocrats, a group of 18th century French thinkers and writers, developed the idea of the economy as a circular flow of income and output. Adam Smith described their system "with all its imperfections" as "perhaps the purest approximation to the truth that has yet been published" on the subject. Physiocrats believed that only agricultural production generated a clear surplus over cost, so that agriculture was the basis of all wealth. Thus, they opposed the mercantilist policy of promoting manufacturing and trade at the expense of agriculture, including import tariffs. Physiocrats advocated replacing administratively costly tax collections with a single tax on income of land owners. Variations on such a land tax were taken up by subsequent economists (including Henry George a century later) as a relatively non-distortionary source of tax revenue. In reaction against copious mercantilist trade regulations, the physiocrats advocated a policy of *laissez-faire*, which called for minimal government intervention in the economy.

Classical economics

Publication of Adam Smith's *The Wealth of Nations* in 1776, has been described as "the effective birth of economics as a separate discipline." The book identified land, labor, and capital as the three factors of production and the major contributors to a nation's wealth.

In Smith's view, the ideal economy is a self-regulating market system that automatically satisfies the economic needs of the populace. He described the market mechanism as an "invisible hand" that leads all individuals, in pursuit of their own self-interests, to produce the greatest benefit for society as a whole. Smith incorporated some of the Physiocrats' ideas, including *laissez-faire*, into his own economic theories, but rejected the idea that only agriculture was productive.

In his famous invisible-hand analogy, Smith argued for the seemingly paradoxical notion that competitive markets tended to advance broader *social* interests, although driven by narrower *self-interest*. The general approach that Smith helped initiate was called political economy and later classical economics. It

included such notables as Thomas Malthus, David Ricardo, and John Stuart Mill writing from about 1770 to 1870.

While Adam Smith emphasized the production of income, David Ricardo focused on the distribution of income among landowners, workers, and capitalists. Ricardo saw an inherent conflict between landowners on the one hand and labor and capital on the other. He posited that the growth of population and capital, pressing against a fixed supply of land, pushes up rents and holds down wages and profits.

Thomas Robert Malthus used the idea of diminishing returns to explain low living standards. Population, he argued, tended to increase geometrically, outstripping the production of food, which increased arithmetically. The force of a rapidly growing population against a limited amount of land meant diminishing returns to labor. The result, he claimed, was chronically low wages, which prevented the standard of living for most of the population from rising above the subsistence level.

Malthus also questioned the automatic tendency of a market economy to produce full employment. He blamed unemployment upon the economy's tendency to limit its spending by saving too much, a theme that lay forgotten until John Maynard Keynes revived it in the 1930s.

Coming at the end of the Classical tradition, John Stuart Mill parted company with the earlier classical economists on the inevitability of the distribution of income produced by the market system. Mill pointed to a distinct difference between the market's two roles: allocation of resources and distribution of income. The market might be efficient in allocating resources but not in distributing income, he wrote, making it necessary for society to intervene.

Value theory was important in classical theory. Smith wrote that the "real price of every thing ... is the toil and trouble of acquiring it" as influenced by its scarcity. Smith maintained that, with rent and profit, other costs besides wages also enter the price of a commodity. Other classical economists presented variations on Smith, termed the 'labour theory of value'. Classical economics focused on the tendency of markets to move to long-run equilibrium.

Marxist economics

Marxist (later, Marxian) economics descends from classical economics. It derives from the work of Karl Marx. The first volume of Marx's major work, *Capital*, was published in German in 1867. In it, Marx focused on the labour theory of value and what he considered to be the exploitation of labour by capital. Thus, the labour theory of value, rather than simply a theory of price, was a method for measuring the exploitation of labour in a capitalist society, although concealed by appearances of "vulgar" political economy.

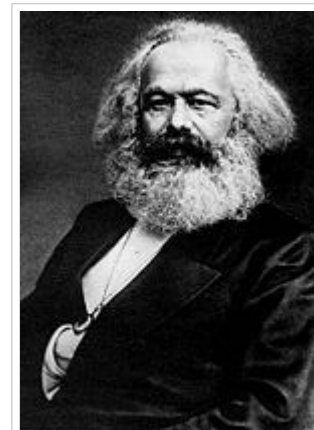
Neoclassical economics

A body of theory later termed 'neoclassical economics' or 'marginalist economics' formed from about 1870 to 1910. The term 'economics' was popularized by neoclassical economists such as Alfred Marshall as a substitute for the earlier term 'political economy'. Neoclassical economics systematized supply and demand as joint determinants of price and quantity in market equilibrium, affecting both the allocation of output and the distribution of income. It dispensed with the labour theory of value inherited from classical economics in favour of a marginal utility theory of value on the demand side and a more general theory of costs on the supply side.

In microeconomics, neoclassical economics represents incentives and costs as playing a pervasive role in shaping decision making. An immediate example of this is the consumer theory of individual demand, which isolates how prices (as costs) and income affect quantity demanded. In macroeconomics it is reflected in an early and lasting neoclassical synthesis with Keynesian macroeconomics.

Neoclassical economics is occasionally referred as *orthodox economics* whether by its critics or sympathizers. Modern mainstream economics builds on neoclassical economics but with many refinements that either supplement or generalize earlier analysis, such as econometrics, game theory, analysis of market failure and imperfect competition, and the neoclassical model of economic growth for analyzing long-run variables affecting national income.

Keynesian economics



The Marxist school of economic thought comes from the work of German economist Karl Marx.

Keynesian economics derives from John Maynard Keynes, in particular his book *The General Theory of Employment, Interest and Money* (1936), which ushered in contemporary macroeconomics as a distinct field. The book focused on determinants of national income in the short run when prices are relatively inflexible. Keynes attempted to explain in broad theoretical detail why high labour-market unemployment might not be self-correcting due to low "effective demand" and why even price flexibility and monetary policy might be unavailing. Such terms as "revolutionary" have been applied to the book in its impact on economic analysis.

Keynesian economics has two successors. Post-Keynesian economics also concentrates on macroeconomic rigidities and adjustment processes. Research on micro foundations for their models is represented as based on real-life practices rather than simple optimizing models. It is generally associated with the University of Cambridge and the work of Joan Robinson. New-Keynesian economics is also associated with developments in the Keynesian fashion. Within this group researchers tend to share with other economists the emphasis on models employing micro foundations and optimizing behaviour but with a narrower focus on standard Keynesian themes such as price and wage rigidity. These are usually made to be endogenous features of the models, rather than simply assumed as in older Keynesian-style ones.



John Maynard Keynes (above, right), widely considered a towering figure in economics.

Other schools and approaches

Other well-known schools or trends of thought referring to a particular style of economics practiced at and disseminated from well-defined groups of academicians that have become known worldwide, include the Austrian School, Chicago School, the Freiburg School, the School of Lausanne and the Stockholm school.

Within macroeconomics there is, in general order of their appearance in the literature; classical economics, Keynesian economics, the neoclassical synthesis, post-Keynesian economics, monetarism, new classical economics, and supply-side economics. New alternative developments include ecological economics, evolutionary economics, dependency theory, structuralist economics and world systems theory.

Historic definitions of economics

This section extends the discussion of the definitions of Economics at the beginning of the article.

Influential early discussions of political economy were related to *wealth* broadly defined, as in the work of David Hume and Adam Smith. Hume argued that additional gold without increased production only served to raise prices. Smith also described real wealth, not in earlier terms of gold and silver, but the "annual produce of the labour and land of the society."

John Stuart Mill defined economics as "the practical science of production and distribution of wealth"; this definition was adopted by the *Concise Oxford English Dictionary* even though it does not include the vital role of consumption. For Mill, wealth is defined as the stock of useful things.

Definitions of the subject in terms of wealth emphasize production and consumption. This emphasis was charged by critics as too narrow a focus in placing wealth to the forefront and man in the background. For example, John Ruskin referred disparagingly to political economy as "the science of getting rich" and a "bastard science."

Broader later definitions evolved to include the study of man, human activity, and human welfare, not wealth as such. Alfred Marshall in his 1890 book *Principles of Economics* wrote, "Political Economy or Economics is a study of mankind in the ordinary business of Life; it examines that part of the individual and social action which is most closely connected with the attainment and with the use of material requisites of well-being."

Criticisms of welfare and scarcity definitions of economics

The definition of economics in terms of material being is criticized as too narrowly materialistic. Welfare could not be quantitatively measured, because the marginal significance of money differs from rich to the poor (that is, \$100 is relatively more important to the well-being of a poor person than to that of a wealthy person). Moreover, the activities of production and distribution of goods such as alcohol and tobacco may not be conducive to human welfare, but these scarce goods do satisfy innate human wants and desires.

Marxist economics still focuses on a welfare definition. In addition, several critiques of mainstream economics begin from the argument that current economic practice does not adequately measure welfare, but only monetized activity, which is an inadequate approximation of welfare.

The focus on scarcity continues to dominate neoclassical economics, which, in turn, predominates in most academic economics departments. It has been criticized in recent years from a variety of quarters, including institutional economics and evolutionary economics and surplus economics.

Criticism

Criticism of contradictions

Economics is a field of study with various schools and currents of thought. As a result, there exists a considerable distribution of opinions, approaches and theories. Some of these reach opposite conclusions or, due to the differences in underlying assumptions, contradict each other.

Economics and politics

Some economists, like John Stuart Mill or Leon Walras, have maintained that the production of wealth should not be tied to its distribution. The former is in the field of "applied economics" while the latter belongs to "social economics" and is largely a matter of power and politics.

Economics per se, as a social science, do not stand on the political acts of any government or other decision-making organization, however, many policymakers or individuals holding highly ranked positions that can influence other people's lives are known for arbitrarily use a plethora of economic theory concepts and rhetoric as vehicles to legitimize agendas and value systems, and do not limit their remarks to matters relevant to their responsibilities. The close relation of

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economic theory and practice with politics is a focus of contention that may shade or distort the most unpretentious original tenets of economics, and is often confused with specific social agendas and value systems.

Issues like central bank independence, central bank policies and rhetoric in central bank governors discourse or the premises of macroeconomic policies (monetary and fiscal policy) of the States, are focus of contention and criticism.

Ideologies and economics

For example, it is possible to associate the U. S. promotion of democracy by force in the 21st century, the 19th century work of Karl Marx or the cold war era debate of capitalism vs. communism, as issues of economics. Although economics makes no such value claims, this may be one of the reasons why economics could be perceived as not being based on empirical observation and testing of hypothesis. As a social science, economics tries to focus on the observable consequences and efficiencies of different economic systems without necessarily making any value judgments about such systems, for example, examine the economics of authoritarian systems, egalitarian systems, or even a caste system without making judgments about the morality of any of them.

Ethics and economics

The relationship between economics and ethics is complex. Many economists consider normative choices and value judgments, like what needs or wants, or what is good for society, to be political or personal questions outside the scope of economics. Once a person or government has established a set of goals, however, economics can provide insight as to how they might best be achieved.

Others see the influence of economic ideas, such as those underlying modern capitalism, to promote a certain system of values with which they may or may not agree. (See, for example, consumerism and Buy Nothing Day.) According to some thinkers, a theory of economics is also, or implies also, a theory of moral reasoning.

The premise of ethical consumerism is that one should take into account ethical and environmental concerns, in addition to financial and traditional economic considerations, when making buying decisions.

On the other hand, the rational allocation of limited resources toward public welfare and safety is also an area of economics. Some have pointed out that not studying the best ways to allocate resources toward goals like health and safety, the environment, justice, or disaster assistance is a sort of willful ignorance that results in less public welfare or even increased suffering. In this sense, it would be unethical not to assess the economics of such issues. In fact, federal agencies in the United States routinely conduct economic analysis studies toward that end.

Effect on society

Some would say that market forms and other means of distribution of scarce goods, suggested by economics, affect not just their "desires and wants" but also "needs" and "habits". Much of so-called economic "choice" is considered involuntary, certainly given by social conditioning because people have come to

expect a certain quality of life. This leads to one of the most hotly debated areas in economic policy, namely, the effect and efficacy of welfare policies. Libertarians view this as a failure to respect economic reasoning. They argue that redistribution of wealth is morally and economically wrong. Socialists view it as a failure of economics to respect society. They argue that disparities of wealth should not have been allowed in the first place. This led to both 19th century labour economics and 20th century welfare economics before being subsumed into human development theory.

The older term for economics, *political economy*, is still often used *instead of* "economics", especially by certain economists such as Marxists. The use of this term often signals a basic disagreement with the terminology or paradigm of market economics. Political economy explicitly brings social political considerations into economic analysis and is therefore openly normative, although this can be said of many economic recommendations as well, despite claims to being positive. Some mainstream universities (many in the United Kingdom) have a "political economy" department rather than an "economics" department.

Economics in practice

The professionalization of economics, reflected in the growth of graduate programs on the subject, has been described as "the main change in economics since around 1900." Most major universities and many colleges have a major, school, or department in which academic degrees are awarded in the subject, whether in the liberal arts, business, or for professional study. The Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel (colloquially, the Nobel Prize in Economics) is a prize awarded to economists each year for outstanding intellectual contributions in the field. In the private sector, professional economists are employed as consultants and in industry, including banking and finance. Economists also work for various government departments and agencies, for example, the national Treasury, Central Bank or Bureau of Statistics.

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Economy of Africa

2008/9 Schools Wikipedia Selection. Related subjects: Economics

The **economy of Africa** consists of the trade, industry, and resources of the peoples of Africa. As of July 2005, approximately 887 million people were living in 54 different states. Africa is by far the world's poorest inhabited continent, and it is, on average, poorer than it was 25 years ago. Of the 175 countries reviewed in the United Nations' Human Development Report 2003, 25 African nations ranked lowest.

Africa's current poverty is rooted, in part, in its history. The decolonization of Africa was fraught with instability aggravated by cold war conflict. Since mid-20th century the Cold War and increased corruption and despotism have also contributed to Africa's poor economy. While China and India have grown rapidly and Latin America has experienced moderate growth, lifting millions above subsistence living, Africa has stagnated and even regressed in terms of foreign trade, investment, and per capita income. This poverty has widespread effects, including low life expectancy, violence, and instability, which in turn perpetuate the continent's poverty. Over the decades, attempts to improve the economy of Africa have been met with little success. However, recent data suggest African economies are experiencing faster growth. The World Bank reports the economy of Sub-Saharan African countries grew at rates that match global rates. The economies of the fastest growing African nations experienced growth significantly above the global average rates. The top nations in 2007 include Mauritania with growth at 19.8%, Angola at 17.6% and Mozambique at 7.9%.

Regional variation

Economy of Africa During 2003 unless otherwise stated

Population:	887 million (14%)
GDP (PPP):	US\$ 1.635 trillion US\$ 2.572 trillion (2007)
GDP (Currency):	\$558 billion \$1,150 billion (2007)
GDP/capita (PPP):	\$1,968 \$2,975 (2007) IMF
GDP/capita (Currency):	\$671
Annual growth in per capita GDP:	5.16% (2004-2006)
Income of top 10%:	44.7%
Millionaires:	0.1 million (0.01%)
Population living on under \$1 per day:	36.2%
External debt as a percent of GDP	60.7% (1998) 25.5% (2007) IMF
External debt payments a as percent of GDP	4.2% 3.0% (2007) IMF
Foreign aid revenue as a percent of GDP	3.2% (2001)
Estimated female income	51.8% of male

While no African nation has joined the ranks of the developed nations in the Organisation for Economic Co-operation and Development (OECD) yet, the entire continent is not utterly impoverished and there is considerable variation in its wealth. Arab North Africa has long been closely linked to the economies of Europe and the Middle East. South Africa is by far the continent's wealthiest state, both in GDP per capita and in total GDP, and its neighbours have shared in this wealth. South Africa is a likely future member of the OECD. The small but oil-rich states of Gabon and Equatorial Guinea round out the list of the ten wealthiest states in Africa.

The temperate northern and southern ends of the continent are wealthier than tropical sub-Saharan Africa. Within the tropics, East Africa, with its long pre-colonial history of trade and development, has tended to be wealthier and more stable than elsewhere. Islands such as the Seychelles, Réunion, Mauritius, and Cape Verde have remained wealthier than the continental nations, although the unstable Comoros remain poor.

The poorest states are those engaged in or just emerging from civil wars. These include the Democratic Republic of the Congo, Sierra Leone, Burundi, and Somalia. In recent times the poorest region has been the Horn of Africa, although it had historically been one of the wealthiest regions of sub-Saharan Africa. Ethiopia in particular had a long and successful history. The current poverty of the region, and the associated famines and wars, have been a problem for decades.

There is considerable internal variation within countries. Urban areas, especially capital cities, are generally wealthier than rural zones. Inequality is pronounced in most African countries; an upper class has a much higher income than the majority of the population.

History

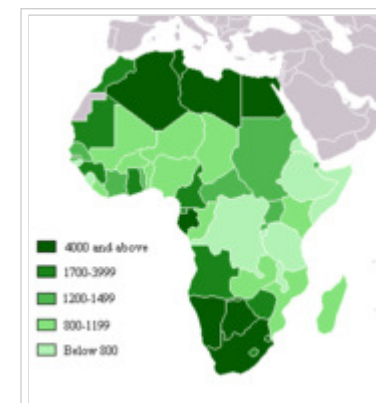
Before the Roman Empire, ancient Egypt was one of the world's most prosperous and advanced civilizations. The port of Alexandria, founded by Alexander the Great in 334 BC, was a hub for Mediterranean trade for centuries. Well into the 19th century, Egypt remained one of the most developed regions outside Europe.

South of the Sahara conditions were different. Internal trade within the continent, hindered by thick forests and massive deserts, was always difficult. Prosperity in sub-Saharan Africa was rare, excepting Nubia, Ethiopia, Mali and Ghana, which had trade routes north to the Mediterranean world and Middle East.

Sub-Saharan Africans have historically built structures from stone mainly in the Nile Valley in cities like Meroe, Napata, Axum by former Nubian and Ethiopian kingdoms. Most other Sub Saharan African pre-colonial civilizations built mainly out of mud brick, leaving few lasting ruins except Great Zimbabwe. Finding no architectural monuments in most parts of the region, some European explorers and historians long concluded that pre-colonial sub-Saharan Africa was devoid of civilization (see Sub-Saharan Africa critic of the term).

Numbers from the UNDP and AfDB. Most numbers exclude some countries for lack of information. Since these tend to be the poorest nations, these numbers tend to have an upwards bias. Numbers are mostly from 2002.

See also: Economy of the world - **Economy of Africa** - Economy of Asia - Economy of Europe - Economy of North America - Economy of Oceania - Economy of South America



National GDP per capita ranges from wealthier states in the north and south to poorer states in the east. These figures from the 2002 World Bank are converted to US dollars.



Once a departure point for trans-Saharan caravans, the market of Douz, Tunisia is today popular with Western tourists.

New technologies and the development of civilization made trading easier. For most of the first millennium AD, the Axumite Kingdom had a prosperous trade empire on the eastern horn, where the modern states of Ethiopia and Eritrea lie. Axum had a powerful navy and traded as far as the Byzantine Empire, India, and possibly China. The introduction of the camel by North African Arab conquerors in the 10th century opened trade across the Sahara for the first time. The profits from the gold and salt trades created powerful empires in the western Sahel including the Kingdom of Ghana and the Mali and Kanem-Bornu Empires, where travellers reported vast wealth. Arabs helped build a maritime trade along Africa's east coast, which prospered as Swahili traders exported ivory and slaves across the Indian Ocean.

Further south empires were less common, with the notable exception of Great Zimbabwe. In the Great Lakes region, states such as Rwanda, Burundi, and Buganda became strongly centralized, due to its high population and agricultural surplus.

In the 15th century, Portuguese traders circumvented the Saharan trade route and began to trade directly with Guinea. Other European traders followed, rapidly boosting prosperity in Western Africa. States flourished, including the Kingdom of Benin, Dahomey, and the Ashanti Confederacy. Loose federations of city states such as those of the Yoruba and Hausa were

common. However, this wealth was principally based on the slave trade, which collapsed following the abolition of slavery and later European colonization.

Although Europeans were ostensibly committed to developing their colonies, colonial rulers employed a *laissez-faire* strategy during the first decades. It was hoped that European companies would prosper if given a secure operating environment. This only occurred in a few areas with rich resources; the colonial economies hardly grew from the 1890s through the 1920s. The colonies had to pay their own way, receiving little or no development money from Europe. Only in the 1930s, with the rise of Keynesian economics, did the colonial administrations seriously encourage development. However, new projects could not transpire until after the Great Depression and the Second World War.

African economies boomed during the 1950s as growth and international trade multiplied beyond their pre-war levels. The insatiable demand for raw materials in the rebuilding economies of Asia and Europe and the strong growth in North America inflated the price of raw materials. By the end of the colonial era in the 1960s, there was great hope for African self-sufficiency and prosperity. However, sporadic growth continued as the newly independent nations borrowed heavily from abroad.

The world economic decline of the 1970s, rising oil prices, corruption, and political instability hit Africa hard. In subsequent decades Africa has steadily become poorer compared to the rest of the world; South America experienced solid growth, and East Asia spectacular growth, during that same period. According to the World Economic Forum, ten percent of the a world's poor were African In 1970; by 2000, that figure had risen to 50 p[ercent. Between 1974 and 2000 the average income declined by \$200. Beginning in 1976, the Lomé Convention and Cotonou Agreement between the European Union and ACP countries, including Sub-Saharan Africa, have structured economic relations between the two regions.

Sectors

Agriculture

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Around 60 percent of African workers are employed by the agricultural sector, with about three-fifths of African farmers being subsistence farmers. Subsistence farms provide a source of food and a relatively small income for the family, but generally fail to produce enough to make re-investment possible. Larger farms tend to grow cash crops such as coffee, cotton, cocoa, and rubber. These farms, normally operated by large corporations, cover tens of square kilometres and employ large numbers of labourers.

The situation whereby African nations export crops to the West while millions on the continent starve has been blamed on Western States including Japan, the European Union and the United States. These countries protect their own agricultural sectors with high import tariffs and offer subsidies to their farmers, which many contend leads the overproduction of such commodities as grain, cotton and milk. The result of this is that the global price of such products is continually reduced until Africans are unable to compete, except for cash crops that do not grow easily in a northern climate.

Due to these market forces, in Africa excess capacity is devoted to growing crops for export. Thus, when civil unrest or a bad harvest occurs, there is often very little food saved and many starve. Ironically, excess foodstuffs grown in developed nations are regularly destroyed, as it is not economically viable to transport it across the oceans to a market poor in capital. Although cash crops can expand a nation's wealth, there is often a risk that focusing on them rather than staples will lead to food shortages and hunger.

Mining and drilling

Africa's most valuable exports are minerals and petroleum. A few countries possess and export the vast majority of these resources. The southern nations have large reserves of gold, diamonds, and copper. Petroleum is concentrated in Nigeria, its neighbours, and Libya.

While mining and drilling produce most of Africa's revenues each year, these industries only employ about two million people, a tiny fraction of the continent's population. Profits normally go either to large corporations or to the governments. Both have been known to squander this money on luxuries for the elite or on megaprojects that return little value.

In some cases, these resources have turned out to be a curse. Although Congo is rich in minerals, the country remains one of the poorest countries in the world. This is historically due to ownership fights over these minerals, tracing back to the early 1900s. After Congo's independence from Belgium, the colonial government hesitated to leave behind these resources. Congo solicited UN help against Belgium, but that turned out to be a bad idea. In an attempt to get out of the quagmire, Congo sought Soviet assistance. This led the country into deeper trouble, as the country separated into two and a long proxy war between the West and East began.

Manufacturing

Africa is the least industrialized continent; only South Africa, Egypt and North Africa have substantial manufacturing sectors. Despite readily available cheap labour, nearly all of the continent's natural resources are exported for secondary refining and manufacturing. According to the AFDB, about 15% of workers are employed in the industrial sector.

The multinational corporations that control most of the world's major industries and their financiers require political stability before erecting an expensive factory and risk losing that investment through nationalization. An educated populace, good infrastructure and a stable source of electricity are essential to investments. These factors are rare in Africa. Other developing regions of the world such as India and China have been more attractive to companies looking to build a new factory or invest in a local enterprise.

Many African states used to limit foreign investment to ensure local majority ownership. Close governmental control over industry further discouraged international investment. Attempts to foster local industry have been hampered by insufficient technology, training, and investment money. The paucity of local markets and the difficulty of transporting goods from major African centres to world markets contribute to the lack of manufacturing outside of South Africa and Egypt.

Investment and banking

Banking in Africa has long been problematic. Because local banks are often unstable and corrupt, governments and industry rely on international banks. South Africa alone has a thriving banking sector, aided by the international sanctions of the apartheid era, which forced out the once-dominant British banks. In the years after independence, African governments heavily regulated the banking sector and placed strict limits on international competition. In recent decades, banking reform has been a priority of the IMF and World Bank. One important reform was obtaining permission for increased penetration by foreign banks. South Africa has been the most successful in attracting local operation of foreign banks.

Encouraging foreign investment in Africa has been difficult. Even Africans are reluctant to invest locally; about forty percent of sub-Saharan African savings are invested in other markets. The IMF and World Bank only lend money after imposing stringent and controversial conditions such as austerity policies.

There are two African currency unions; the West African Banque Centrale des États de l'Afrique de l'Ouest (BCEAO) and the Central African Banque des États de l'Afrique Centrale (BEAC). Both use the CFA franc as their legal tender.

Communication and information technology

The continent has the largest growth rate of cellular subscribers in the world. African markets are expanding nearly twice as fast as Asian markets. The African cell phone has created a base for cellular banking.

Determinants

The seemingly intractable nature of Africa's poverty runs counter to modern economic theory, leading to debate concerning its root causes. Endemic warfare and unrest, widespread corruption, and despotic regimes are both causes and effects of the continued economic problems.

Geography

Africa has the largest hot desert and the second largest tropical forest in the world that hinder building transcontinental means of transportations, hampering its economy. In the centre of the continent, on the western side, an almost impenetrable rainforest impedes the transit of people and goods. The Sahara creates an obvious barrier to trade from the north. Although Africa has great river systems such as the Nile, Niger, Congo, and Zambezi, they do not link the continent into trade routes effectively as happens in Europe and China. Rapids and cataracts block African rivers, requiring development projects to allow navigation. The wet terrain of the interior complicates transport. Few roads are paved and during the wet season unpaved tracks become impassable mud.

Countries in Africa are cut off from the sea more than those on other continents. Africa has more landlocked nations than any other continent, which support a high population density compared to the steppes or plains of North America and Asia. The ridge running from Zimbabwe to Ethiopia has superb volcanic soils and the higher altitude produces a more temperate climate. These enable more interior settlement, but the lack of access to the sea makes international trade harder.



A satellite composite image of Africa reveals the more inhabitable regions of the interior.

The majority of the world's population and wealth is found in the temperate zone. Historically the vast expanse of Eurasia, almost entirely in the temperate zone (except for the vast tracts that are dry and hot such as the Arabian Peninsula; cold tundra such as in North Asia, and tropical such as subcontinental India, Bangladesh, Thailand, Laos, Bhutan, Burma, Cambodia, Vietnam, Malaysia, and Singapore) was linked by land routes, allowing technologies and ideas to spread from one area over time, aiding innovation. The agricultural techniques and medicines designed to work in the northern climes may fail in the tropics. This theory could partly explain why temperate South Africa is by far the wealthiest part of Africa, and why other tropical areas in South America and Indonesia share Africa's poverty, though tropical Singapore and Brunei do not, nevertheless they are still isolated spots of wealth. There are no tropical countries in the OECD, apart from Mexico and Australia which have significant tropical sections, and only a handful have a GDP per capita above the world average, again apart from Mexico, Australia, Singapore, Brunei, Malaysia and Thailand. A tropical latitude is not a guarantee of poverty, but globally there is a definite correlation between wealth and climate, though this said theory is far more complicated than simply considering "tropical" vs. "non-tropical" countries or regions. Variations of this theory of geographic determinism date back to Montesquieu, though these theories have been simplistic and unscientific until they have recently been revived and refined by academics such as William Masters and Jeffrey Sachs and popular writers such as Jared Diamond.

Africa is well-endowed with natural resources, including gold, diamonds, and oil reserves, but due to several factors including poor governance and global trade policies which place tariffs on finished goods from Africa, few African countries have materially benefited from their mineral wealth. Africa is as well suited to agriculture as any other continent; the volcanic soils of the Great Lakes region are—by some measures—the best in the world.

Disease

Closely linked to geography is the problem of disease in Africa. The tropics are more hospitable to disease than the colder climates. The most significant illness has long been malaria. A new problem of vast magnitude is the rise of HIV/AIDS in Sub-Saharan Africa. AIDS, whose spread correlates with poverty, has nevertheless hit hardest in some of the wealthiest African countries, including Botswana, Swaziland, and South Africa. AIDS has decimated or will decimate the working-age population of many states.

The healthcare costs, including those of importing anti-retroviral AIDS drugs from the West, is a new burden on many African states, leading to the challenging of drug prices and the manufacture of cheap generic alternatives. Tropical diseases can be just as expensive to cure, assuming a cure exist. Since the tropical regions are poorer, pharmaceutical companies are reluctant to invest in curing the diseases of the region. Disease not only reduces the work force and creates a burden on health care, but also harms agriculture and transportation, as most forms of livestock cannot survive the diseases of the region. Historically, sub-Saharan Africans could not use pack animals for trade or work horses for labour, limiting the continent's development.

Africa is in the midst of major AIDS epidemic. The cost of vaccines and medical supplies compounds the economic cost of the labour force becoming medical dependents. As parents die or become unable to work, their children must find care elsewhere, adding to the burden of already struggling families and states.

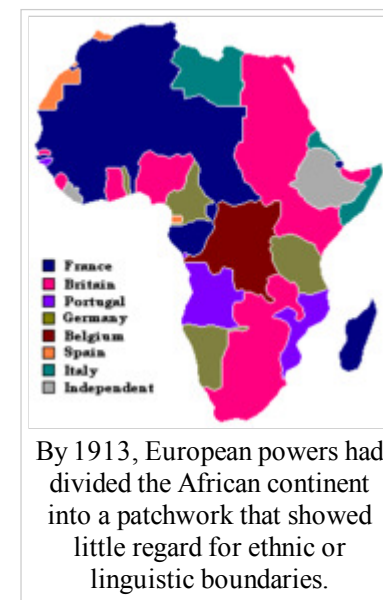
Colonialism

The economic impact of the colonization of Africa has been debated. Africa acquired its greatest relative wealth in the 1960s, just prior to decolonization. African countries have yet to return to those levels of wealth. Some see this as evidence that colonialism helped local economies by creating a cyclical economic link with the ruling colonial power, and with independence this link was broken.

To achieve wealth during the colonial period, imperial overseers geared the economies of Africa towards exporting raw materials. Egypt produced cotton, Ruanda-Urundi was almost completely dedicated to growing coffee, and Upper Volta specialized in palm oil. Basing an entire nation's wealth on one commodity in this way would have debilitating effects later. These monocultures left national economies extremely vulnerable to price swings, making economic planning difficult. Some writers, such as Walter Rodney in his influential book *How Europe Underdeveloped Africa*, argue that these colonial policies are directly responsible for many of Africa's modern problems. Other post-colonial scholars, most notably Frantz Fanon, have argued that the true effects of colonialism are psychological and that domination by a foreign power creates a lasting sense of inferiority and subjugation that creates a barrier to growth and innovation. Of course, other countries such as Japan and Germany have succeeded economically despite such foreign incursions.

European culture in the late 19th century brought racism and social Darwinism. The elevation of the white race above blacks had lasting repercussions in lands with significant European immigration, notably South Africa and Rhodesia. Even more damaging was the introduction of the idea that northern Hamites such as the Ethiopians and Tutsi were racially superior to other Africans. This division of society into rival ethnicities would have long-lasting negative effects, especially in Rwanda and Burundi.

In those areas that were colonies rather than protectorates, colonizers acted quickly to ensure all the top members of society were Europeans. This included not only the rulers but the lawyers, doctors, and academics. The colonial rulers looked upon educated native populations, such as in the Gold Coast and the Maghreb, with great suspicion as probable nationalists and anti-imperialists. Colonial regimes therefore did not invest money or effort in creating a local elite. While they funded education, this was almost entirely elementary skills such as literacy. Once independent, African states saw an exodus of European administrators and consequently lacked individuals with the training or education to operate the government they had inherited. For instance, the massive area



of French Equatorial Africa was divided into four independent nations, but was home to only five locals who were university graduates.

One method of gauging the effects of colonialism on the economies of Africa is to compare the results of different colonial policies implemented by the European powers. Regions where the economy was plundered, such as the Raubwirtschaft policies of Leopold II in the Congo Free State, have not prospered. The long reluctance of Portugal to surrender its colonies, leading to long wars of independence, had an obvious negative effect on Mozambique and Angola. The countries formerly under French control have fared much better, and those under British dominion were the most successful. This inequality may be due to other factors than economic policy. Britain, at the time of the Scramble for Africa, was the world's greatest power and could thus cherry-pick the wealthiest parts of the continent. The French, with their mighty navy, could also occupy prosperous areas, while the Belgians were forced to take the economically disadvantaged interior.

Africa as a whole has not prospered compared with other colonised regions in Asia and the Americas. At the end of the Second World War the Americas were economically the strongest of the colonised regions; in the span of one generation, former colonies in Asia have become economic powerhouses.

Cultural and linguistic diversity

In the Scramble for Africa, national boundaries in sub-Saharan Africa were established by Europeans using latitude and longitude rather than natural borders. This separated population centres from their supplies of food and natural resources. The artificial borders of modern African states cut across cultural, tribal, linguistic and religious boundaries, creating ethnic and religious cleavages which impede national unity and induce internal violence.

However, those states that preserved pre-colonial boundaries have been no more successful. Few countries in Africa have more troubled recent histories than Rwanda and Burundi, although their borders are almost identical to those of the prosperous kingdoms from which they are descended. The ancient and only briefly occupied state of Ethiopia is one of the poorest on the continent, and ethnically unified Somalia has failed so completely that it no longer exists in any real sense. Elsewhere, the Americas were also divided up by Europeans along arbitrary borders and yet those continents remain economically far more successful than Africa.

Africa is a much divided continent with many small countries. Successful economic growth requires regional cooperation, which political tensions make difficult. To be effective, foreign aid must be multilateral, making it harder to base aid upon the performance of local governments.

The African peoples speak over 2,000 languages. In 2005, six of the world's ten most linguistically diverse countries were African. The nearly 26 million people of Tanzania alone speak 127 distinct languages. The primary language of government, political debate, academic discourse, and administration is often the language of the former colonial powers—English, French, or Portuguese. Only an elite minority speak these European languages fluently enough to participate in these institutions without intermediaries, further disenfranchising the majority population.

Governance

The political situation in Africa perpetuates the intractable nature of African poverty. Democracy in Africa has not been historically successful, almost always supplanted by centralized authoritarian rule such as military dictatorships. Although some rulers worked to improve the lot of their nation's citizens, others used power purely for their own benefit. Among the most notorious was Mobutu Sese Seko of Zaire, whose regime has been called a kleptocracy due to its looting of the nation's wealth. According to international measures, the economies of Africa generally rank among the most corrupt. Bribery and graft abound, due to poverty and poorly handled de-colonization, and the superpowers' (Soviet Union and United States) practice during the Cold War of supporting any ruler with the desired political alignment, regardless of their managerial practices or human rights records.

Dependency theory asserts that the wealth and prosperity of the superpowers and their allies in Europe, North America and East Asia is dependent upon the poverty of the rest of the world, including Africa. Economists who subscribe to this theory believe that poorer regions must break their trading ties with the developed world in order to prosper.

Less radical theories suggest that economic protectionism in developed countries hampers Africa's growth. When developing countries have harvested agricultural produce at low cost, they generally do not export as much as would be expected. Abundant farm subsidies and high import tariffs in the developed world, most notably those set by Japan, the European Union's Common Agricultural Policy, and the United States Department of Agriculture, are thought to be the cause. Although these subsidies and tariffs have been gradually reduced, they remain high. This theory, however, overlooks the heavy hand of the State in several African nations that can even prevent their own exports from becoming competitive.

Although Africa and Asia had similar levels of income in the 1960s, Asia has since outpaced Africa. One school of economists argues that Asia's superior economic development lies in local investment. Corruption in Africa consists primarily of extracting economic rent and moving the resulting financial capital overseas instead of investing at home; the stereotype of African dictators with Swiss bank accounts is often accurate. Asian dictators such as Suharto often take a cut on everything, necessitating bribery, but enable development through infrastructure investment and the social stability created by law and order. University of Massachusetts researchers estimate that from 1970 to 1996, capital flight from 30 sub-Saharan countries totalled \$187bn, exceeding those nations' external debts. This disparity in development is consistent with the model theorized by economist Mancur Olson. Because governments were politically unstable and new governments often confiscated their predecessors' assets, officials would stash their wealth abroad, out of reach of any future expropriation.

Corruption encouraged social inequality, because the wealthy elite not only avoided investing at home, but also imported most of its consumption. Desirable luxury goods were generally not locally available. This hindered the development of national markets. Historically, economic development is closely linked to



Over 67 languages are spoken by the people of Ghana.

the creation of a middle class with enough income to save and invest but limited influence on governance. In countries without such a middle class, development is all but impossible, except the illusory and destructive development based on extracting resources like oil.

War

Since independence, Africa has seen dozens of wars, both civil and international. This has contributed to poverty because states have spent their scarce resources on military equipment and supplies. Development has suffered, since warfare has scared off foreign investors, destroyed infrastructure, and created lasting animosities.

Much conflict was enabled by the Cold War. The countries of the Western and Eastern blocs leveraged foreign aid money to coax countries into their camp. Aid was tied to the purchase of military weapons, and donor countries ignored misappropriation of the funds. Corruption became endemic, hampering economic development. Proxy conflicts erupted in Africa when each bloc would fund and assisted rebel or sectarian groups under the control of the opposing bloc.

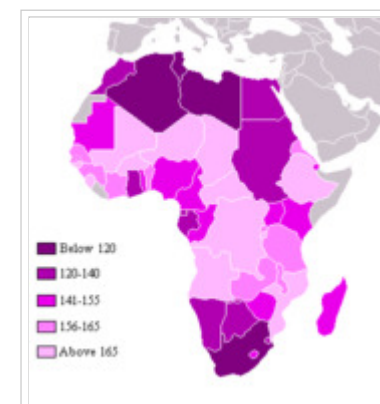
Violence in Africa has increased following the Cold War, despite the slashing of foreign aid spending in developed countries. Civil wars have raged throughout the African Great Lakes region, Somalia, Sudan, Mozambique, Liberia, Sierra Leone, Ivory Coast, and Guinea-Bissau. International wars include the First and Second Congo Wars between the Democratic Republic of the Congo and its neighbours, and conflict between Ethiopia and its former province Eritrea.

Effects of widespread poverty

Africa's economic malaise is self-perpetuating, as it engenders more of the disease, warfare, misgovernment, and corruption that created it in the first place. Other effects of poverty have similar consequences. The most direct consequence of low GDP is Africa's low standard of living and quality of life. Except for a wealthy elite and the more prosperous peoples of South Africa and the Maghreb, Africans have very few consumer goods. Quality of life does not correlate exactly with a nation's wealth. Angola, for instance, reaps large sums annually from its diamond mines, but after years of civil war, conditions there remain poor. Radios, televisions, and automobiles are rare luxuries. Most Africans are on the far side of the Digital Divide and are cut off from communications technology and the Internet. Quality of life and human development are also low. African nations dominate the lower reaches of the UN Human Development Index. Infant mortality is high, while life expectancy, literacy, and education are all low. The UN also lowers the ranking of African states because the continent sees greater inequality than any other region. The best educated often choose to leave the continent for the West or the Persian Gulf to seek a better life.

Catastrophes cause deadly periods of great shortages. The most damaging are the famines that have regularly hit the continent, especially the Horn of Africa. These have been caused by disruptions due to warfare, years of drought, and plagues of locusts.

An average African faced annual inflation of over 60% from 1990 until 2002 in those few countries that account for inflation. At the high end, Angola and the Democratic Republic of the Congo both saw triple-digit inflation throughout the period. Most African states saw inflation of around 10% per year.



High index values, indicated by lighter colors, show the relative poverty of African countries as ranked by the UNDP's 2004 list of countries by quality of life.

There are no reliable numbers for unemployment in most African nations, but it is an important problem. Major cities like Lagos and Kinshasa have large slums of the unemployed and underemployed.

Environmental degradation occurs on many fronts. Farmers on the verge of starvation are unlikely to be concerned about the fate of the rainforest in their pursuit of new land, and starving people do not often consider the rarity of an animal before eating it (see bushmeat). Along the length of the Sahel, deforestation and overgrazing has caused increased desertification as the Sahara spreads south. Profits from the sale in the West of rare animals, ivory from elephants, and timber encourage illegal poaching. Local governments have little money to devote to protecting the environment.

Attempts at promoting growth

The relative economic failure of Africa has long been an important issue both in Africa and abroad. Many attempts at solving Africa's poverty have been attempted, but few have had any great degree of success.

Socialism

In the years immediately after independence many nations saw the rapid industrialisations of the Soviet Union and China under communism as models to follow. This led to command economies and major investment in heavy industries such as coal and steel production to stimulate growth, but this approach had little success. Only a handful of states formally adopted socialism and even fewer turned to outright Marxism. Everywhere government intervention in the economy was seen as necessary for growth, especially since private companies and investors were unlikely to invest in the region.

Often the approach of governments in Africa was to borrow heavily from abroad and use this aid to grow the economy to a level that the loans could be paid off. Sporadic growth during the years after independence continued. The countries focused on exports to pay for these development efforts. The 1973 energy crisis hit sub-Saharan Africa as hard as anywhere in the world. While some nations were net exporters, most were heavily reliant on imported fuels. Economies quickly began to falter and events such as famines hit Africa in the 1980s. The collapse of the Soviet Union, which had supported socialist and collectivist projects throughout the continent, undermined the legitimacy of such an approach, while it also meant that there were no longer any sources of international aid to help pursue this approach.

Liberalism

Thus in the 1980s, socialist ideas were discarded throughout almost the entire continent as "capitalism" became seen as the route to salvation in what became known as the Washington Consensus. By 1990, forty of the nations of Sub-Saharan Africa had agreed to follow rigorous IMF restructuring plans. IMF recommendations saw the continent's currencies drop by an average of 50%, the selling off of government-owned industries, and the slashing of government spending. After twenty years, however, these methods have seen as little success as the socialist approaches of the previous era. Average growth increased from 2.3% per annum to 2.8%. Only a handful of African states reached new levels of wealth, and many others became poorer over the course of the 1990s. Today there is a great deal of controversy on why this failed. One school of thought is that the reforms failed because they were only economic in nature and without

democracy and the rule of law development cannot occur.

Yet another school of thought attributes some of Africa's problems to insufficient liberalization. It has been pointed out that while the developed world has insisted that Africa open its markets and eliminate public subsidies, this has been one-sided as the developed world has not opened its markets to agricultural goods from Africa nor has it eliminated agricultural subsidies. At the GATT free trade talks, the African leaders repeatedly request that the developed nations abolish the subsidies they provide their farmers and open their markets to African agricultural goods. It has been argued that the abolition of the subsidy would have three beneficial effects for the developing world and Africa:

- The developed nations would produce less food locally, therefore providing a larger export market for developing countries.
- Food prices would rise without the artificial subsidy and therefore would increase profits for food exports from the developing world.
- The developing nations could adopt a more balanced agriculture policy, producing food and grain for export; this would provide a surplus that would shield countries from famine.

Autarky

The pursuit of self-sufficiency as advocated by dependency theory has been given limited trials in several African countries. In the 1980s, Nigeria banned the importation of many foodstuffs to stimulate domestic production. The Lagos Plan of Action of 1982 called for Africa as a whole to block imports from the rest of the world, but few countries followed through on the idea. Eventually even Nigeria agreed to limited liberalization.

Foreign aid

Since independence there has been a constant flow of foreign aid into Africa. The benefits of this aid have been mixed. In many cases much of this aid was misappropriated by unscrupulous leaders. During the Cold War the main goal of much of the aid money was to win the allegiance of these rulers, and so their misappropriation of the aid was at the very least overlooked. Since the end of the Cold War almost all developed countries have slashed foreign aid spending. Many also allege that the aid that was not stolen was long misdirected. For many decades the leading notion of development was government supervised mega-projects; today many believe that small grants to local businesses would be more effective. One example of foreign aid which has come under considerable criticism is food aid. In some circles, it is believed that food aid does not solve any fundamental problems and can also lead to a dependency on outside assistance, as well as hindering the development of indigenous industries. Food shipments in case of dire local shortage are generally uncontroversial; but as Amartya Sen has shown, most famines involve a local lack of income rather than of food. In such situations, food aid - as opposed to financial aid - has the effect of destroying local agriculture and serves mainly to benefit Western agribusiness which are vastly overproducing food as a result of agricultural subsidies. Historically, food aid is more highly correlated with excess supply in Western countries than with the needs of developing countries.

Debt relief

Advocacy for debt relief has become widespread. Each year Africa sends more money to Western bankers in interest on its debts than it receives in foreign aid from these countries. Debt relief is not a panacea, but relieving some of the burden, especially of debts that were run up by regimes for their own benefit, may

help the economies of Africa grow and prosper. However, arguments against full and unconditional debt relief exist.

First, debt relief punishes nations which have managed borrowing well and do not need debt relief.

Second, unconditional debt relief will not necessarily cause nations to spend more in social programs and services, on the one hand, or to solve their financial problems without stifling the economy with the need for more taxes, on the other hand.

Finally, debt relief may make it more difficult for nations to receive credit in the future.

It has been suggested that any debt relief policy be conditional upon a commensurate reduction in aid. The Heavily Indebted Poor Countries initiative was launched in 1996; if implemented, it would greatly affect Africa's economy.

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Economy of the People's Republic of China

2008/9 Schools Wikipedia Selection. Related subjects: Economics

The People's Republic of China has the second largest economy in the world after the US with a GDP of over \$ 7 trillion (2007) when measured on a purchasing power parity (PPP) basis. In November 2007, it became the third largest in the world after the US and Japan with a nominal GDP of US\$3.42 trillion (2007) when measured in exchange-rate terms. China has been the fastest-growing major nation for the past quarter of a century with an average annual GDP growth rate above 10%. China's per capita income has grown at an average annual rate of more than 8% over the last three decades drastically reducing poverty, but this rapid growth has been accompanied by rising income inequalities. The country's per capita income is classified as low by world standards, at about \$2,000 (nominal, 107th of 179 countries/economies), and \$7,800 (PPP, 82nd of 179 countries/economies) in 2006, according to the IMF.

Since the late 1970s and early 1980s, the economic reforms initially began with the shift of farming work to a system of household responsibility to start the phase out of collectivized agriculture, and later expanded to include the gradual liberalization of prices; fiscal decentralization; increased autonomy for state enterprises that increased the authority of local government officials and plant managers in industry thereby permitting a wide variety of private enterprise in services and light manufacturing; the foundation of a diversified banking system; the development of stock markets; the rapid growth of the non-state sector, and the opening of the economy to increased foreign trade and foreign investment. China has generally implemented reforms in a gradualist fashion, including the sale of equity in China's largest state banks to foreign investors and refinements in foreign exchange and bond markets in mid-2000s. As its role in world trade has steadily grown, its importance to the international economy has also increased apace. China's foreign trade has grown faster than its GDP for the past 25 years. As of 2007, most of china's growth came from the Private Sector instead of exports. Particularly the smaller public sector, which was dominated by about 200 large state enterprises concentrated mostly in utilities, heavy industries, and energy resources.

China has emphasized raising personal income and consumption and introducing new management systems to help increase productivity. The government has also focused on foreign trade as a major vehicle for economic growth. China's GDP has increased tenfold since 1978, largely due to economic reforms including liberalization of their economy. Some economists believe that Chinese economic growth has been in fact understated during much of the 1990s and early 2000s, failing to fully factor in the growth driven by the private sector and that the extent at which China is dependent on exports is exaggerated. Nevertheless, key bottlenecks continue to

Economy of the People's Republic of China	
Currency	yuan (CNY); also referred to as the Renminbi (RMB)
Exchange rate (av) (2007)	Rmb:\$ USD = 7.61 Rmb:¥ JPY100 = 6.47 Rmb:€ EUR = 10.55 Rmb:£ GBP = 15.23
Fiscal year	Calendar year (01 Jan to 31 Dec)
Trade organizations	WTO, APEC and others
Statistics	
GDP (Nominal) (2007)	\$3.42 trillion (ranked 4th)
GDP (PPP) (2006)	\$10.21 trillion (ranked 2nd)
GDP per capita (Nominal) (2006)	\$2,034 (ranked 107th)
GDP per capita (PPP) (2006)	\$7,800 (ranked 82nd)
GDP growth rate (2007)	11.4% (official data)
GDP by sector (2006)	agriculture (primary) (11.7%) industry (secondary) (48.9%)

constrain growth. Available energy is insufficient to run at fully-installed industrial capacity, the transport system is inadequate to move sufficient quantities of such critical items as coal, and the communications system cannot yet fully meet the needs of an economy of China's size and complexity.

The two most important sectors of the economy have traditionally been agriculture and industry, which together employ more than 70 percent of the labor force and produce more than 60 percent of GDP. The two sectors have differed in many respects. Technology, labor productivity, and incomes have advanced much more rapidly in industry than in agriculture. Agricultural output has been vulnerable to the effects of weather, while industry has been more directly influenced by the government. The disparities between the two sectors have combined to form an economic-cultural-social gap between the rural and urban areas, which is a major division in Chinese society. China is the world's largest producer of rice and is among the principal sources of wheat, corn (maize), tobacco, soybeans, peanuts (groundnuts), and cotton. The country is one of the world's largest producers of a number of industrial and mineral products, including cotton cloth, tungsten, and antimony, and is an important producer of cotton yarn, coal, crude oil, and a number of other products. Its mineral resources are probably among the richest in the world but are only partially developed. Although China has acquired some highly sophisticated production facilities through trade and also has built a number of advanced engineering plants capable of manufacturing an increasing range of sophisticated equipment, including nuclear weapons and satellites, most of its industrial output still comes from relatively backward and ill-equipped factories. The technological level and quality standards of its industry as a whole are still fairly low.

History

1949-1980

In 1949, China followed a socialist heavy industry development strategy, or the "Big Push" strategy. Consumption was reduced while rapid industrialization was given high priority. The government took control of a large part of the economy and redirected resources into building new factories. Entire new industries were created. Most important, economic growth was jump-started. Tight control of budget and money supply reduced inflation by the end of 1950. Though most of it was done at the expense of suppressing the private sector of small to big businesses by the Three-anti/five-anti campaigns between 1951 to 1952. The campaigns were notorious for being anti-capitalist, and imposed baseless charges that allowed the government to punish capitalists with severe fines. In the beginning of the Communist party's rule, the leaders of the party had agreed that for a nation such as China, which does not have any heavy industry and minimal secondary production, capitalism is to be utilized to help the building of the "New China" and finally merged into communism.

	services (tertiary) (39.3%) note: industry includes construction (5.5%)
GDP by components, % (2006)	Private consumption (36.4) Government consumption (13.7) Gross fixed investment (40.9) Exports of goods/services (39.7) Imports of goods/services (-31.9)
Domestic demand growth (2002-06 av)	9.3%
Interest rates (2007- 12-20)	One-year benchmark deposit rate: 4.14% One-year lending rate: 7.47%
Inflation rate (CPI)	4.6% (CPI: 8.7%, Feb 07 - Feb 08) 4.5% (2007 av) 1.7% (2006 av)
Household income or consumption by percentage share (2004)	lowest 10%: 1.6%, highest 10%: 34.9%
Population below poverty line (2004)	10%
Gini index (2004)	46.9 (List of countries)
Labor force (2006)	795.3 million

Throughout the 1950s and 1960s a number of widespread changes occurred in China's economic policies and procedures. During the First Five-Year Plan period (1953-1957), a policy of continued rapid industrial development was furthered, though somewhat at the detriment of other economic sectors. The largest part of the state's investment was directed into the industrial sector, while agriculture, which employed more than 78.6 percent of the labor force, was compelled to depend on its own minimal capital resources for a significant portion of its fund necessities. The highest priority was given to industrial sectors, such as coal, electric power, iron and steel, building materials, basic chemicals, and heavy engineering. By following the Soviet model, the goal was to set up technologically sophisticated, large-scale, capital-intensive plants. Many new factories were built with Soviet technical and financial assistance, as they could not be purely supported by domestic resources.

During the first policy plan fast growth in heavy industry was achieved, but a few months after the introduction of the Second Five-Year Plan (1958-1962), which was to be on the same lines as the First, the policy of the Great Leap Forward was announced. In agriculture, this involved the formation of people's communes, the abolition of private plots, and the increasing of output through greater cooperation and physical effort. Construction of large factories was to be continued apace, and in addition to that was the initiative to create a massive auxiliary network of simple, small-scale industries and plants that were built and managed locally. However, the Chinese peasantry was unprepared for this communal system, and a plunge in agricultural output soon followed.. Concurrently, the irregular and haphazard backyard production drive failed to achieve the intended objectives as it turned out enormous quantities of expensively produced, low quality goods, most notably steel produced from low quality iron which can not be used to build. During that time, these failures were exacerbated all the more by the Sino-Soviet split which caused the cancellation of Soviet assistance which had provided technicians and blueprints. In consequence, by late 1960 the country was in the throes of an economic and humanitarian disaster. Mao Zedong self-exiled from politics and was succeeded by Liu Shaoqi, who made a complete about-turn in policy. He criticized the disasters as "30% fault of nature, 70% human error." Private plots were restored, the size of the communes was reduced, and greater independence was given to the production team. There was also a mass transfer of the unemployed from industry to the countryside, and industrial investment was temporarily slashed in order to free resources for farm production.

This policy, which led to an immediate improvement in the agricultural situation, was maintained until 1963, when it again became possible to redirect some resources to the capital goods industry. As a result, industrial production and construction gathered some momentum, but due effort was taken to try to avoid the earlier mistake of sacrificing food production to iron and steel and similar industries. Then, in 1966 the " Great Proletarian Cultural Revolution" began, initially as a campaign for Mao to retake power from Liu Shaoqi and to "eliminate the liberal bourgeoisie" from the Party. Unlike the Great Leap Forward, the Cultural Revolution did not have an explicit economic rationale. Nevertheless, industrial production was badly affected by the

Labor force by occupation (2005)	agriculture (45%), industry (24%), services (31%)
Unemployment rate (2006)	4.3% (official); 13% (unofficial)
Industrial production growth rate (2006)	22.9%
Main industries	mining and ore processing, iron, steel, aluminium, and other metals, coal; machine building; armaments; textiles and apparel; petroleum; cement; chemicals; fertilizers; consumer products, including footwear, toys, and electronics; food processing; transportation equipment, including automobiles, rail cars and locomotives, ships, and aircraft; telecommunications equipment, commercial space launch vehicles, satellites
Agricultural products	rice, wheat, potatoes, corn (maize), tobacco, soybeans, peanuts (groundnuts), tea, millet, barley, apples, cotton, oilseed; pork; fish
Natural resources	Coal, iron ore, crude oil, mercury, tin, tungsten, antimony, manganese, molybdenum, vanadium, magnetite, aluminium, lead,

ensuing confusion and strife, when hundreds of millions of people simply stopped working, while notable politicians, factory owners, and even teachers were victims to the massive "uprisings".

The Cultural Revolution left some problematic legacies for the economy. In industry, wages had been frozen and bonuses cancelled. This had, when combined with the policies of employing more workers than necessary to absorb unemployment and hiring workers on a permanent basis, essentially eliminated incentives to work hard. In addition, technicians and many managers lost their authority and could not play an effective role in production in the wake of the movement. The entire urban system, moreover, provided less than minimal incentives to achieve efficiency in production. While overall output continued to grow, capital-output ratios declined. In agriculture, per capita output in 1977 was no higher than in 1957. In 1952, gross industrial output of China was estimated at 34,900 million yuan in current prices. GDP per capita grew a paltry 17% in the 1960s, and rose to 70% in the 1970s.

1980-1990

Since 1979, China began to make major reforms to its economy. The Chinese leadership adopted a pragmatic perspective on many political and socioeconomic problems, and sharply reduced the role of ideology in economic policy. Political and social stability, economic productivity, and public and consumer welfare were considered paramount and indivisible. In these years, the government emphasized raising personal income and consumption and introducing new management systems to help increase productivity. The government also had focused on foreign trade as a major vehicle for economic growth. In the 1980s, China tried to combine central planning with market-oriented reforms to increase productivity, living standards, and technological quality without exacerbating inflation, unemployment, and budget deficits. Reforms began in the agricultural, industrial, fiscal, financial, banking, price setting, and labor systems.

Rural and agricultural reforms began with major price increases for agricultural products in 1979. In 1981 the authorities began to dismantle the collectively farmed land, and it was with the introduction of the household responsibility system that these fields were contracted out to private families to work, which provided peasants greater decision-making in agricultural activities. During this time, the size of private plots (land actually owned by individuals) was increased, and most restrictions on selling agricultural products in free markets were lifted.

China's people's communes were largely eliminated by 1984 after more than 25 years in existence. Also by that time, much longer-term contracts for land were encouraged (generally 15 years or more), and the concentration of land through subleasing of parcels was made legal. In 1985 the government announced that it would dismantle the system of planned procurements with state-allocated production quotas in agriculture.

	zinc, uranium, hydropower potential (world's largest)
Investment (gross fixed) (2006)	40.9% of GDP
Foreign direct investment (FDI) inflows (2006)	3.1% of GDP
Stock of direct foreign investment - at home (2006)	\$699.5 billion
Stock of direct foreign investment - abroad (2006)	\$67.4 billion
Market value of publicly traded shares (2006)	\$2.426 trillion
Commercial bank prime rate (%; year-end) (2007)	6.7%
Debt service ratio, paid (2007)	2.7%
Trade	
Current account balance (2007)	\$262.2 billion (9% of GDP) (ranked 1st)
Exports (2007)	\$1,216.1 billion f.o.b.

Peasants who had stopped working the land were encouraged to find private employment in the countryside or in small towns. However, they did not obtain permission to move to major cities at that time.

With production being introduced in the agricultural sector, private ownership of production assets became legal, although many major non-agricultural and industrial facilities were still state-owned and centrally planned. The government also encouraged non-agricultural activities, such as village enterprises in rural areas, and promoted more self-management for state-owned enterprises, increased competition in the marketplace, and facilitated direct contact between Chinese and foreign trading enterprises. China also relied more upon foreign financing and imports. Restraints on foreign trade were relaxed and joint ventures encouraged.

Urban economic reform was aimed at integrating China more fully with the international economy.

The development of the private sector was allowed and it was permitted to compete with state firms in a number of service sectors, and increasingly in infrastructure operations, such as construction. Authorities rationalized the pricing structure and transferred investment somewhat away from the metallurgical and machine-building industries and toward light and high-technology industries, while an emphasis on resolving the energy, transportation, and communications bottlenecks was retained.

Individuals were allocated state jobs for which they had specialized training, skills, or talents, and material incentives for individual effort and a consumer ethos were created in order to encourage people to work harder and be more productive. Resource allocation by state planning was reduced and enterprises were made ultimately responsible for their own profits and losses.

Central government (mandatory) planning was reduced and the profit remission system was replaced with contracting and tax-based systems. The reduction in the scope of mandatory planning was based on the assumption that market forces can more efficiently allocate many resources. This assumption, in turn, requires a rational pricing system that takes into account any and all extant technologies and scarcities. Because extensive subsidies were built into the economic system, however, price reform became an extremely sensitive issue. The fear of inflation also served as a constraint on price reform. Nevertheless, the fact that products produced in excess of amounts targeted in the plan could be sold, in most cases, at essentially free market

"What is socialism and what is Marxism? We were not quite clear about this in the past. Marxism attaches utmost importance to developing the productive forces. We have said that socialism is the primary stage of communism and that at the advanced stage the principle of from each according to his ability and to each according to his needs will be applied. This calls for highly developed productive forces and an overwhelming abundance of material wealth. Therefore, the fundamental task for the socialist stage is to develop the productive forces. The superiority of the socialist system is demonstrated, in the final analysis, by faster and greater development of those forces than under the capitalist system. As they develop, the people's material and cultural life will constantly improve. One of our shortcomings after the founding of the People's Republic was that we didn't pay enough attention to developing the productive forces. Socialism means eliminating poverty. Pauperism is not socialism, still less communism."

— Chinese paramount leader Deng Xiaoping on June 30, 1984

Principal exports (US \$ bn) (2006)	Office machines & data processing equipment (134.5), Telecommunications equipment (123.6), Electrical machinery (101.7), Apparel & clothing (95.4), Miscellaneous manufactures (55.5)
Main destinations of exports (2006)	US 21%, Hong Kong 16%, Japan 9.5%, South Korea 4.6%, Germany 4.2%, Netherlands 3.2%, UK 2.5%, Singapore 2.4%
Imports (2007)	\$953.9 billion f.o.b.
Principal imports (US \$ bn) (2006)	Electrical machinery (174.8), Petroleum & related products (84.1), Professional & scientific instruments (48.6), Metalliferous ores and scrap (44.0), Office machines & data processing equipment (40.7)
Main origins of imports (2006)	Japan 14.6%, South Korea 11.3%, Taiwan 10.9%, US 7.5%, Germany 4.8%, Malaysia 3.0%, Australia 2.4%, Thailand 2.3%
Public finances	
Public debt (2006)	22.1% of GDP
External debt (2006)	\$315 billion
Foreign exchange	\$1.474 trillion

prices had created a two-tiered price system that was designed to gradually wean the economy from the administratively fixed prices of an earlier era.

Several measures were taken to improve the incentives for enterprise managers so as to increase the efficiency of their firms. Enterprises were allowed to keep a substantial share of increases in production, so managers could be rewarded. This combined with the permission for enterprises to buy and sell surplus goods on essentially a free market basis meant that the prices thus obtained were often far higher than for goods produced to meet plan quotas. Managerial authority within firms was strengthened, and bonuses were restored and allowed to grow to significant proportions. Managers also were given greater authority to hire, transfer, suspend, lay off, recall, promote, discharge, assign, reward or discipline workers. The state plan also diverted some resources into the light industrial sector, for example, it gave some light industrial enterprises that produced high-quality goods priority in energy consumption.

During the 1980s, these reforms led to average annual rates of growth of 10% in agricultural and industrial output. The variety of light industrial and consumer goods increased. Industry posted major gains especially in coastal areas near Hong Kong and across the strait from Taiwan, where foreign investment helped spur output of both domestic and export goods. Rural per capita real income doubled. China became self-sufficient in grain production; rural industries accounted for 23% of agricultural output, helping absorb surplus labor in the countryside. Efforts to create a freer labor market were also part of the overall stress on achieving greater efficiency. As with price reform, tampering with a system that kept many citizens living more comfortably and securely than would an economically more rational system risked serious repercussions in relations with the public. Changes had proceeded slowly in this sensitive area.

A decision was made in 1978 to permit foreign direct investment in several small "special economic zones" along the coast. The country lacked the legal infrastructure and knowledge of international practices to make this prospect attractive for many foreign businesses, however. In the early 1980s steps were taken to expand the number of areas that could accept foreign investment with a minimum of red tape, and related efforts were made to develop the legal and other infrastructures necessary to make this work well. This additional effort resulted in making 14 coastal cities and three coastal regions "open areas" for foreign investment. All of these places provide favored tax treatment and other advantages for foreign investment. Laws on contracts, patents, and other matters of concern to foreign businesses were also passed in an effort to attract international capital to spur China's development. The largely bureaucratic nature of China's economy, however, posed a number of inherent problems for foreign firms that wanted to operate in the Chinese environment, and China gradually had to add more incentives to attract foreign capital.

The common threads of these reforms were the search for efficiency and an assumption that management of the economy by large governmental bureaucracies was unlikely to produce that result. The changes in China's economic thinking and strategy since 1978 were so great — with the potential repercussions for important vested interests so strong — that actual practice had inevitably lagged considerably behind declaratory policy. Notable during this period were the

reserves (2007)	
Foreign exchange reserves excl gold (2007)	?
Revenues (2006)	\$482.2 billion
Expenditures (2006)	\$515.8 billion; including capital expenditures of \$NA
Budget balance (2006)	-7.0% of GDP (deficit)
Corporate income tax rate (2006)	33% (official)
Economic aid recipient	\$1.641 billion (2007)
Economic aid donor	?
Main source	
<i>All values, unless otherwise stated, are in US dollars</i>	
View	

swings in economic policy between an emphasis on market-oriented reforms and a return to at least partial reliance on centralized planning. Indeed, by the end of 1989 China's economic policy had again begun to place greater emphasis on centralized planning and on large state-run enterprises, signifying a marked slowdown of the reforms. The leadership often experienced in its hybrid system the worst results of socialism (lassitude, political corruption, disrespect of personal property) and of capitalism (windfall gains, a huge and widening gap between rich and poor, stepped-up inflation). The government thus periodically backtracked, re-tightening central controls at intervals. By the late 1980s, the economy became overheated with increasing rates of inflation. At the end of 1988, in reaction to a surge of inflation caused by accelerated price reforms, the leadership introduced an austerity program. That same year, the 22 point regulation was also set by the PRC to encourage Taiwanese investments on mainland soil.

1990-2000

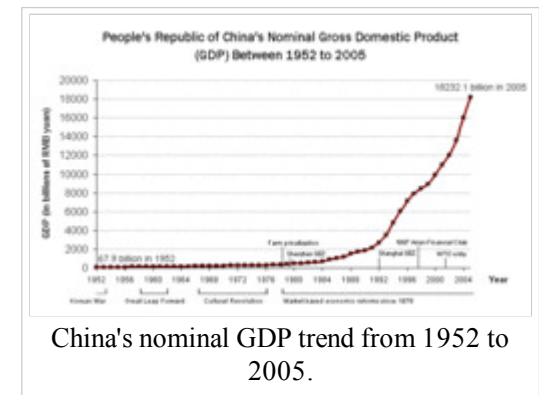
China's economy regained momentum in the early 1990s. During a Chinese New Year visit to southern China in early 1992, China's paramount leader at the time Deng Xiaoping made a series of political pronouncements designed to give new impetus to and reinvigorate the process of economic reform. The 14th National Communist Party Congress later in the year backed up Deng's renewed push for market reforms, stating that China's key task in the 1990s was to create a "socialist market economy". Continuity in the political system but bolder reform in the economic system were announced as the hallmarks of the 10-year development plan for the 1990s.

During 1993, output and prices were accelerating, investment outside the state budget was soaring, and economic expansion was fueled by the introduction of more than 2,000 special economic zones (SEZs) and the influx of foreign capital that the SEZs facilitated. The government approved additional long-term reforms aimed at giving still more play to market-oriented institutions and at strengthening central control over the financial system; state enterprises would continue to dominate many key industries in what was now termed a "socialist market economy".

Fearing hyperinflation, the authorities called in speculative loans, raised interest rates, and reevaluated investment projects. The growth rate was thus tempered, and the inflation rate dropped from over 17% in 1995 to 8% in early 1996.

In 1996, the Chinese economy continued to grow at a rapid pace, at about 9.5%, accompanied by low inflation. The economy slowed for the next 3 years, influenced in part by the Asian Financial Crisis, with official growth of 8.9% in 1997, 7.8% in 1998 and 7.1% for 1999. From 1995-1999, inflation dropped sharply, reflecting tighter monetary policies and stronger measures to control food prices. The year 2000 showed a modest reversal of this trend. Gross domestic product in 2000 grew officially at 8.0% that year, and had quadrupled since 1978. In 1999, with its 1.25 billion people but a GDP of just \$3,800 per capita (PPP), China became the second largest economy in the world after the US.

The Asian financial crisis affected China at the margin, mainly through decreased foreign direct investment and a sharp drop in the growth of its exports. However, China had huge reserves, a currency that was not freely convertible, and capital inflows that consisted overwhelmingly of long-term investment. For these reasons it remained largely insulated from the regional crisis and its commitment not to devalue had been a major stabilizing factor for the region. However, China faced slowing growth and rising unemployment based on internal problems, including a financial system burdened by huge amounts of bad loans, and massive layoffs stemming from aggressive efforts to reform state-owned enterprises (SOEs).



Despite China's impressive economic development during the past two decades, reforming the state sector and modernizing the banking system remained major hurdles. Over half of China's state-owned enterprises were inefficient and reporting losses. During the 15th National Communist Party Congress that met in September 1997, President Jiang Zemin announced plans to sell, merge, or close the vast majority of SOEs in his call for increased "non-public ownership" (*feigongyou* or privatization in euphemistic terms). The 9th National People's Congress endorsed the plans at its March 1998 session. In 2000, China claimed success in its three year effort to make the majority of large state owned enterprises (SOEs) profitable.

2000-present

Following the Chinese Communist Party's Third Plenum, held in October 2003, Chinese legislators unveiled several proposed amendments to the state constitution. One of the most significant was a proposal to provide protection for private property rights. Legislators also indicated there would be a new emphasis on certain aspects of overall government economic policy, including efforts to reduce unemployment (now in the 8-10% range in urban areas), to rebalance income distribution between urban and rural regions, and to maintain economic growth while protecting the environment and improving social equity. The National People's Congress approved the amendments when it met in March 2004.

The Fifth Plenum in October 2005 approved the 11th Five-Year Economic Program (2006-2010) aimed at building a "harmonious society" through more balanced wealth distribution and improved education, medical care, and social security. On March 2006, the National People's Congress approved the 11th Five-Year Program. The plan called for a relatively conservative 45% increase in GDP and a 20% reduction in energy intensity (energy consumption per unit of GDP) by 2010.

China's economy grew at an average rate of 10% per year during the period 1990-2004, the highest growth rate in the world. China's GDP grew 10.0% in 2003, and even faster, 10.1%, in 2004, and 9.9% in 2005 despite attempts by the government to cool the economy. China's total trade in 2006 surpassed \$1.76 trillion, making China the world's third-largest trading nation after the U.S. and Germany. Such high growth is necessary if China is to generate the 15 million jobs needed annually — roughly the size of Ecuador or Cambodia — to employ new entrants into the job market.

Nevertheless, serious imbalances exist behind the spectacular trade performance, high investment flows, and high GDP growth. High numbers of non-performing loans weigh down the state-run banking system. Inefficient state-owned enterprises (SOEs) are still a drag on growth, despite announced efforts to reform, sell, merge, or close the vast majority of SOEs.

Social and economic indicators have improved since reforms were launched, but rising inequality is evident between the more highly developed coastal provinces and the less developed, poorer inland regions. According to World Bank estimates, around 300 million people in China in 2007 — mostly in rural areas of the lagging inland provinces — still live in poverty, on consumption of less than \$1 a day (roughly the size of the United States population). About 47% of the Chinese population lives under \$2 a day.

Government role

Since 1949 the government, under China's socialist political and economic system, has been responsible for planning and managing the national economy. In the

early 1950s, the foreign trade system was monopolized by the state. Nearly all the domestic enterprises were state-owned and the government had set the prices for key commodities, controlled the level and general distribution of investment funds, determined output targets for major enterprises and branches, allocated energy resources, set wage levels and employment targets, operated the wholesale and retail networks, and steered the financial policy and banking system. In the countryside from the mid-1950s, the government established cropping patterns, set the level of prices, and fixed output targets for all major crops.

Since 1978 when economic reforms were instituted, the government role in the economy has lessened to a great degree. Industrial output by state enterprises slowly declined, although a few strategic industries have today remained predominantly state-owned. While the role of the government in managing the economy has been reduced and the role of both private enterprise and market forces increased, the government maintains a major role in the urban economy. With its policies on such issues as agricultural procurement the government also retains a major influence on rural sector performance. The State Constitution of 1982 specified that the state is to guide the country's economic development by making broad decisions on economic priorities and policies, and that the State Council, which exercises executive control, was to direct its subordinate bodies in preparing and implementing the national economic plan and the state budget. A major portion of the government system (bureaucracy) is devoted to managing the economy in a top-down chain of command with all but a few of the more than 100 ministries, commissions, administrations, bureaus, academies, and corporations under the State Council are concerned with economic matters.

Each significant economic sector is supervised and controlled by one or more of these organizations, which includes the People's Bank of China, National Development and Reform Commission, Ministry of Finance, and the ministries of agriculture; coal industry; commerce; communications; education; light industry; metallurgical industry; petroleum industry; railways; textile industry; and water resources and electric power. Several aspects of the economy are administered by specialized departments under the State Council, including the National Bureau of Statistics, Civil Aviation Administration of China, and the tourism bureau. Each of the economic organizations under the State Council directs the units under its jurisdiction through subordinate offices at the provincial and local levels.

The whole policy-making process involves extensive consultation and negotiation. Economic policies and decisions adopted by the National People's Congress and the State Council are to be passed on to the economic organizations under the State Council, which incorporates them into the plans for the various sectors of the economy. Economic plans and policies are implemented by a variety of direct and indirect control mechanisms. Direct control is exercised by designating specific physical output quotas and supply allocations for some goods and services. Indirect instruments — also called "economic levers" — operate by affecting market incentives. These included levying taxes, setting prices for products and supplies, allocating investment funds, monitoring and controlling financial transactions by the banking system, and controlling the allocation of key resources, such as skilled labor, electric power, transportation, steel, and chemicals (including fertilizers). The main advantage of including a project in an annual plan is that the raw materials, labor, financial resources, and markets are guaranteed by directives that have the weight of the law behind them. In reality, however, a great deal of economic activity goes on outside the scope of the detailed plan, and the tendency has been for the plan to become narrower rather than broader in scope. A major objective of the reform program was to reduce the use of direct controls and to increase the role of indirect economic levers. Major state-owned enterprises still receive detailed plans specifying physical quantities of key inputs and products from their ministries. These corporations, however, have been increasingly affected by prices and allocations that were determined through market interaction and only indirectly influenced by the central plan.

Total economic enterprise in China is apportioned along lines of directive planning (mandatory), indicative planning (indirect implementation of central directives), and those left to market forces. In the early 1980s during the initial reforms enterprises began to have increasing discretion over the quantities of

inputs purchased, the sources of inputs, the variety of products manufactured, and the production process. Operational supervision over economic projects has devolved primarily to provincial, municipal, and county governments. The majority of state-owned industrial enterprises, which were managed at the provincial level or below, were partially regulated by a combination of specific allocations and indirect controls, but they also produced goods outside the plan for sale in the market. Important, scarce resources — for example, engineers or finished steel — may have been assigned to this kind of unit in exact numbers. Less critical assignments of personnel and materials would have been authorized in a general way by the plan, but with procurement arrangements left up to the enterprise management.

In addition, enterprises themselves are gaining increased independence in a range of activity. While strategically important industry and services and most of large-scale construction have remained under directive planning, the market economy has gained rapidly in scale every year as it subsumes more and more sectors. Overall, the Chinese industrial system contains a complex mixture of relationships. The State Council generally administers relatively strict control over resources deemed to be of vital concern for the performance and health of the entire economy. Less vital aspects of the economy have been transferred to lower levels for detailed decisions and management. Furthermore, the need to coordinate entities that are in different organizational hierarchies generally causes a great deal of informal bargaining and consensus building.

Consumer spending has been subject to a limited degree of direct government influence but is primarily determined by the basic market forces of income levels and commodity prices. Before the reform period, key goods were rationed when they were in short supply, but by the mid-1980s availability had increased to the point that rationing was discontinued for everything except grain, which could also be purchased in the free markets. Collectively owned units and the agricultural sector were regulated primarily by indirect instruments. Each collective unit was "responsible for its own profit and loss," and the prices of its inputs and products provided the major production incentives.

Vast changes were made in relaxing the state control of the agricultural sector from the late 1970s. The structural mechanisms for implementing state objectives — the people's communes and their subordinate teams and brigades — have been either entirely eliminated or greatly diminished. Farm incentives have been boosted both by price increases for state-purchased agricultural products, and it was permitted to sell excess production on a free market. There was more room in the choice of what crops to grow, and peasants are allowed to contract for land that they will work, rather than simply working most of the land collectively. The system of procurement quotas (fixed in the form of contracts) has been being phased out, although the state can still buy farm products and control surpluses in order to affect market conditions.

Foreign trade is supervised by the Ministry of Commerce, customs, and the Bank of China, the foreign exchange arm of the Chinese banking system, which controls access to the foreign currency required for imports. Ever since restrictions on foreign trade were reduced, there have been broad opportunities for individual enterprises to engage in exchanges with foreign firms without much intervention from official agencies.

Although the government still dominates the economy in parts, the extent of its control has been limited by the sheer volume of economic activity. Furthermore, the concept of government supervision of the economy had changed from one of direct state control to one of indirect guidance of a more dynamic economy.

Regional economies

China's underdeveloped transportation system — combined with important differences in the availability of natural and human resources and in industrial infrastructure — has produced significant variations in the regional economies of China.

Economic development has generally been more rapid in coastal provinces than in the interior, and there are large disparities in per capita income between regions. The three wealthiest regions are along the southeast coast, centred on the Pearl River Delta; along the east coast, centred on the Lower Yangtze River; and near the Bohai Gulf, in the Beijing-Tianjin- Liaoning region. It is the rapid development of these areas that is expected to have the most significant effect on the Asian regional economy as a whole, and Chinese government policy is designed to remove the obstacles to accelerated growth in these wealthier regions.

Development

China, economically extremely backward up until 1979, has again become one of the world's major economic powers with the greatest potential. In the 22 years following reform and opening-up in 1979 in particular, China's economy developed at an unprecedented rate, and that momentum has been held steady into the 21st century. In 2004, China further strengthened and improved its macro control, and the economy entered its best ever development period of recent years. The gross domestic product (GDP) for 2004 amounted to 13,687.59 billion yuan, 9.5 percent higher than the previous year.

China adopts the " five-year-plan" strategy for economic development. The 11th Five-Year Plan (2006-2010) is the currently being implemented.

Three-Step Development Strategy

China's overall economic construction objectives were clearly stated in the Three Step Development Strategy set out in 1987: Step One--to double the 1980 GNP and ensure that the people have enough food and clothing -- was attained by the end of the 1980s; Step Two--to quadruple the 1980 GNP by the end of the 20th century --was achieved in 1995 ahead of schedule; Step Three--to increase per-capita GNP to the level of the medium-developed countries by 2050--at which point, the Chinese people will be fairly well-off and modernization will be basically realized.

Regional development

Template:China regional economic strategies These strategies are aimed at the relatively poorer regions in China in an attempt to prevent widening inequalities:

- Great Western Development, designed to improve the economic situation of the western provinces through capital investment and development of natural resources.
- Revitalize Northeast China, to rejuvenate the industrial bases in the northeastern China. It covers 3 provinces: Heilongjiang, Jilin, and Liaoning.
- Rise of Central China Plan, to accelerate the development of its central regions. It covers 6 provinces: Shanxi, Henan, Anhui, Hubei, Hunan, and Jiangxi.
- Third Front, focused on the southwestern provinces.

Foreign investment abroad:

- Go Global, to encourage its enterprises to invest overseas.

Key national projects

The "West-to-East Electricity Transmission," the "West-to-East Gas Transmission," and the "South-North Water Transfer Project" are the government's three key strategic projects, aimed at realigning overall economic development and achieving rational distribution of national resources across China. The "West-to-East Electricity Transmission" project is in full swing, involving hydropower and coal resources in western China and the construction of new power transmission channels to deliver electricity to the east. The southern power grid line, transmitting three million kW from Guizhou to Guangdong, was completed in September 2004. The "West-to-East Gas Transmission" project includes a 4,000 km trunk pipeline running through 10 provinces, autonomous regions or municipalities, conveying natural gas to cities in northern and eastern China. This was finished in October 2004 and has a design capacity of 12 billion cu m per year. Construction of the "South-to-North Water Diversion" project was officially launched on 27 December 2002 and completion of Phase I is scheduled for 2010; this will relieve serious water shortfall in northern China and realize a rational distribution of the water resources of the Yangtze, Yellow, Huaihe, and Haihe river valleys.

Hong Kong and Macau

In accordance with the One Country, Two Systems policy, the economies of the former European colonies, Hong Kong and Macao, are separate from the rest of the PRC, and each other. Both Hong Kong and Macau are free to conduct and engage in economic negotiations with foreign countries, as well as participating as full members in various international economic organizations such as the World Customs Organization, the World Trade Organization and the Asia-Pacific Economic Cooperation forum, often under the names "Hong Kong, China" and "Macao, China".

Macroeconomic trends

The table below shows the trend of the GDP of China at market prices estimated by the IMF with figures in millions (Chinese yuan). For purchasing power parity comparisons, the US dollar is exchanged at 2.05 CNY only.

Year	Gross domestic product	US dollar exchange	Inflation index (2000=100)
1955	91,000	2.46	-
1960	145,700	2.46	-
1965	171,600	2.46	-
1970	225,300	2.46	21.3
1975	299,700	1.86	22.4

1980	460,906	1.49	25
1985	896,440	2.93	30
1990	1,854,790	4.78	49
1995	6,079,400	8.35	91
2000	9,921,500	8.27	100
2005	18,308,500	8.19	106

Average wages in 2007 hover around \$12-14 per day (just below Guatemalan levels).

Systemic problems

The government has in recent years struggled to contain the social strife and environmental damage related to the economy's rapid transformation; collect public receipts due from provinces, businesses, and individuals; reduce corruption and other economic crimes; sustain adequate job growth for tens of millions of workers laid off from state-owned enterprises, migrants, and new entrants to the work force; and keep afloat the large state-owned enterprises, most of which had not participated in the vigorous expansion of the economy and many of which had been losing the ability to pay full wages and pensions. From 50 to 100 million surplus rural workers were adrift between the villages and the cities, many subsisting through part-time low-paying jobs. Popular resistance, changes in central policy, and loss of authority by rural cadres have weakened China's population control program. Another long-term threat to continued rapid economic growth has been the deterioration in the environment, notably air and water pollution, soil erosion, growing desertification and the steady fall of the water table especially in the north. China also has continued to lose arable land because of erosion and infrastructure development.

Other major problems concern the labor force and the pricing system. There is large-scale underemployment in both urban and rural areas, and the fear of the disruptive effects of major, explicit unemployment is strong. The prices of certain key commodities, especially of industrial raw materials and major industrial products, are determined by the state. In most cases, basic price ratios were set in the 1950s and are often irrational in terms of current production capabilities and demands. Over the years, large subsidies were built into the price structure, and these subsidies grew substantially in the late 1970s and 1980s. By the early 1990s these subsidies began to be eliminated, in large part due to China's admission into the World Trade Organization (WTO) in 2001, which carried with it requirements for further economic liberalization and deregulation. China's ongoing economic transformation has had a profound impact not only on China but on the world. The market-oriented reforms China has implemented over the past two decades have unleashed individual initiative and entrepreneurship.

Regulatory environment

Though China's economy has expanded rapidly, its regulatory environment has not kept pace. Since Deng Xiaoping's open market reforms, the growth of new businesses has outpaced the government's ability to regulate them. This has created a situation where businesses, faced with mounting competition and poor

oversight, will be willing to take drastic measures to increase profit margins, often at the expense of consumer safety. This issue acquired more prominence in 2007, with a number of restrictions being placed on problematic Chinese exports by the United States. The Chinese Government recognizes the severity of the problem, recently concluding that up to 20% of the country's products are substandard or tainted.

Inflation

During the winter of 2007-2008, inflation ran about 7% on an annual basis, rising to 8.7% in statistics for February, 2008, released in March, 2008. The food and fuel sectors were major problem areas, with meat and fuel posing special difficulties.

Shortages of gasoline and diesel fuel developed in the fall of 2007 due to reluctance of refineries to produce fuel at low prices set by the state. These prices were slightly increased in November, 2007 with fuel selling for \$2.65 a gallon, still slightly below world prices. Price controls were in effect on numerous basic products and services, but were ineffective with food, prices of which were rising at an annual rate of 18.2% in November, 2007. The problem of inflation has caused concern at the highest levels of the Chinese government. On January 9, 2008 the government of China issued the following statement on its official website: "The Chinese government decided on Wednesday to take further measures to stabilize market prices and increase the severity of punishments for those guilty of driving up prices through hoarding or cheating."

Pork is an important part of the Chinese economy with a per capita consumption of a fifth of a pound per day. The worldwide rise in the price of animal feed associated with increased production of ethanol from corn resulted in steep rises in pork prices in China in 2007. Increased cost of production interacted badly with increased demand resulting from rapidly rising wages. The state responded by subsidizing pork prices for students and the urban poor and called for increased production. Release of pork from the nation's strategic pork reserve was considered.

By January 2008, the inflation rate rose to 7.1%, which BBC News described as the highest inflation rate since 1997, due to the winter storms that month. China's inflation rate jumped to a new decade high of 8.7 percent in February 2008 after severe winter storms disrupted the economy and worsened food shortages, the government said March 11, 2008.

Labor shortages and rising export costs

By 2005, there were signs of stronger demand for labor with workers being able to choose employment which offered higher wages and better working conditions, enabling some to move away from the restrictive dormitory life and boring factory work which have characterized export industries in provinces such as Guangdong and Fujian. Minimum wages began rising toward the equivalent of 100 U.S. dollars a month as companies scrambled for employees, with some paying as much as \$150 a month on average. The labor shortage was partially driven by the demographic trends, as the proportion of people of working age fell as the result of strict family planning.

It was reported in *The New York Times* in April 2006 that labor costs continued to increase and a shortage of unskilled labor had developed with a million or more employees being sought. Operations which relied on cheap labor were contemplating relocations to cities in the interior or to other low-cost countries such as Vietnam or Bangladesh. Many young people were attending college rather than opting for minimum-wage factory work. The demographic shift resulting from

the one-child policy continued to reduce the supply of young entry-level workers. Also, government efforts to advance economic development in the interior of the country were beginning to be effective at creating better opportunities there. A follow-up article in *The New York Times* in late August 2007 reported acceleration of this trend. The minimum wage a young unskilled factory worker could be hired at had increased to \$200 with experienced workers commanding more. There was strong demand for young workers willing to work long hours and live in dormitory conditions, while older workers, over forty, were considered unsuitable. Rising wages were being, to a certain extent, offset by increases in productivity, but in 2007, a slight rise in the cost of imports from China was recorded by the United States government: "After falling since its inception in December, 2003, the price index for imports from China rose 0.4 percent in July, 2007, the largest monthly increase since the index was first published in December 2003. The July increase was the third consecutive monthly advance. Over the past year, import prices from China increased 0.9 percent." By February, 2008, concerns were being raised that rising wages and inflation in China were beginning to create inflationary pressure in the United States and Europe, which had depended on cheap prices for consumer goods from China exerting downward pressure on prices.

Financial and banking system

Most of China's financial institutions are state governed. The chief instruments of financial and fiscal control are the People's Bank of China (PBC) and the Ministry of Finance, both under the authority of the State Council. The People's Bank of China replaced the Central Bank of China in 1950 and gradually took over private banks. It fulfills many of the functions of other central and commercial banks. It issues the currency, controls circulation, and plays an important role in disbursing budgetary expenditures. Additionally, it administers the accounts, payments, and receipts of government organizations and other bodies, which enables it to exert thorough supervision over their financial and general performances in consideration to the government's economic plans. The PBC is also responsible for international trade and other overseas transactions. Remittances by overseas Chinese are managed by the Bank of China (BOC), which has a number of branch offices in several countries.

Other financial institutions that are crucial, include the China Development Bank (CDB), which funds economic development and directs foreign investment; the Agricultural Bank of China (ABC), which provides for the agricultural sector; the China Construction Bank (CCB), which is responsible for capitalizing a portion of overall investment and for providing capital funds for certain industrial and construction enterprises; and the Industrial and Commercial Bank of China (ICBC), which conducts ordinary commercial transactions and acts as a savings bank for the public.



A Shanghai branch of Industrial and Commercial Bank of China (ICBC)

China's economic reforms greatly increased the economic role of the banking system. Enterprises and individuals can go to the banks to obtain loans outside the state plan, and this has proved to be a major source of financing both for start-up companies and businesses and for the expansion, modernization or privatization of existing enterprises. Even though nearly all investment capital was previously provided on a grant basis according to the state plan, policy has since the start of the reform shifted to a loan basis through the various state-directed financial institutions. Increasing amounts of funds are made available through the banks for economic and commercial purposes. Foreign sources of capital have also become increasingly prominent. China has received loans from the World Bank and several United Nations programs, as well as from countries (particularly Japan) and, to a lesser extent, commercial banks. Hong Kong has been a major conduit of this investment, as well as a source itself.



Shanghai Stock Exchange (SSE)

With two stock exchanges (Shanghai Stock Exchange and Shenzhen Stock Exchange), mainland China's stock market had a market value of \$1 trillion by January 2007, which became the third largest stock market in Asia, after Japan and Hong Kong. It is estimated to be the world's third largest by 2016.

Currency system

The renminbi (“people’s currency”) is the currency of the mainland, denominated as the yuan, subdivided into 10 jiao or 100 fen. The renminbi is issued by the People's Bank of China, the monetary authority of the PRC. The ISO 4217 abbreviation is CNY, although also commonly abbreviated as "RMB". The Latinised symbol is ¥. The yuan is generally considered by outside observers to be undervalued by about 30%.

The renminbi is held in a floating exchange-rate system managed primarily against the US dollar. On July 21, 2005 China revalued its currency by 2.1% against the US dollar and, since then has moved to an exchange rate system that references a basket of currencies and has allowed the renminbi to fluctuate at a daily rate of up to half a percent.

The rate of exchange (Chinese yuan per US\$1) in mid-2007 was RMB 7.45, while in early 2006 was RMB 8.07:US \$1 = 8.2793 yuan (January 2000), 8.2783 (1999), 8.2790 (1998), 8.2898 (1997), 8.3142 (1996), 8.3514 (1995).

Beginning January 1, 1994, the People's Bank of China quotes the midpoint rate against the US dollar based on the previous day's prevailing rate in the interbank foreign exchange market.

There is a complex relationship between China's balance of trade, inflation, measured by the consumer price index and the value of its currency. Despite allowing the value of the yuan to "float", China's central bank has decisive ability to control its value with relationship to other currencies. Inflation in 2007, reflecting sharply rising prices for meat and fuel, is probably related to the worldwide rise in commodities used as animal feed or as fuel. Thus rapid rises in the value of the yuan permitted in December, 2007 are possibly related to efforts to mitigate inflation by permitting the renminbi to be worth more.

Tax system

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :171 of 626.

From the 1950s to the 1980s, the central government's revenues derived chiefly from the profits of the state enterprises, which were remitted to the state. Some government revenues also came from taxes, of which the most important was the general industrial and commercial tax.

The trend, however, has been for remitted profits of the state enterprises to be replaced with taxes on those profits. Initially, this tax system was adjusted so as to allow for differences in the capitalization and pricing situations of various firms, but more-uniform tax schedules were introduced in the early 1990s. In addition, personal income and value-added taxes were implemented at that time.

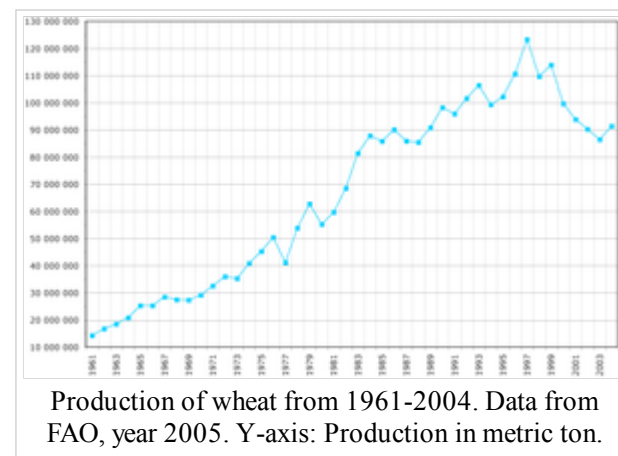
Agriculture

China is the world's most populous country and one of the largest producers and consumers of agricultural products. According to the United Nations World Food Program, in 2003, China fed 20 percent of the world's population with only 7 percent of the world's arable land. China ranks first worldwide in farm output, and, as a result of topographic and climatic factors, only about 10–15 percent of the total land area is suitable for cultivation. Of this, slightly more than half is unirrigated, and the remainder is divided roughly equally between paddy fields and irrigated areas. Nevertheless, about 60 percent of the population lives in the rural areas, and until the 1980s a high percentage of them made their living directly from farming. Since then, many have been encouraged to leave the fields and pursue other activities, such as light manufacturing, commerce, and transportation; and by the mid-1980s farming accounted for less than half of the value of rural output. Today, agriculture contributes only 13% of China's GDP.

The quality of the soil varies. Environmental problems such as floods, drought, and erosion pose serious threats in many parts of the country. The wholesale destruction of forests gave way to an energetic reforestation program that proved inadequate, and forest resources are still fairly meagre. The principal forests are found in the Qinling Mountains and the central mountains and on the Sichuan-Yunnan plateau. Because they are inaccessible, the Qinling forests are not worked extensively, and much of the country's timber comes from Heilongjiang, Jilin, Sichuan, and Yunnan.

About 45 percent of China's labor force is engaged in agriculture. There are over 300 million Chinese farm workers - mostly laboring on small pieces of land relative to U.S. farms. Virtually all arable land is used for food crops. China is the world's largest producer of rice and is among the principal sources of wheat, corn (maize), tobacco, soybeans, peanuts (groundnuts), cotton, potatoes, sorghum, peanuts, tea, millet, barley, oilseed, pork, and fish. Major non-food crops, including cotton, other fibers, and oilseeds, furnish China with a small proportion of its foreign trade revenue. Agricultural exports, such as vegetables and fruits, fish and shellfish, grain and grain products, and meat and meat products, are exported to Hong Kong. Yields are high because of intensive cultivation, for example, China's cropland area is only 75% of the U.S. total, but China still produces about 30% more crops and livestock than the United States. China hopes to further increase agricultural production through improved plant stocks, fertilizers, and technology.

Though incomes for farmers have continued to rise over the past two decades, the rate of growth has fallen further behind that of urban residents, leading to an increasing wealth gap between the cities and countryside. Government policies that have continued to emphasize grain self-sufficiency and the fact that farmers



do not own — and cannot buy or sell — the land they work have contributed to this situation. In addition, inadequate port facilities and lack of warehousing and cold storage facilities impede both domestic and international agricultural trade.

Western China, comprising Tibet, Xinjiang, and Qinghai, has little agricultural significance except for areas of floriculture and cattle raising. Rice, China's most important crop, is dominant in the southern provinces, many of which yield two harvests a year. In the north, wheat is of the greatest importance, while in central China wheat and rice vie with each other for the top place. Millet and kaoliang (a variety of grain sorghum) are grown mainly in the northeast and some central provinces, which, together with some northern areas, also provide considerable quantities of barley. Most of the soybean crop is derived from the north and the northeast; corn (maize) is grown in the centre and the north, while tea comes mainly from the hilly areas of the southeast. Cotton is grown extensively in the central provinces, but it is also found to a lesser extent in the southeast and in the north. Tobacco comes from the centre and parts of the south. Other important crops are potatoes, sugar beets, and oilseeds.

There is still a relative lack of, especially advanced, agricultural machinery. For the most part the Chinese peasant or farmer depends on simple, non mechanized farming implements. Good progress has been made in increasing water conservancy, and about half the cultivated land is under irrigation.

Animal husbandry constitutes the second most important component of agricultural production. China is the world's leading producer of pigs, chickens, and eggs, and it also has sizable herds of sheep and cattle. Since the mid-1970s, greater emphasis has been placed on increasing the livestock output. China has a long tradition of ocean and freshwater fishing and of aquaculture. Pond raising has always been important and has been increasingly emphasized to supplement coastal and inland fisheries threatened by overfishing and to provide such valuable export commodities as prawns.

Industry and manufacturing

Industry and construction account for about 48% of China's GDP. Around 8% of the total manufacturing output in the world comes from China itself. China ranks third worldwide in industrial output. Major industries include mining and ore processing; iron and steel; aluminium; coal; machinery; armaments; textiles and apparel; petroleum; cement; chemical; fertilizers; food processing; automobiles and other transportation equipment including rail cars and locomotives, ships, and aircraft; consumer products including footwear, toys, and electronics; telecommunications and information technology. China has become a preferred destination for the relocation of global manufacturing facilities. Its strength as an export platform has contributed to incomes and employment in China. The state-owned sector still accounts for about 40% of GDP. In recent years, authorities have been giving greater attention to the management of state assets — both in the financial market as well as among state-owned-enterprises — and progress has been noteworthy.

Since the founding of the People's Republic, industrial development has been given considerable attention. Among the various industrial branches the machine-building and metallurgical industries have received the highest priority. These two areas alone now account for about 20-30 percent of the total gross value of industrial output. In these, as in most other areas of industry, however, innovation has generally suffered at the hands of a system that has rewarded increases in gross output rather than improvements in variety, sophistication and quality. China, therefore, still imports significant quantities of specialized steels. Overall industrial output has grown at an average rate of more than 10 percent per year, having surpassed all other sectors in economic growth and degree of modernization. Some heavy industries and products deemed to be of national strategic importance remain state-owned, but an increasing proportion of lighter and consumer-oriented manufacturing firms are privately held or are private-state joint ventures.

The predominant focus of development in the chemical industry is to expand the output of chemical fertilizers, plastics, and synthetic fibers. The growth of this industry has placed China among the world's leading producers of nitrogenous fertilizers. In the consumer goods sector the main emphasis is on textiles and clothing, which also form an important part of China's exports. Textile manufacturing, a rapidly growing proportion of which consists of synthetics, account for about 10 percent of the gross industrial output and continues to be important, but less so than before. The industry tends to be scattered throughout the country, but there are a number of important textile centers, including Shanghai, Guangzhou, and Harbin.

Major state industries are iron, steel, coal, machine building, light industrial products, armaments, and textiles. These industries completed a decade of reform (1979-1989) with little substantial management change. Prior to 1978, most output was produced by state-owned enterprises. As a result of the economic reforms that followed, there was a significant increase in production by enterprises sponsored by local governments, especially townships and villages, and, increasingly, by private entrepreneurs and foreign investors. The 1996 industrial census revealed that there were 7,342,000 industrial enterprises at the end of 1995; total employment in industrial enterprises was approximately 147 million. The 1999 industrial census revealed that there were 7,930,000 industrial enterprises at the end of 1999 (including small-scale town and village enterprises); total employment in state-owned industrial enterprises was about 24 million. The automobile industry has grown rapidly since 2000, as has the petrochemical industry. Machinery and electronic products became China's main exports. China is the world's leading manufacturer of chemical fertilizers, cement, and steel. By 2002 the share in gross industrial output by state-owned and state-holding industries had decreased to 41%, and the state-owned companies themselves contributed only 16% of China's industrial output.

China's construction sector has grown substantially since the early 1980s. In the twenty-first century, investment in capital construction has experienced major annual increases. In 2001 investments increased 8.5% over the previous year. In 2002 there was a 16.4% increase, followed by a 30% increase in 2003. The manufacturing sector produced 44.1% of GDP in 2004 and accounted for 11.3% of total employment in 2002. Industry and construction produced 53.1% of China's GDP in 2005. Industry (including mining, manufacturing, construction, and power) contributed 52.9% of GDP in 2004 and occupied 22.5% of the workforce.

Energy production has increased rapidly, but it still falls considerably short of demand. This is partly due to artificial energy prices that have been held so low that industries have had few incentives to conserve. Coal provides about 75-80 percent of China's energy consumption. Petroleum production, which began growing rapidly from an extremely low base in the early 1960s, has basically remained at the same level since the late 1970s. There are large petroleum reserves in the inaccessible northwest and potentially significant offshore petroleum deposits, but about half of the country's oil production still comes from the major Daqing oilfield in the northeast. China has much, and partially undeveloped, hydroelectric power potential and natural gas reserves. The government has made plans to develop nuclear power plants in the coastal and western regions (see Nuclear power in China).

Overall, the distribution of industry remains very uneven, despite serious efforts from the mid-1950s to the late 1970s to build up industry in the interior at the cost of the major cities on the east coast. While percentage growth of industry in the interior provinces generally greatly exceeded that of the coastal areas, the far larger initial industrial base of the latter has meant that a few coastal regions have continued to dominate China's industrial economy. The establishment of special economic zones in coastal areas only heightened this disparity. Shanghai by itself accounts for about 8-10 percent of China's gross value of industrial output, and the east coast accounts for about 60 percent of the national industrial output. The rate of industrialization increased and diversified after the early 1990s. Notable were the development of aerospace, aircraft, and automobile manufacturing. In addition, China expanded rapidly into the production of pharmaceuticals, software, semiconductors, electronics, and precision equipment.

Steel industry

China is the largest producer of steel in the world and the steel industry has been rapidly increasing its steel production. Iron ore production kept pace with steel production in the early 1990s but was soon outpaced by imported iron ore and other metals in the early 2000s. Steel production, an estimated 140 million tons in 2000, was increased to 419 million tons in 2006. Much of the country's steel output comes from a large number of small-scale producing centers, one of the largest being Anshan in Liaoning.

Automotive industry

By 2006 China had become the world's third largest automotive vehicle manufacturer (after US and Japan) and the second largest consumer (only after US). Automobile manufacturing has soared during the reform period. In 1975 only 139,800 automobiles were produced annually, but by 1985 production had reached 443,377, then jumped to nearly 1.1 million by 1992 and increased fairly evenly each year up until 2001, when it reached 2.3 million. In 2002 production rose to nearly 3.25 million and then jumped to 4.44 million in 2003, 5.07 million in 2004, 5.71 million in 2005 and 7.28 million in 2006. In 2007, 9 million automobiles are expected to be produced and the country could become the number-one automaker in the world by 2020. Domestic sales have kept pace with production. After respectable annual increases in the mid- and late 1990s, passenger car sales soared in the early 2000s. In 2006, a total of 7.22 million automobiles have been sold, including 5.18 million units of passenger cars and 2.04 million units of commercial vehicles.

So successful has China's automotive industry been that it began exporting car parts in 1999. China began to plan major moves into the automobile and components export business starting in 2005. A new Honda factory in Guangzhou was built in 2004 solely for the export market and was expected to ship 30,000 passenger vehicles to Europe in 2005. By 2004, 12 major foreign automotive manufacturers had joint-venture plants in China. They produced a wide range of automobiles, minivans, sport utility vehicles, buses, and trucks. In 2003 China exported US\$4.7 billion worth of vehicles and components. The vehicle export was 78,000 units in 2004, 173,000 units in 2005, and 340,000 units in 2006. The vehicle and component export is targeted to reach US\$70 billion by 2010.

Other industries

Services

China's services output ranks seventh worldwide, and high power and telecom density has ensured that it has remained on a high-growth trajectory in the long-term. In 2005 the services sector produced 40.3% of China's annual GDP, second only to manufacturing. However, its proportion of GDP is still low compared with the ratio in more developed countries, and the agricultural sector still employs a larger workforce. Prior to the onset of economic reforms in 1978, China's services sector was characterized by state-operated shops, rationing, and regulated prices. With reform came private markets and individual entrepreneurs and a commercial sector. The wholesale and retail trade has expanded quickly, with urban areas now having many shopping malls, retail shops, restaurant chains and hotels. Public administration has still remained a main component of the service sector, while tourism has become a significant factor in employment and as a source of foreign exchange.

Tourism

China's tourism industry is one of the fastest-growing industries in the national economy and is also one of the industries with a very distinct global competitive edge. The total revenue of China's tourism industry reached USD 67.3 billion in 2002, accounting for 5.44% of the GDP. It dropped, largely due to SARS, to USD 59 billion in 2003. Nevertheless, for areas rich in tourism resources, tourism has become the main source of tax revenue and the key industry for economic development.

The total number of inbound tourists was 91.66 million in 2003, and that of tourists staying overnight was 32.7 million, about 10 times of the number in 1980. International tourism receipts were USD 17.4 billion in 2003. China's ranking for both the overnight tourist arrivals and tourism receipts were among the world's top five in 2003. However, there is unlikely to be a big increase in the inbound tourism market.

China's domestic tourism market makes up more than 90% of the country's tourism traffic, and contributes more than 70% of total tourism revenue. In 2002, domestic tourists reached 878 million and tourism revenue was USD 46.9 billion. The five-days-per-week and long vacation schemes have increased leisure time for the Chinese people and spurred market demand in domestic tourism and led to its prosperity.

A large middle class population with strong consumption power is emerging in China, especially in major cities. China's outbound tourists reached 20.22 million in 2003, overtaking Japan for the first time. Currently there are 65 countries/areas open to Chinese tour groups. Putting aside the threat of SARS and other unexpected events, based on the current economic growth situation and the social development of China, China's outbound tourism is poised to achieve a new growth peak.

Driven by the flourishing tourism industry, China's tourist hotel sector is expanding rapidly. At the end of 2003, China had a total of 10,093 tourist hotels and more than 820,000 rooms. 773 of these tourist hotels were foreign-funded. The number of foreign-funded (inclusive of Hong Kong, Macau and Taiwan investments) four- and five-star tourist hotels made up 26% and 30.02% of the national total, respectively.

In 2003, there were a total of 11,522 travel agencies in China, among which, 1,349 were international ones and 10,203 were domestic ones. While overall tourism market concentration rose, there was a drop in the market position of the traditional three key travel agencies. As competition heightened, China's tourism industry on the whole, had begun to start earning low profits, even while it was expanding its scale of operations.

Currently, there are approximately 15,000 natural, cultural and man-made places of attraction which are above county level. Presently, Hong Kong investors are the main participants in the establishment of tourist attractions in China. In 2001, Sichuan became the first province to propose renting out the operation rights of 10 scenic areas to foreign investors.

According to the plan by China National Tourism Administration, the number of inbound tourists, foreign exchange earnings from tourism and the domestic market size are targeted to have an annual growth of 4%, 8% and 8%, respectively, in the next five to ten years. It is also forecasted by the WTO that China's tourism industry will take up to 8.6% of world market share to become the world's top tourism industry by 2020.

Labor and welfare

One of the hallmarks of China's socialist economy was its promise of employment to all able and willing to work and job-security with virtually lifelong tenure. Reformers targeted the labor market as unproductive because industries were frequently overstaffed to fulfill socialist goals and job-security reduced workers' incentive to work. This socialist policy was pejoratively called the iron rice bowl.

In 1979-1980, the state reformed factories by giving wage increases to workers, which was immediately offset by sharply rising inflation rates of 6%-7%. In other words, although they were given more pay, their money was worth less and they could buy less, which meant they were poorer. The state remedied this problem, in part, by distributing wage subsidies.

The reforms also dismantled the iron rice bowl, which meant it witnessed a rise in unemployment in the economy. In 1979, immediately after the iron rice bowl was dismantled, there were 20 million unemployed people. Official Chinese statistics reveal that 4.2% of the total urban workforce was unemployed in 2004, although other estimates have reached 10%. As part of its newly developing social security legislation, China has an unemployment insurance system. At the end of 2003, more than 103.7 million people were participating in the plan, and 7.4 million laid-off employees had received benefits.

A 10-percent sample tabulation of census questionnaires from the 1982 census provided needed statistical data on China's working population and allowed the first reliable estimates of the labor force's size and characteristics. The quality of the data was considered to be quite high, although a 40-million-person discrepancy existed between the 10-percent sample and the regular employment statistics. This discrepancy can be explained by the combination of inaccurate employment statistics and varying methods of calculation and scope of coverage. The estimated mid-1982 labor force was 546 million, or approximately 54 percent of the total population. Males accounted for slightly more than half of the estimated labor force, and the labor force participation rates for persons age fifteen years and older were among the highest in the world.

The 10-percent sample showed that approximately three-fourths of the labor force worked in the agricultural sector. According to the National Bureau of Statistics, in the mid-1980s more than 120 million people worked in the nonagricultural sector. The sample revealed that men occupied the great majority of leadership positions. The average worker was about thirty years old, and three out of every four workers were under forty-five years of age. The working population had a low education level. Less than 40 percent of the labor force had more than a primary school education, and 30 percent were illiterate or semiliterate.

In mid-1982 the overall unemployment rate was estimated to be about 5 percent. Of the approximately 25 million unemployed, 12 million were men and 13 million were women. The unemployment rate was highest in the northeast and lowest in the south. The unemployment rates were higher than those of East Asian, Southeast Asian, and Pacific island countries for which data were available but were lower than the rates found in North America and Europe. Virtually all of the unemployed persons in cities and towns were under twenty years of age.



A window washer on one of the thousands of skyscrapers in Shanghai.

By the 1990s and 2000s, agriculture has remained the largest employer, though its proportion of the workforce has steadily declined; between 1991 and 2001 it dropped from about 60% to 40% of the total. The manufacturing labor force has also become smaller at a slower rate, partially because of reforms implemented at many of the state-run enterprises. Such reforms and other factors have increased unemployment and underemployment in both urban and rural areas. Women have been a major labor presence in China since the People's Republic was established. Some 40-45 percent of all women over age 15 are employed.

China's estimated employed labor force in 2005 totaled 791.4 million persons, about 60% of the total population. During 2003, 49% of the labor force worked in agriculture, forestry, and fishing; 22% in mining, manufacturing, energy, and construction industries; and 29% in the services sector and other categories. In 2004 some 25 million persons were employed by 743,000 private enterprises. Urban wages rose rapidly from 2004-2007, at a rate of 13 to 19% per year with average wages near \$200 in 2007.

The All-China Federation of Trade Unions (ACFTU) was established in 1925 to represent the interests of national and local trade unions and trade union councils. The ACFTU reported a membership of 130 million, out of an estimated 248 million urban workers, at the end of 2002. Chinese trade unions are organized on a broad industrial basis. Membership is open to those who rely on wages for the whole or a large part of their income, a qualification that excludes most agricultural workers. In theory, membership is not compulsory, but in view of the unions' role in the distribution of social benefits, the economic pressure to join is great. The lowest unit is the enterprise union committee. Individual trade unions also operate at the provincial level, and there are trade union councils that coordinate all union activities within a particular area and operate at county, municipal, and provincial levels. At the top of the movement is the ACFTU, which discharges its functions through a number of regional federations.

In theory the appropriate trade union organizations have been consulted on the level of wages as well as on wage differentials, but in practice their role in these and similar matters has been insignificant. They have not engaged in collective bargaining, as their principal duties have included assisting the party and promoting production. In fulfilling these tasks, they have had a role in enforcing labor discipline. From the point of view of the membership, the most important activities have concerned the social and welfare services. Thus, the unions have looked after industrial safety, organized social and cultural activities, and, provided services such as clinics, rest and holiday homes, hostels, libraries, and clubs. They also administer old-age pensions, workers' insurance, disability benefits, and other welfare schemes. More recently, however, reforms of the social security system have involved moving the responsibility for pensions and other welfare to the provinces.

In China exists labor laws which, if fully enforced, would greatly alleviate common abuses such as not paying workers. In 2006, a new labor law was proposed and submitted for public comment. The new law, as currently drafted, would permit collective bargaining in a form analogous to that standard in Western economies, although the only legal unions would continue to be those affiliated with the All-China Federation of Trade Unions, the Communist Party's official union organization. The new law has support from labor activists, but has been opposed by some foreign corporations, including the American Chamber of Commerce and the European Chamber of Commerce. There is some expectation that the new law, if enacted, would be enforced. An ongoing effort to organize Chinese operations of foreign companies succeeded in 2006 at Wal-Mart. The campaign is projected to include Eastman Kodak, Dell and other companies. It was reported in 2008 that problems with sweatshops persist.

External trade

International trade makes up a sizeable portion of China's overall economy. The course of China's foreign trade has experienced considerable transformations since the early 1950s. In 1950 more than 70 percent of the total trade was with non- Communist countries, but by 1954, a year after the end of the Korean War, the situation was completely reversed, and trade with Communist countries stood at about 75 percent. During the next few years, trade with the Communist world lost some of its standing, but it was only after the Sino-Soviet split of 1960, which resulted in the cancellation of Soviet credits and the withdrawal of Soviet technicians, that the non-Communist world began to see a speedy recovery in its position. In 1965 China's trade with other socialist countries made up only about a third of the total.

Being a Second World country at the time, a meaningful segment of China's trade with the Third World was financed through grants, credits, and other forms of assistance. At first, from 1953 to 1955, aid went mainly to North Korea and North Vietnam and some other Communist states; but from the mid-1950s large amounts, mainly grants and long-term, interest-free loans, were promised to politically uncommitted developing countries. The principal efforts were made in Asia, especially to Indonesia, Burma, Pakistan, and Ceylon, but large loans were also granted in Africa (Ghana, Algeria, Tanzania) and in the Middle East (Egypt). However, after Mao Zedong's death in 1976, these efforts were scaled back. After which, trade with developing countries became negligible, though during that time, Hong Kong and Taiwan both began to emerge as major trading partners.

Since economic reforms began in the late 1970s, China sought to decentralize its foreign trade system to integrate itself into the international trading system. On November 1991, China joined the Asia-Pacific Economic Cooperation (APEC) group, which promotes free trade and cooperation the in economic, trade, investment, and technology spheres. China served as APEC chair in 2001, and Shanghai hosted the annual APEC leaders meeting in October of that year.

China's global trade totaled \$324 billion in 1997 and \$151 billion in the first half of 1998; the trade surplus stood at \$40.0 billion. China's primary trading partners were Japan, Taiwan, the U.S., South Korea, Hong Kong, Germany, Singapore, Russia, and the Netherlands. China had a trade surplus with the U.S. of \$49.7 billion in 1997 and \$54.6 billion in 1998. Major imports were power generating equipment, aircraft and parts, computers and industrial machinery, raw materials, and chemical and agricultural products.

In 1998, China was in its 12th year of negotiations for accession to the World Trade Organization (WTO) — formerly the General Agreement on Tariffs and Trade (GATT), and had significantly reduced import tariffs. Previously in 1996, China had already introduced cuts to more than 4,000 tariff lines, reducing average tariffs from 35% to 23%; further tariff cuts that took effect October 1, 1997 decreased average tariffs to 17%. To gain WTO entry, all prospective WTO members were required to comply with certain fundamental trading disciplines and offer substantially expanded market access to other members of the organization. Many major trading entities — among them the United States, the European Union, and Japan — shared concerns with respect to China's accession. These concerns included obtaining satisfactory market access offers for both goods and services, full trading rights for all potential Chinese consumers and end-users, nondiscrimination between foreign and local commercial operations in China, the reduction of monopolistic state trading practices,

Statistics

Exports: \$1216 billion (2007)

Exports - commodities: machinery and equipment, textiles and clothing, footwear, toys, mineral fuels, plastics, optical and medical equipment, iron and steel

Exports - partners: US 21.0%, EU 18.1%, Hong Kong 17.0%, Japan 12.4%, ASEAN 7.2%, South Korea 4.7% (2004)

Imports: \$953.9 billion (2007)

Imports - commodities: machinery and equipment, oil and mineral fuels, plastics, optical and medical equipment, organic chemicals, iron and steel

Imports - partners: Japan 16.8%, EU 12.4%, ASEAN 11.2%, South Korea 11.1%, US 7.9%, Russia 2.2% (2004)

and the elimination of arbitrary or non-scientific technical standards. China and other WTO members worked to achieve a commercially viable accession protocol.

In 1999, Premier Zhu Rongji signed a bilateral U.S.-China Agricultural Cooperation Agreement, which lifted longstanding Chinese prohibitions on imports of citrus, grain, beef, and poultry. In November 1999, the United States and China reached a historic bilateral market-access agreement to pave the way for China's accession to the WTO. As part of the far-reaching trade liberalization agreement, China agreed to lower tariffs and abolish market impediments after it joins the world trading body. Chinese and foreign businessmen, for example, would gain the right to import and export on their own - and to sell their products without going through a government middleman. After reaching a bilateral WTO agreement with the EU and other trading partners in summer 2000, China worked on a multilateral WTO accession package. China concluded multilateral negotiations on its accession to the WTO in September 2001. The completion of its accession protocol and Working Party Report paved the way for its entry into the WTO on December 11, 2001, after 16 years of negotiations, the longest in GATT history.

According to IMF statistics, China's global trade totaled \$353 billion in 1999; the trade surplus stood at \$36 billion. China's global trade totaled \$454 billion in 2000; the trade surplus stood at \$20 billion. China's primary trading partners included Japan, the EU, the U.S., South Korea, Hong Kong, and Taiwan. According to U.S. statistics, China had a trade surplus with the U.S. of \$68.7 billion in 1999. China had a trade surplus with the U.S. of \$83 billion in 2000. (Note: U.S. figures may overestimate Chinese exports, and its surplus, by failing to account for the fact that China's assembly industries first import many almost-finished products.)



China's global trade exceeded \$1.758 trillion at the end of 2006. It first broke the 1 trillion mark (\$1.15 trillion) in 2004, more than doubling from 2001. At the end of 2004, China became the world's third largest trading nation behind the United States and Germany. The trade surplus however was stable at \$30 billion (more than 40 billion in 1998, less than 30 billion in 2003). China's primary trading partners include Japan, the U.S., South Korea, Germany, Singapore, Malaysia, Russia, and the Netherlands. The vast majority of China's imports consists of industrial supplies and capital goods, notably machinery and high-technology equipment, the majority of which comes from the developed countries, primarily Japan and the United States. Regionally, almost half of China's imports come from East and Southeast Asia, and about one-fourth of China's exports go to the same destinations. About 80 percent of China's exports consist of manufactured goods, most of which are textiles and electronic equipment, with agricultural products and chemicals constituting the remainder. Out of the five busiest ports in the world, three are in China.

The U.S. is one of China's primary suppliers of semiconductors and electronic components, power-generating equipment, aircraft and parts, computers and industrial machinery, raw materials, waste and scrap, and chemical and agricultural products. However, U.S. exporters continue to have concerns about fair market access due to China's restrictive trade policies and U.S. export restrictions. Intellectual property theft makes many foreign companies wary of doing business in mainland China. Some foreign politicians and manufacturers also say the value of the yuan is artificially low and gives export from mainland China an unfair advantage. These and other issues are behind the recent push for greater protectionism by some in the US Congress, including a 27.5% consumer tax on imports. According to U.S. statistics, China had a trade surplus with the U.S. of \$170 billion in 2004, more than doubling from 1999. Wal-Mart, the United

States' largest retailer, is China's 7th largest export partner, just ahead of the United Kingdom.

The U.S. trade deficit with China reached \$232.5 billion in 2006, as imports grew 18%. China's share of total U.S. imports has grown from 7% to 15% since 1996. At the same time, the share of many other Asian countries' imports to the United States fell, from 39% in 1996 to 21.1% in 2005. The share of overall Asian imports (including China) to the United States actually declined from 38.8% in 1996 to 35.7% in 2005. The U.S. global trade deficit with the Asia-Pacific region as a whole also has fallen from 75% in 1995 to 49% in 2005.

Trade volume between China and Russia reached \$29.1 billion in 2005, an increase of 37.1% compared with 2004. A spokesman for the Ministry of Commerce, Van Jingsun, said that the volume of trade between China and Russia could exceed 40 billion dollars in 2007. China's export of machinery and electronic goods to Russia grew 70%, which is 24% of China's total export to Russia in the first 11 months of 2005. During the same time, China's export of high-tech products to Russia increased by 58%, and that is 7% of China's total exports to Russia. Also in this time period border trade between the two countries reached \$5.13 billion, growing 35% and accounting for nearly 20% of the total trade. Most of China's exports to Russia remain apparel and footwear. Russia is China's eighth largest trade partner and China is now Russia's fourth largest trade partner, and China now has over 750 investment projects in Russia, involving \$1.05 billion. China's contracted investment in Russia totaled \$368 million during January-September of 2005, twice that in 2004.

Chinese imports from Russia are mainly those of energy sources, such as crude oil, which is mostly transported by rail, and electricity exports from neighboring Siberian and Far Eastern regions. In the near future, exports of both of these commodities are set to increase, as Russia is building the Eastern Siberia-Pacific Ocean oil pipeline with a branch to Chinese border, and Russian power grid monopoly UES is building some of its hydropower stations with a view of future exports to China.

Export growth have continued to be a major component supporting China's rapid economic growth. To increase exports, China pursued policies such as fostering the rapid development of foreign-invested factories, which assembled imported components into consumer goods for export and liberalizing trading rights. In its 11th Five-Year Program, adopted in 2005, China placed greater emphasis on developing a consumer demand-driven economy to sustain economic growth and address imbalances.

The China Council for the Promotion of International Trade (CCPIT) promotes China's international economic and commercial interests. This is accomplished by developing business cooperation and exchanges with foreign countries. It also produces economic data, creates diplomatic ties and is active with trade arbitration issues. Hong Kong remains prominent in domestic trade, notably in its reliance on the mainland for agricultural products.

Foreign investment

China's investment climate has changed dramatically with more than two decades of reform. In the early 1980s, China restricted foreign investments to export-oriented operations and required foreign investors to form joint-venture partnerships with Chinese firms. The Encouraged Industry Catalogue sets out the degree



Chinese cars at a dealer's lot in Nizhny Novgorod, the traditional capital of the Russian automotive industry.

of foreign involvement allowed in various industry sectors. Foreign investment slowed in late 1989 in the aftermath of Tiananmen Square protests. In response, the government introduced legislation and regulations designed to encourage foreigners to invest in high-priority sectors and regions.

Since the early 1990s, the government has allowed foreign investors to manufacture and sell a wide range of goods on the domestic market, eliminated time restrictions on the establishment of joint ventures, provided some assurances against nationalization, allowed foreign partners to become chairs of joint venture boards, and authorized the establishment of wholly foreign-owned enterprises, now the preferred form of FDI. In 1991, China granted more preferential tax treatment for Wholly Foreign Owned Enterprises and contractual ventures and for foreign companies, which invested in selected economic zones or in projects encouraged by the state, such as energy, communications and transportation.

China also authorized some foreign banks to open branches in Shanghai and allowed foreign investors to purchase special "B" shares of stock in selected companies listed on the Shanghai and Shenzhen Securities Exchanges. These "B" shares sold to foreigners carried no ownership rights in a company. In 1997, China approved 21,046 foreign investment projects and received over \$45 billion in foreign direct investment. China revised significantly its laws on Wholly Foreign-Owned Enterprises and China Foreign Equity Joint Ventures in 2000 and 2001, easing export performance and domestic content requirements.

Foreign investment remains a strong element in China's rapid expansion in world trade and has been an important factor in the growth of urban jobs. In 1998, foreign-invested enterprises produced about 40% of China's exports, and foreign exchange reserves totalled about \$145 billion. Foreign-invested enterprises today produce about half of China's exports (note that the majority of China's foreign investment come from Hong Kong, Macau and Taiwan), and China continues to attract large investment inflows. However, the Chinese government's emphasis on guiding FDI into manufacturing has led to market saturation in some industries, while leaving China's services sectors underdeveloped. From 1993-2001, China was the world's second-largest recipient of foreign direct investment after the United States. China received \$39 billion FDI in 1999 and \$41 billion FDI in 2000. China is now one of the leading FDI recipients in the world, receiving almost \$80 billion in 2005 according to World Bank statistics. In 2006, China received \$69.47 billion in foreign direct investment.

Foreign exchange reserves totaled \$155 billion in 1999 and \$165 billion in 2000. Foreign exchange reserves exceeded \$800 billion in 2005, more than doubling from 2003. Foreign exchange reserves were \$819 billion at the end of 2005, \$1.066 trillion at the end of 2006, and have now surpassed those of Japan, making China's foreign exchange reserves the largest in the world.

As part of its WTO accession, China undertook to eliminate certain trade-related investment measures and to open up specified sectors that had previously been closed to foreign investment. New laws, regulations, and administrative measures to implement these commitments are being issued. Major remaining barriers to foreign investment include opaque and inconsistently enforced laws and regulations and the lack of a rules-based legal infrastructure. Warner Bros., for instance, withdrew its cinema business in China as a result of a regulation that requires Chinese investors to own at least a 51 percent stake or play a leading role in a foreign joint venture.

Demographics

Since the 1950s medical care, public hygiene and sanitation improved considerably, and epidemics were controlled. Consecutive generations continuously experienced better health. The population growth rate surged as the mortality rate dropped more rapidly than the birth rate. China's massive population has

always been a major difficulty for the government as it has struggled to provide for it. In the 1950s, food supply was inadequate and the standard of living was generally low. This spurred the authorities to initiate a major birth control program. The Great Leap Forward industrial plan in 1958-60 caused a huge famine which caused the death rate to surpass the birth rate and by 1960, the overall population was declining. A second population control drive began in 1962 with major efforts focused on promoting late marriages and the use of contraceptives. By 1963 the country was in the beginning of recovery from the famine and the birth rate soared to its highest since 1949 with an annual population growth rate of 3%. In 1966, the Cultural Revolution suspended this second family planning program, but resumed four years later with the third attempt by making later marriage and family size limitation an obligation. Since 1970, the efforts have been much more effective. The third family planning program continued until 1979 when the one child per family policy was implemented. By the early 1980s, China's population reached around 1 billion and by the early 2000s, surpassed 1.3 billion. In the 1980s, the average overall population growth was around 1.5%. In the 1990s, this fell to about 1%. Today it is about 0.6%. China's population growth rate is now among the lowest for a developing country, although, because its population is so huge, annual net population growth is still considerable. One demographic consequence of the one-child policy is that China is now one of the most rapidly ageing countries in the world.

From 100 million to 150 million surplus rural workers are adrift between the villages and the cities, many subsisting through part-time, low-paying jobs.

According to the latest Forbes China Rich List (2007), China had 66 billionaires, the second largest number after the United States, which had 415. In the 2006 Forbes Rich List it stated that there were 15 Chinese billionaires. In the latest 2007 Hurun Report, it lists 106 billionaires in China.

Transportation

Development of the country's transportation infrastructure is given a high priority because it is so strategically tied to the national economy and national defense. Regardless, the transportation infrastructure is still not fully developed in many aspects and areas, and it constitutes a major hindrance on economic growth and the efficient logistical movement of goods and people. China's transportation policy, influenced by political, military, and economic concerns, have undergone major changes since 1949.

Immediately after the People's Republic was founded, the primary goal was to repair existing transportation infrastructure in order to meet military transport and logistics needs as well as to strengthen territorial integrity. During most of the 1950s, new road and rail links were built, while at the same time old ones were improved. During the 1960s much of the improvement of regional transportation became the responsibility of the local governments, and many small railways were constructed. Emphasis was also placed on developing transportation in remote rural, mountainous, and forested areas, in order to integrate poorer regions of the country and to help promote economies of scale in the agricultural sector.

Before the reform era began in the late 1970s, China's transportation links were mostly concentrated in the coastal areas and access to the inner regions was generally poor. This situation has been improved considerably since then, as railways and highways have been built in the remote and frontier regions of the northwest and southwest. At the same time, the development of international transportation was also pursued, and the scope of ocean shipping was broadened considerably.

Freight haulage is mainly provided by rail transport. The rail sector is monopolized by China Railways which is controlled by the Ministry of Railways and there

is wide variation in services provided. In late 2007 China became one of the few countries in the world to launch its own indigenously developed high-speed train. As rail capacity is struggling to meet demand for the transport of goods and raw materials such as coal, air routes, roads and waterways are rapidly being developed to provide an increasing proportion of China's overall transportation needs.

Communications

China possesses a diversified communications system that links all parts of the country by Internet, telephone, telegraph, radio, and television. None of the telecommunications forms are as prevalent or as advanced as those in modern Western countries, but the system includes some of the most sophisticated technology in the world and constitutes a foundation for further development of a modern network.

China's number of Internet users or netizens topped 137 million by the end of 2006, an increase of 23.4% from a year before and 162 million by June 2007, making China the second largest Internet user after the United States, according to China's Ministry of Information Industry (MII). China's mobile phone penetration rate is 34% in 2007. In 2006, mobile phone users sent 429 billion text messages, or on average 967 text messages per user. For 2006, the number of fixed-lines grew by 79%, mainly in the rural areas.

Science and technology

Science and technology are a concern of China's leadership and many of China's leaders have come from technical backgrounds with a high regard for science. Deng Xiaoping called it "the first productive force." In recent times, with Hu Jintao and Wen Jiabao and their predecessors Jiang Zemin and Zhu Rongji all being trained engineers, China's leaders have been described as technocrats.

Since the early 1980s scientific and technological modernization has been given an especially high priority. Plans were made to rebuild the educational structure, continue sending students abroad, negotiate technological purchases and transfer arrangements with the U.S. and others, and develop ways to disseminate scientific and technological information. Areas of most critical interest have included microelectronics, telecommunications, computers, automated manufacturing, and energy. China also has had a space program since the 1960s and, by the late 1990s, had successfully launched more than 25 satellites.

On the other hand, distortions in the economy and society created by party rule have severely hurt Chinese science, according to some Chinese science policy experts. The Chinese Academy of Sciences, modeled on the Soviet system, puts much of China's greatest scientific talent in a large, under-funded apparatus that remains largely isolated from industry, although the reforms of the past decade have begun to address this problem.

Chinese science strategists have seen China's greatest opportunities in newly emerging fields such as biotechnology and computers where there is still a chance for China to become a significant player. Most Chinese students who went abroad have not returned, but they have built a dense network of global contacts that have greatly facilitated international scientific cooperation. The United States is often held up as the standard of scientific modernity in China. Indeed, photos of the Space Shuttle often appear in Chinese advertisements as a symbol of advanced technology. China's growing space program, which has put a man in space and successfully completed their second manned orbit in October 2005, is a focus of national pride.

At the end of 1996, China had 5,434 state-owned independent research and development institutions at and above the county level. There were another 3,400 research institutions affiliated with universities, 13,744 affiliated with medium and large industrial enterprises, and 726 affiliated with medium and large construction enterprises. A total of 2.8 million people were engaged in scientific and technological activities in these institutions.

The U.S.-China Science and Technology Agreement remains the framework for bilateral cooperation between the two countries in this field. It was originally signed in 1979. A five-year agreement to extend and amend the accord, including provisions for the protection of intellectual property rights, was signed in May 1991, and the Agreement was again extended for five years in April 1996. Five-year agreements to extend the accord were signed in April 2001 and April 2006. The Agreement is among the longest-standing U.S.-China accords, and includes over eleven U.S. Federal agencies and numerous branches that participate in cooperative exchanges under the S&T Agreement and its nearly 60 protocols, memoranda of understanding, agreements and annexes. The Agreement covers cooperation in areas such as marine conservation, high-energy physics, renewable energy, and health. Biennial Joint Commission Meetings on Science and Technology bring together policymakers from both sides to coordinate joint science and technology cooperation. Executive Secretaries meetings are held biennially to implement specific cooperation programs.

Japan and the European Union also have high profile science and technology cooperative relationships with China.

Environment and public health

One of the serious negative consequences of China's rapid industrial development since the 1980s has been increased pollution and degradation of natural resources. Problems such as soil erosion, desertification and the steady fall of the water table, especially in the north, have posed a threat to the sustainable development of the country. Although China has passed environmental legislation and has participated in some international anti-pollution conventions, pollution will be a serious problem in China for years to come.

A 1998 WHO report on air quality in 272 cities worldwide concluded that seven of the world's 10 most polluted cities were in China. According to China's own evaluation, two-thirds of the 338 cities for which air-quality data are available are considered polluted - two-thirds of them moderately or severely so. Respiratory and heart diseases related to air pollution are the leading causes of death in China.

Almost all of the nation's rivers are considered polluted to some degree, and half of the population lacks access to clean water. Ninety percent of urban water bodies are severely polluted. Water scarcity also is an issue; for example, severe water scarcity in northern China is a serious threat to sustained economic growth and has forced the government to plan a large-scale diversion of water from the Yangtze River to northern cities, including Beijing and Tianjin. Acid rain falls on 30% of the country. Various studies estimate pollution costs the Chinese economy about 7%-10% of GDP each year. A 2005 report by the World Bank states that more than 300 million people in rural China have no access to safe water and nearly 800 million have seen no improvement in sanitation and hygiene in recent years.

China's leaders have increasingly paid attention to the country's severe environmental problems. The head of National Environmental Protection Agency (NEPA) proclaimed in 1991 that environmental protection was one of China's basic national policies, at the same time cautioning that environmental protection must be coordinated with economic development. According to NEPA, \$3.2 billion was spent on pollution prevention and environmental rehabilitation from

1981-85, \$8.8 billion from 1986-1990, and about \$15 billion for the eighth five-year plan (1991-95).

China has sought to contain its increasing industrial pollution largely through administrative procedures and efforts to increase public awareness. The heavily polluted Pearl River delta was one of the first major industrialized areas targeted for clean up. Officials hoped that new sewage treatment plants for cities in the delta area would enable the river to support an edible fish population by the year 2000. A nascent environmental protection industry has also emerged. However, in some areas of China, pollution has long been considered as one of the costs associated with economic development.

The question of environmental impacts associated with the Three Gorges Dam project has generated controversy among environmentalists inside and outside China. Critics claim that erosion and silting of the Yangtze River threaten several endangered species, while officials say the dam will help prevent devastating floods and generate clean hydroelectric power that will enable the region to lower its dependence on coal, thus lessening air pollution.

In March 1998, NEPA was officially upgraded to a ministry-level agency and renamed as the State Environmental Protection Administration (SEPA), reflecting the growing importance the Chinese government placed on environmental protection. The Chinese government recognizes the environmental situation in China is grim and that increasing water and air pollution, as well as deforestation and desertification, will threaten the base of China's economic development. In 1999, China invested more than 1% of GDP in environmental protection.

In recent years, China has strengthened its environmental legislation and made some progress in stemming environmental deterioration. During the 10th Five-Year Plan (2001-2005), China planned to reduce total emissions by 10%. Beijing in particular has invested heavily in pollution control as part of its preparation of the 2008 Olympic Games. In 2005, China joined the Asia Pacific Partnership on Clean Development, which brings industries and governments together to implement strategies that reduce pollution and address climate change. Some cities have seen improvement in air quality in recent years.

At the beginning of 2007 SEPA announced 82 projects, with a total investment value of over 112 billion yuan, had been found in serious breach of the environmental impact assessment law and regulations on the integration of health and safety measures into project design.

China is an active participant in climate change talks and other multilateral environmental negotiations in organization such as the UN Environment Program (UNEP). While China has taken environmental challenges seriously, it has pushed for the developed world to help developing countries to a far greater extent. It is a signatory to the Basel Convention governing the transport and disposal of hazardous waste and the Montreal Protocol for the Protection of the Ozone Layer, the Kyoto Protocol, as well as the Convention on International Trade in Endangered Species and other major environmental agreements.

China is a member of the Asia Pacific Partnership on Clean Development and Climate (APP). The APP is a public-private partnership of six nations (Australia, China, India, Japan, the Republic of Korea, and the United States) committed to explore new mechanisms to meet national pollution reduction, energy security and climate change goals in ways that reduce poverty and promote economic development. APP members have undertaken cooperative activities involving deployment of clean technology in partner countries in eight areas: cleaner fossil energy, renewable energy and distributed generation, power generation and transmission, steel, aluminium, cement, coal mining, and buildings and appliances.

The United States and China have been engaged in an active program of bilateral environmental cooperation since the mid-1990s, with an emphasis on clean energy technology and the design of effective environmental policy. The U.S.-China Forum on Environment and Development, co-chaired by the U.S. Vice

President and the Premier of the People's Republic of China, has been the principal vehicle of an active program of bilateral environmental cooperation since its inception in 1997. Despite positive reviews of the Forum's achievements from both sides, China has often compared the U.S. program, which lacks a foreign assistance component, with those of Japan and several EU countries that include generous levels of aid.

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Economy of England

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The **Economy of England** is the largest economy of the four constituent countries of the United Kingdom.

England is a most highly industrialised country. It is an important producer of textiles and chemical products. Although automobiles, locomotives, and aircraft are among England's other important industrial products, the bulk of the country's income comes from the City (see next paragraph).

Since the 1990s the financial services sector has played an increasingly greater role in the English economy and the City of London is the world's largest financial centre. Banks, insurance companies, commodity and futures exchanges are heavily concentrated in the City.

The service sector of the economy as a whole is now the largest in England, with manufacturing and primary industries in decline. The only major secondary industry that is growing is the construction industry, fueled by economic growth provided mainly by the growing services, administrative and financial sector.

The British pound sterling is the official currency of England and the central bank of the United Kingdom, the Bank of England, is located in London.

In medieval times (c. 11th Century-15th Century) the wool trade was the major industry of England and the country exported wool to Europe. Many market towns and ports grew up on the industry. Poor infrastructure hampered the development of large scale industry. This changed when the canals and railways began to be built, in the late 18th Century and early 19th Century.

England became the world's first industrialized nation, with the industrial revolution taking place in the late 18th Century. This was also the age of British overseas expansion, where England relied upon colonies (such as America, Canada, or Australia) to bring in resources such as cotton and tobacco. English factories then processed the goods and sold them on in both the quickly growing domestic market or abroad. Cities grew and large industrial centres were established, especially in the Midlands and North England.

Heavy industries, such as coal mining, steel production and ship building, declined in England during the second half of the 20th Century and were replaced by service industries and hi-tech industries, such as the computer and pharmaceutical industries.

Today England is one of Europe's, as well as the world's, wealthiest nations and is the wealthiest of the four nations that make up the UK (GDP per capita).

Economic sectors

Agriculture and Fishing

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Agriculture is intensive, highly mechanized, and efficient by European standards, producing about 60% of food needs with only 1% of the labor force. It contributes around 2% of GDP. Around two thirds of production is devoted to livestock, one third to arable crops. Agriculture is heavily subsidized by the European Union's Common Agricultural Policy and it is not known how large a sector it would be if the market was unregulated. The GDP from the farming sector is argued by some to be a small return on the subsidies given but is argued by others that subsidy boosts security. And therefore is justified in the same way defence spending is.

The main crops that are grown are wheat, barley, oats, potatoes, sugar beets, fruits and they use the euro vegetables. The livestock that is raised is cattle and sheep. In the drier east, farmers raise wheat, barley, oats, potatoes, and sugar beets. Apples are grown in the west. Cornwall and the nearby Isles of Scilly, that have the mildest climate and longest growing season in England, raise winter vegetables, fruits, and flowers for the London Market.

England is one of the world's leading fishing nations. Its fleets bring home fish of every kind, ranging from sole to herring. Kingston upon Hull, Grimsby, Fleetwood, Great Yarmouth, and Lowestoft are among the coastal towns that have large fishing industries.

Investing and banking

England's capital is London. The *City of London* is London's major financial district, and one of the world's leading financial centres. The city is where the London Stock Exchange, as well as many other exchanges, are based.

Service industries, particularly banking, insurance, and business services, account by far for the largest proportion of GDP and employ around 70% of the working population.

Manufacturing

Manufacturing continues to decline in importance. In the 1960s and 70s manufacturing was a significant part of England's economic output. However a lot of the heavy manufacturing industry was government run and had failed to respond to world markets. State industries were sold off and over the 20th century many closed as they were unable to compete; a situation largely reflected in other Western industrialized countries. However, manufacturing still accounts for some 26% of the UK's GDP. England remains a key player in the aerospace, defense, pharmaceutical and chemical industries and British companies world wide continue to have a role in the sector through foreign investment. Closure of English factories and movement of manufacturing to Eastern Europe and the " Far East" in search of lower costs (especially through lower wages and less strict employment laws) continues to benefit share-holders, consumers and the UK economy as a whole, although areas that were formerly dependent on manufacturing such as the Midlands and North East have experienced severe economic decline.

Tourism

Tourism is the 6th largest industry in the UK, contributing 76 billion pounds to the economy. It employs 1,800,000 full-time equivalent people — 6.1% of the working population (2002 figures) . The largest centre for tourism is London, which attracts millions of international tourists every year.

Currency

The currency of England is the Pound Sterling, or *British pound*. The central bank of the United Kingdom, where interest rates are set and monetary policy is carried out, is the Bank of England in London.

There is considerable debate as to whether the UK should join the Euro currency, which would replace the Pound. The relatively good economic performance has complicated the Blair government's efforts to make a case for Britain to leave the Pound Sterling and join the Euro. The British Prime Minister has pledged to hold a public referendum if membership meets Chancellor of the Exchequer Gordon Brown's " five economic tests". The tests are:

1. Are business cycles and economic structures compatible with European interest rates on a permanent basis?
2. If problems emerge, is there sufficient flexibility to deal with them?
3. What impact would entry into the Euro have on the UK's financial services industry?
4. Would joining the Euro create better conditions for firms making long-term decisions to invest in Britain?
5. Would joining the Euro promote higher growth, stability and a lasting increase in jobs?

When assessing the tests, Gordon Brown concluded that while the decision was close, the United Kingdom should not yet join the Euro. In particular, he cited fluctuations in house prices as a barrier to immediate entry. The tests will be reassessed in the future. Public opinion polls show that a majority of Britons are opposed to joining the single currency at this time. The same polls point towards slightly stronger opposition to the Euro in England than in the other UK nations.

Regional variation

The strength of the English economy varies from region to region. GDP, and GDP per capita is highest in London. The following table shows the GDP (2004) per capita of England as a whole and each of the nine regions.

Rank	Place	GDP per capita in Euros
	England	26 904
1.	London	44 401
2.	South East	31 300
3.	East of England	27 778
4.	South West	27 348
5.	East Midlands	26 683
6.	West Midlands	25 931
7.	North West	25 396

8. Yorkshire and the Humber 25 300
9. North East 22 886

Two of the 10 economically strongest areas in the European Union are in England. Inner London is number 1 with a €71 338 GDP per capita (303% above EU average); Berkshire, Buckinghamshire & Oxfordshire is number 7 with a €40 937 GDP per capita (174% above EU average).

Although being in South West England, which is the 4th strongest region in England, Cornwall and the Isles of Scilly (combined into a NUTS:3 region for statistical purposes) is the weakest area in England, with a GDP per capita of €18 645 per capita, or 79% of the EU average of €21 503.

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Economy of India

2008/9 Schools Wikipedia Selection. Related subjects: Economics

The **economy of India**, when measured in USD exchange-rate terms, is the twelfth largest in the world, with a GDP of US \$1.25 trillion (2008). It is the third largest in terms of purchasing power parity. India is the second fastest growing major economy in the world, with a GDP growth rate of 9.4% for the fiscal year 2006–2007. However, India's huge population results in a per capita income of \$4,542 at PPP and \$1,089 at nominal (revised 2007 estimate). The World Bank classifies India as a low-income economy.

India's economy is diverse, encompassing agriculture, handicrafts, textile, manufacturing, and a multitude of services. Although two-thirds of the Indian workforce still earn their livelihood directly or indirectly through agriculture, services are a growing sector and play an increasingly important role of India's economy. The advent of the digital age, and the large number of young and educated populace fluent in English, is gradually transforming India as an important 'back office' destination for global outsourcing of customer services and technical support. India is a major exporter of highly-skilled workers in software and financial services, and software engineering. Other sectors like manufacturing, pharmaceuticals, biotechnology, nanotechnology, telecommunication, shipbuilding, aviation and tourism are showing strong potentials with higher growth rates.

India followed a socialist-inspired approach for most of its independent history, with strict government control over private sector participation, foreign trade, and foreign direct investment. However, since the early 1990s, India has gradually opened up its markets through economic reforms by reducing government controls on foreign trade and investment. The privatisation of publicly owned industries and the opening up of certain sectors to private and foreign interests has proceeded slowly amid political debate.

India faces a fastly growing population and the challenge of reducing economic and social inequality. Poverty remains a serious problem, although it has declined significantly since independence. Official surveys estimated that in the year 2004-2005, 27% of Indians were poor.

History

Economy of India



Currency	1 Indian Rupee (INR) (Rs) = 100 Paise
Fiscal year	April 1– March 31
Trade organisations	WTO, SAFTA

Statistics

GDP (PPP)	\$5.21 trillion (PPP) (2008 est.) (3rd)
GDP growth	9.6% (2006/07)
GDP per capita	\$1,089 (nominal); \$4,543 (PPP)
GDP by sector	agriculture: 19.9%, industry: 19.3%, services: 60.7% (2006 est.)
Inflation (CPI)	3.5% (2008 est.)
Population below poverty line	25% (2002 est.)

India's economic history can be broadly divided into three eras, beginning with the pre-colonial period lasting up to the 17th century. The advent of British colonisation started the colonial period in the 17th century, which ended with independence in 1947. The third period stretches from independence in 1947 until the present.

Pre-colonial

The citizens of the Indus Valley civilisation, a permanent and predominantly urban settlement that flourished between 2800 BC and 1800 BC, practised agriculture, domesticated animals, used uniform weights and measures, made tools and weapons, and traded with other cities. Evidence of well planned streets, a drainage system and water supply reveals their knowledge of urban planning, which included the world's first urban sanitation systems and the existence of a form of municipal government.

Labour force	509.3 million (2006 est.)
Labour force by occupation	agriculture: 60%, industry: 12%, services: 28% (2003)
Unemployment	7.8% (2006 est.)
Main industries	textiles, chemicals, food processing, steel, transportation equipment, cement, mining, petroleum, machinery, software, services
External	
Exports	\$125 billion (Financial Year 2006-2007)
Export goods	textile goods, gems and jewelry, engineering goods, chemicals, leather manufactures, services
Main export partners	US 18%, the People's Republic of China 8.9%, UAE 8.4%, UK 4.7%, Hong Kong 4.2% (2005)
Imports	\$187.9 billion f.o.b. (2006 est.)
Import goods	crude oil, machinery, gems, fertilizer, chemicals
Main import partners	the People's Republic of China 7.2%, US 6.4%, Belgium 5.1%, Singapore 4.7%, Australia 4.2%, Germany 4.2%, UK 4.1% (2005)
Public finances	
Public debt	\$132.1 billion (2006 est.)
Revenues	\$109.4 billion (2006 est.)

The 1872 census revealed that 99.3% of the population of the region constituting present-day India resided in villages, whose economies were largely isolated and self-sustaining, with agriculture the predominant occupation. This satisfied the food requirements of the village and provided raw materials for hand-based industries, such as textiles, food processing and crafts. Although many kingdoms and rulers issued coins, barter was prevalent. Villages paid a portion of their agricultural produce as revenue to the rulers, while its craftsmen received a part of the crops at harvest time for their services.

Religion, especially Hinduism, and the caste and the joint family systems, played an influential role in shaping economic activities. The caste system functioned much like medieval European guilds, ensuring the division of labour, providing for the training of apprentices and, in some cases, allowing manufacturers to achieve narrow specialization. For instance, in certain regions, producing each variety of cloth was the speciality of a particular sub-caste.

Textiles such as muslin, Calicos, shawls, and agricultural products such as pepper, cinnamon, opium and indigo were exported to Europe, the Middle East and South East Asia in return for gold and silver.

Assessment of India's pre-colonial economy is mostly qualitative, owing to the lack of quantitative information. One estimate puts the revenue of Akbar's Mughal Empire in 1600 at £17.5 million, in contrast with the total revenue of Great Britain in 1800, which totalled £16 million. India, by the time of the arrival of the British, was a largely traditional agrarian economy with a dominant subsistence sector dependent on primitive technology. It existed alongside a competitively developed network of commerce, manufacturing and credit. After the fall of the Mughals, India was administered by Maratha Empire. The maratha empire's budget in 1740s, at its peak, was Rs. 100 million. After the loss at Panipat, the maratha empire disintegrated into confederate states of Gwalior, Baroda, Indore, Jhansi, Nagpur, Pune and Kolhapur. Gwalior state has a budget of Rs. 30M. However, at this time, British East India company entered the Indian political theatre. Until, 1857, when India was firmly under the British crown, the country remained in a state of political instability due to internecine wars and conflicts.

Colonial

Colonial rule brought a major change in the taxation environment from revenue taxes to property taxes resulting in mass impoverishment and destitution of the great majority of farmers. It also created an institutional environment that, on paper, guaranteed property rights among the colonizers, encouraged free trade, and created a single currency with fixed exchange rates, standardized weights and measures, capital markets, a well developed system of railways and telegraphs, a civil service that aimed to be free from political interference, and a common-law, adversarial legal system. India's colonisation by the British coincided with major changes in the world economy—industrialisation, and significant growth in production and trade. However, at the end of colonial rule, India inherited an economy that was one of the poorest in the developing world, with industrial development stalled, agriculture unable to feed a rapidly growing population, one of the world's lowest life expectancies, and low rates of literacy.

Expenses \$143.8 billion; including capital expenditures of \$15 billion (2006 est.)

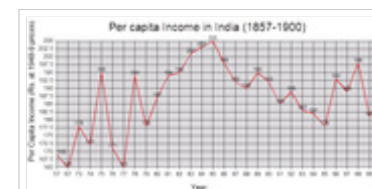
Economic aid *donor*: \$17.3 million (2006)

Main data source: CIA World Factbook

All values, unless otherwise stated, are in US dollars



Silver coin minted during the reign of the Gupta king Kumara Gupta I (AD 414–55)

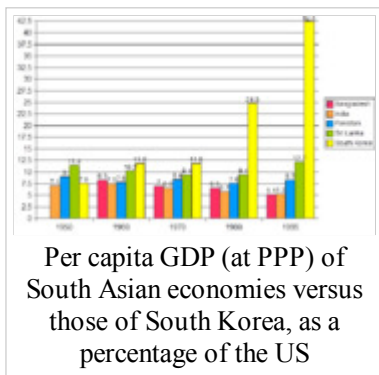


Estimates of the per capita income of India (1857–1900) as per 1948–49 prices.

An estimate by Cambridge University historian Angus Maddison reveals that India's share of the world income fell from 22.6% in 1700, comparable to Europe's share of 23.3%, to a low of 3.8% in 1952. While Indian leaders during the Independence struggle, and left-nationalist economic historians have blamed colonial rule for the dismal state of India's economy in its aftermath, a broader macroeconomic view of India during this period reveals that there were sectors of growth and decline, resulting from changes brought about by colonialism and a world that was moving towards industrialisation and economic integration.

Independence to 1991

Indian economic policy after independence was influenced by the colonial experience (which was seen by Indian leaders as exploitative in nature) and by those leaders' exposure to Fabian socialism. Policy tended towards protectionism, with a strong emphasis on import substitution, industrialisation, state intervention in labour and financial markets, a large public sector, business regulation, and central planning. Jawaharlal Nehru, the first prime minister, along with the statistician Prasanta Chandra Mahalanobis, carried on by Indira Gandhi formulated and oversaw economic policy. They expected favourable outcomes from this strategy, because it involved both public and private sectors and was based on direct and indirect state intervention, rather than the more extreme Soviet-style central command system. The policy of concentrating simultaneously on capital- and technology-intensive heavy industry and subsidising manual, low-skill cottage industries was criticized by economist Milton Friedman, who thought it would waste capital and labour, and retard the development of small manufacturers.

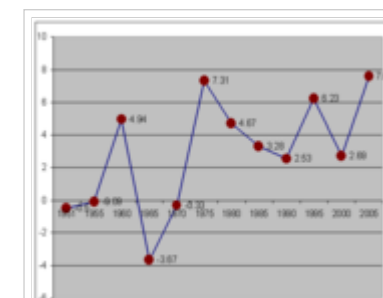


India's low average growth rate from 1947–80 was derisively referred to as the Hindu rate of growth, because of the unfavourable comparison with growth rates in other Asian countries, especially the "East Asian Tigers".

After 1991

In the late 80s, the government led by Rajiv Gandhi eased restrictions on capacity expansion for incumbents, removed price controls and reduced corporate taxes. While this increased the rate of growth, it also led to high fiscal deficits and a worsening current account. The collapse of the Soviet Union, which was India's major trading partner, and the first Gulf War, which caused a spike in oil prices, caused a major balance-of-payments crisis for India, which found itself facing the prospect of defaulting on its loans. In response, Prime Minister Narasimha Rao along with his finance minister Manmohan Singh initiated the economic liberalisation of 1991. The reforms did away with the Licence Raj (investment, industrial and import licensing) and ended many public monopolies, allowing automatic approval of foreign direct investment in many sectors. Since then, the overall direction of liberalisation has remained the same, irrespective of the ruling party, although no party has yet tried to take on powerful lobbies such as the trade unions and farmers, or contentious issues such as reforming labour laws and reducing agricultural subsidies.

Since 1990 India has emerged as one of the wealthiest economies in the developing world; during this period, the economy has grown constantly, but with a few major setbacks. This has been accompanied by increases in life expectancy, literacy rates and food security.



Growth rate of India's real GDP per capita (Constant Prices: Chain series) (1950–2006).
Data Source: Penn World tables.

While the credit rating of India was hit by its nuclear tests in 1998, it has been raised to investment level in 2007 by S&P and Moody's. In 2003, Goldman Sachs predicted that India's GDP in current prices will overtake France and Italy by 2020, Germany, UK and Russia by 2025 and Japan by 2035. By 2035, it was projected to be the third largest economy of the world, behind US and China.

Government intervention

State planning and the mixed economy

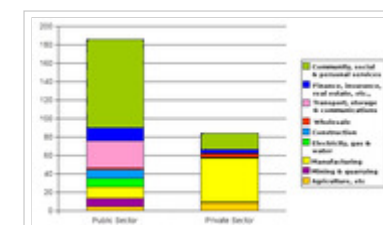
After independence, India opted for a centrally planned economy to try to achieve an effective and equitable allocation of national resources and balanced economic development. The process of formulation and direction of the Five-Year Plans is carried out by the Planning Commission, headed by the Prime Minister of India as its chairperson.

India's mixed economy combines features of both capitalist market economy and the socialist command economy, but has shifted more towards the former over the past decade. The public sector generally covers areas which are deemed too important or not profitable enough to leave to the market, including such services as the railways and postal system.

Since independence, there have been phases of nationalizing such areas as banking and, more recently, of privatization.

Public expenditure

India's public expenditure is classified as development expenditure, comprising central plan expenditure and central assistance and non-development expenditures; these categories can each be divided into capital expenditure and revenue expenditure. Central plan expenditure is allocated to development schemes outlined in the plans of the central government and public sector undertakings; central assistance refers to financial assistance and developmental loans given for plans of the state governments and union territories. Non-development capital expenditure comprises capital defence expenditure, loans to public enterprises, states and union territories and foreign governments, while non-development revenue expenditure comprises revenue defence expenditure, administrative expenditure, subsidies, debt relief to farmers, postal deficit, pensions, social and economic services (education, health, agriculture, science and technology), grants to states and union territories and foreign governments.



The number of people employed in non-agricultural occupations in the public and private sectors. Totals are rounded. Private sector data relates to non-agriculture establishments with 10 or more employees.

India's non-development revenue expenditure has increased nearly fivefold in 2003–04 since 1990–91 and more than tenfold since 1985–1986. Interest payments are the single largest item of expenditure and accounted for more than 40% of the total non development expenditure in the 2003–04 budget. Defence expenditure increased fourfold during the same period and has been increasing due to growing tensions in the region, the expensive dispute with Pakistan over Jammu and Kashmir and an effort to modernise the military. Administrative expenses are compounded by a large salary and pension bill, which rises periodically due to revisions in wages, dearness allowance etc. subsidies on food, fertilizers, education and petroleum and other merit and non-merit subsidies account are not only continuously rising, especially because of rising crude oil and food prices, but are also harder to rein in, because of political compulsions.

Public receipts

India has a three-tier tax structure, wherein the constitution empowers the union government to levy Income tax, tax on capital transactions (wealth tax, inheritance tax), sales tax, service tax, customs and excise duties and the state governments to levy sales tax on intra-state sale of goods, tax on entertainment and professions, excise duties on manufacture of alcohol, stamp duties on transfer of property and collect land revenue (levy on land owned). The local governments are empowered by the state government to levy property tax, Octroi and charge users for public utilities like water supply, sewage etc. More than half of the revenues of the union and state governments come from taxes, of which half come from Indirect taxes. More than a quarter of the union government's tax revenues is shared with the state governments.

The tax reforms, initiated in 1991, have sought to rationalise the tax structure and increase compliance by taking steps in the following directions:

- Reducing the rates of individual and corporate income taxes, excises, customs and making it more progressive
- Reducing exemptions and concessions
- Simplification of laws and procedures
- Introduction of Permanent account number to track monetary transactions
- 21 of the 29 states introduced Value added tax (VAT) on April 1, 2005 to replace the complex and multiple sales tax system

The non-tax revenues of the central government come from fiscal services, interest receipts, public sector dividends, etc., while the non-tax revenues of the States are grants from the central government, interest receipts, dividends and income from general, economic and social services.

Inter-State share in the federal tax pool is decided by the recommendations of the Finance Commission to the President.

General budget

The Finance minister of India presents the annual union budget in the Parliament on the last working day of February. The budget has to be passed by the Lok Sabha before it can come into effect on April 1, the start of India's fiscal year. The Union budget is preceded by an economic survey which outlines the broad direction of the budget and the economic performance of the country for the outgoing financial year. This economic survey involves all the various NGOs,



Headquarters of India's central bank, the Reserve Bank of India, in Mumbai.

women organizations, business people, old people associations etc.

India's union budget for 2005–06, had an estimated outlay of Rs.5,14,344 crores (\$118 billion). Earnings from taxes amount to Rs. 2,73,466 crore (\$63b). India's fiscal deficit amounts to 4.5% or 1,39,231 crore (\$32b). The fiscal deficit is expected to be 3.8% of GDP, by March 2007.

Currency system

Rupee

The **Rupee** is the only legal tender accepted in India. The exchange rate as of October 13, 2007 is about 39.18 to a US dollar, 55.56 to a Euro, and 79.82 to a UK pound. The Indian rupee is accepted as legal tender in the neighboring Nepal and Bhutan, both of which peg their currency to that of the Indian rupee. The rupee is divided into 100 paise. The highest-denomination banknote is the 1,000 rupee note; the lowest-denomination coin in circulation is the 50 paise coin.

Exchange rates

Under the fixed exchange rate system, the value of the rupee was linked to the British pound sterling until 1946, and after independence, 30% of India's foreign trade was determined in pound sterling. In 1975, as per the floating exchange rate system, the value of the rupee was pegged to a basket of currencies and was tightly controlled by the Reserve Bank of India. Since 2005, its value has been appreciating against the US dollar, Euro and British Pound Sterling. Since liberalisation reforms in early 1990s, the rupee is fully convertible on trade and current account.

Labour

The large population puts further pressure on infrastructure and social services. A positive factor has been the large working-age population, which forms 45.33% of the population and is expected to increase substantially, because of the decreasing dependency ratio. The national labour market has been tightly regulated by successive governments ever since the *Workmen's Compensation Act* was passed in 1923.

Physical infrastructure

Since independence, India has allocated nearly half of the total outlay of the five-year plans for infrastructural development. Development of infrastructure was completely in the hands of the public sector and was plagued by corruption, bureaucratic inefficiencies, urban-bias and an inability to scale investment.

India's low spending on power, construction, transportation, telecommunications and real estate, at \$31 billion or 6% of GDP in 2002 had prevented India from sustaining higher growth rates. This had prompted the government to partially open up infrastructure to the private sector allowing foreign investment which has helped in a sustained growth rate of close to 9% for the past six quarters. India holds second position in the world in roadways' construction, more than twice that of China. As of 2005 the electricity production was at 661.6 billion kWh with oil production standing at 785,000 bbl/day. India's prime import partners are : China 8.7%, US 6%, Germany 4.6%, Singapore 4.6%, Australia 4% as of 2006 CIA FactBook As of 15 January 2007, there were 2.10 million broadband lines in India. Low tele-density is the major hurdle for slow pickup in broadband services. Over 76% of the broadband lines were via DSL and the rest via cable modems.

Financial institutions

India inherited several institutions, such as the civil services, Reserve Bank of India, railways, etc., from her British rulers. Mumbai serves as the nation's commercial capital, with the Reserve Bank of India (RBI), Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE) located here. The headquarters of many financial institutions are also located in the city.

The RBI, the country's central bank was established on 1 April 1935. It serves as the nation's monetary authority, regulator and supervisor of the financial system, manager of exchange control and as an issuer of currency. The RBI is governed by a central board, headed by a governor who is appointed by the Central government of India.

The BSE Sensex or the BSE Sensitive Index is a value-weighted index composed of 30 companies with April 1979 as the base year (100). These companies have the largest and most actively traded stocks and are representative of various sectors, on the Exchange. They account for around one-fifth of the market capitalisation of the BSE. The Sensex is generally regarded as the most popular and precise barometer of the Indian stock markets. Incorporated in 1992, the National Stock Exchange is one of the largest and most advanced stock markets in India. The NSE is the world's third largest stock exchange in terms of transactions. There are a total of 23 stock exchanges in India, but the BSE and NSE comprise 83% of the volumes. The Securities and Exchange Board of India (SEBI), established in 1992, regulates the stock markets and other securities markets of the country.

Sectors

Agriculture

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Affordable and environment friendly public transport is seen as a necessity for India's metros. Pictured here, is Mumbai Airport

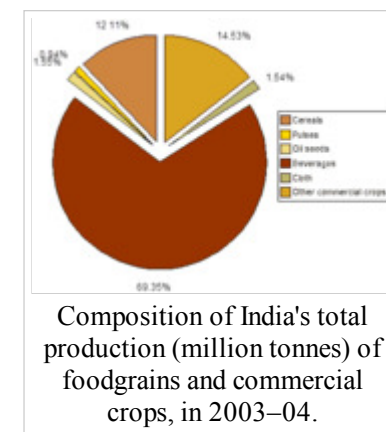


India has set up Special Economic Zones and software parks that offer tax benefits and better infrastructure to set up business. Pictured here is the Infosys headquarters in Bangalore, one of the largest software companies in India.

India ranks second worldwide in farm output. Agriculture and allied sectors like forestry, logging and fishing accounted for 18.6% of the GDP in 2005, employed 60% of the total workforce and despite a steady decline of its share in the GDP, is still the largest economic sector and plays a significant role in the overall socio-economic development of India. Yields per unit area of all crops have grown since 1950, due to the special emphasis placed on agriculture in the five-year plans and steady improvements in irrigation, technology, application of modern agricultural practices and provision of agricultural credit and subsidies since Green revolution in India. However, international comparisons reveal that the average yield in India is generally 30% to 50% of the highest average yield in the world.

The low productivity in India is a result of the following factors:

- Illiteracy, general socio-economic backwardness, slow progress in implementing land reforms and inadequate or inefficient finance and marketing services for farm produce.
- The average size of land holdings is very small (less than 20,000 m²) and is subject to fragmentation, due to land ceiling acts and in some cases, family disputes. Such small holdings are often over-manned, resulting in disguised unemployment and low productivity of labour.
- Adoption of modern agricultural practices and use of technology is inadequate, hampered by ignorance of such practices, high costs and impracticality in the case of small land holdings.
- Irrigation facilities are inadequate, as revealed by the fact that only 53.6% of the land was irrigated in 2000–01, which result in farmers still being dependent on rainfall, specifically the Monsoon season. A good monsoon results in a robust growth for the economy as a whole, while a poor monsoon leads to a sluggish growth. Farm credit is regulated by NABARD, which is the statutory apex agent for rural development in the subcontinent.



Industry

India is fourteenth in the world in factory output. They together account for 27.6% of the GDP and employ 17% of the total workforce. However, about one-third of the industrial labour force is engaged in simple household manufacturing only.

Economic reforms brought foreign competition, led to privatisation of certain public sector industries, opened up sectors hitherto reserved for the public sector and led to an expansion in the production of fast-moving consumer goods.

Post-liberalisation, the Indian private sector, which was usually run by oligopolies of old family firms and required political connections to prosper was faced with foreign competition, including the threat of cheaper Chinese imports. It has since handled the change by squeezing costs, revamping management, focusing on designing new products and relying on low labour costs and technology.

34 Indian companies have been listed in the Forbes Global 2000 ranking for 2007. The 10 leading companies are:

World Rank	Company	Logo	Industry	Revenue (billion \$)	Profits (billion \$)	Assets (billion \$)	Market Value (billion \$)

239	Oil and Natural Gas Corporation		Oil & Gas Operations	15.64	3.46	26.98	38.19
258	Reliance Industries		Oil & Gas Operations	18.05	2.11	21.75	42.62
326	State Bank of India		Banking	13.66	1.24	156.37	12.35
399	Indian Oil Corporation		Oil & Gas Operations	34.22	1.11	22.68	10.92
494	NTPC		Utilities	6.06	1.31	17.25	26.06
536	ICICI Bank		Banking	5.79	0.54	62.13	16.72
800	Steel Authority of India Limited		Materials	6.30	0.91	7.06	10.16
1047	Tata Consultancy Svcs	Image:TCS LOGO.JPG	Software & Services	2.98	0.67	1.93	26.27
1128	Tata Steel		Materials	4.54	0.84	4.61	5.80
1130	Infosys Technologies	Image:Infosys logo sml.gif	Software & Services	2.14	0.55	2.09	26.19

Services

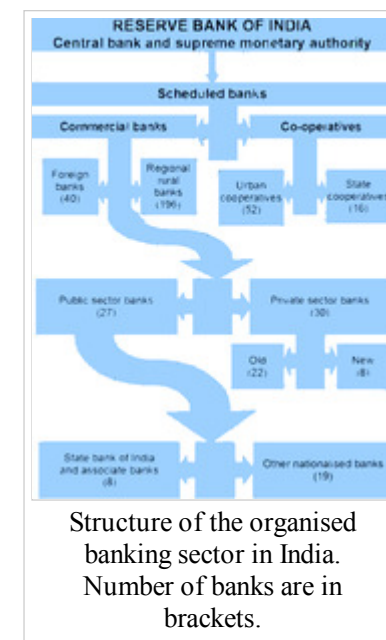
India is fifteenth in services output. It provides employment to 23% of work force, and it is growing fast, growth rate 7.5% in 1991–2000 up from 4.5% in 1951–80. It has the largest share in the GDP, accounting for 53.8% in 2005 up from 15% in 1950. Business services (information technology, information technology enabled services, business process outsourcing) are among the fastest growing sectors contributing to one third of the total output of services in 2000. The growth in the IT sector is attributed to increased specialisation, availability of a large pool of low cost, but highly skilled, educated and fluent English-speaking workers (a legacy of British Colonialism) on the supply side and on the demand side, increased demand from foreign consumers interested in India's service exports or those looking to outsource their operations. India's IT industry, despite contributing significantly to its balance of payments, accounted for only about 1% of the total GDP or 1/50th of the total services.

Banking and finance

The Indian money market is classified into: the organised sector (comprising private, public and foreign owned commercial banks and cooperative banks, together known as *scheduled banks*); and the unorganised sector (comprising individual or family owned indigenous bankers or money lenders and non-banking financial companies (NBFCs)). The unorganised sector and microcredit are still preferred over traditional banks in rural and sub-urban areas, especially for non-productive purposes, like ceremonies and short duration loans.

Prime Minister Indira Gandhi nationalised 14 banks in 1969, followed by six others in 1980, and made it mandatory for banks to provide 40% of their net credit to priority sectors like agriculture, small-scale industry, retail trade, small businesses, etc. to ensure that the banks fulfill their social and developmental goals. Since then, the number of bank branches has increased from 10,120 in 1969 to 98,910 in 2003 and the population covered by a branch decreased from 63,800 to 15,000 during the same period. The total deposits increased 32.6 times between 1971 to 1991 compared to 7 times between 1951 to 1971. Despite an increase of rural branches, from 1,860 or 22% of the total number of branches in 1969 to 32,270 or 48%, only 32,270 out of 5 lakh (500,000) villages are covered by a scheduled bank.

Since liberalisation, the government has approved significant banking reforms. While some of these relate to nationalised banks (like encouraging mergers, reducing government interference and increasing profitability and competitiveness), other reforms have opened up the banking and insurance sectors to private and foreign players.



Socio-economic characteristics

Poverty

Large numbers of India's people live in abject poverty. Wealth distribution in India is improving since the liberalization and with the end of the socialist rule termed as the license raj. While poverty in India has reduced significantly, official figures estimate that 27.5% of Indians still lived below the national poverty line in 2004-2005. A 2007 report by the state-run National Commission for Enterprises in the Unorganised Sector (NCEUS) found that 70% of Indians, or 800 million people, lived on less than 20 rupees per day with most working in "informal labour sector with no job or social security, living in abject poverty."

Since the early 1950s, successive governments have implemented various schemes, under planning, to alleviate poverty, that have met with partial success. All these programmes have relied upon the strategies of the *Food for work* programme and *National Rural Employment Programme* of the 1980s, which attempted to use the unemployed to generate productive assets and build rural infrastructure. In August 2005, the Indian parliament passed the *Rural Employment Guarantee Bill*, the largest programme of this type in terms of cost and coverage, which promises 100 days of minimum wage employment to every rural household in 200 of India's 600 districts. The question of whether economic reforms have reduced poverty or not has fuelled debates without generating any clear cut answers and has also put political pressure on further economic reforms, especially those involving the downsizing of labour and cutting agricultural subsidies.

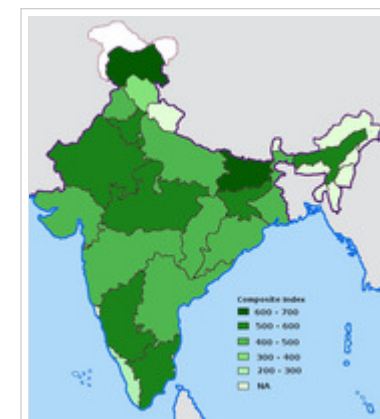
Corruption

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Corruption has been one of the pervasive problems affecting India. It takes the form of bribes, evasion of tax and exchange controls, embezzlement, etc. The economic reforms of 1991 reduced the red tape, bureaucracy and the *Licence Raj* that had strangled private enterprise and was blamed for the corruption and inefficiencies. Yet, a 2005 study by Transparency International (TI) India found that more than half of those surveyed had firsthand experience of paying bribe or peddling influence to get a job done in a public office.

The chief economic consequences of corruption are the loss to the exchequer, an unhealthy climate for investment and an increase in the cost of government-subsidised services. The TI India study estimates the monetary value of petty corruption in 11 basic services provided by the government, like education, healthcare, judiciary, police, etc., to be around Rs.21,068 crores. India still ranks in the bottom quartile of developing nations in terms of the ease of doing business, and compared to China, the average time taken to secure the clearances for a startup or to invoke bankruptcy is much greater.

The Right to Information Act (2005) and equivalent acts in the states, that require government officials to furnish information requested by citizens or face punitive action, computerisation of services and various central and state government acts that established vigilance commissions have considerably reduced corruption or at least have opened up avenues to redress grievances. The 2006 report by Transparency International puts India at 70th place and states that significant improvements were made by India in reducing corruption.



Extent of corruption in Indian states, as measured in a 2005 study by Transparency International India. (Darker regions are more corrupt)

Occupations and unemployment

Agricultural and allied sectors accounted for about 57% of the total workforce in 1999–2000, down from 60% in 1993–94. While agriculture has faced stagnation in growth, services have seen a steady growth. Of the total workforce, 8% is in the organised sector, two-thirds of which are in the public sector. The NSSO survey estimated that in 1999–2000, 106 million, nearly 10% of the population were unemployed and the overall unemployment rate was 7.32%, with rural areas doing marginally better (7.21%) than urban areas (7.65%).

Unemployment in India is characterised by chronic underemployment or disguised unemployment. Government schemes that target eradication of both poverty and unemployment, (Which in recent decades has sent millions of poor and unskilled people into urban areas in search of livelihoods.) attempt to solve the problem, by providing financial assistance for setting up businesses, skill honing, setting up public sector enterprises, reservations in governments, etc. The decreased role of the public sector after liberalisation has further underlined the need for focusing on better education and has also put political pressure on further reforms.

Regional imbalance

One of the critical problems facing India's economy is the sharp and growing regional variations among India's different states and territories in terms of per capita income, poverty, availability of infrastructure and socio-economic development.

The five-year plans have attempted to reduce regional disparities by encouraging industrial development in the interior regions, but industries still tend to concentrate around urban areas and port cities. After liberalization, the more advanced states are better placed to benefit from them, with infrastructure like well developed ports, urbanisation and an educated and skilled workforce which attract manufacturing and service sectors. The union and state governments of backward regions are trying to reduce the disparities by offering tax holidays, cheap land, etc., and focusing more on sectors like tourism, which although being geographically and historically determined, can become a source of growth and is faster to develop than other sectors.

External trade and investment

Global trade relations

Until the liberalisation of 1991, India was largely and intentionally isolated from the world markets, to protect its fledging economy and to achieve self-reliance. Foreign trade was subject to import tariffs, export taxes and quantitative restrictions, while foreign direct investment was restricted by upper-limit equity participation, restrictions on technology transfer, export obligations and government approvals; these approvals were needed for nearly 60% of new FDI in the industrial sector. The restrictions ensured that FDI averaged only around \$200M annually between 1985 and 1991; a large percentage of the capital flows consisted of foreign aid, commercial borrowing and deposits of non-resident Indians.

India's exports were stagnant for the first 15 years after independence, due to the predominance of tea, jute and cotton manufactures, demand for which was generally inelastic. Imports in the same period consisted predominantly of machinery, equipment and raw materials, due to nascent industrialisation.






Since liberalisation, the value of India's international trade has become more broad-based and has risen to Rs. 63,080,109 crores in 2003–04 from Rs. 1,250 crores in 1950–51. India's major trading partners are China, the US, the UAE, the UK, Japan and the EU. The exports during August 2006 were \$10.3 billion up by 41.14% and import were \$13.87 billion with an increase of 32.16% over the previous year .

India is a founding-member of General Agreement on Tariffs and Trade (GATT) since 1947 and its successor, the World Trade Organization. While participating actively in its general council meetings, India has been crucial in voicing the concerns of the developing world. For instance, India has continued its opposition to the inclusion of such matters as labour and environment issues and other *non-tariff barriers* into the WTO policies.

Balance of payments

Since independence, India's balance of payments on its current account has been negative. Since liberalisation in the 1990s (precipitated by a balance of payment crisis), India's exports have been consistently rising, covering 80.3% of its imports in 2002–03, up from 66.2% in 1990–91. Although India is still a net importer, since 1996–97, its overall balance of payments (i.e., including the capital account balance), has been positive, largely on account of increased foreign direct investment and deposits from non-resident Indians; until this time, the overall balance was only occasionally positive on account of external assistance

*Share of top five investing countries in FDI inflows.
(1991–2004)*

Rank	Country	Inflows (Million USD)	Inflows (%)
1	 Mauritius	8,898	34.49%
2	 United States	4,389	17.08%
3	 Japan	1,891	7.33%
4	 Netherlands	1,847	7.16%
5	 United Kingdom	1,692	6.56%

and commercial borrowings. As a result, India's foreign currency reserves stood at \$141bn in 2005–06. Now however the reserves have been sitting at \$270 billion which could be used in infrastructural development of the country if used effectively.

India's reliance on external assistance and commercial borrowings has decreased since 1991–92, and since 2002–03, it has gradually been repaying these debts. Declining interest rates and reduced borrowings decreased India's debt service ratio to 14.1% in 2001–02, from 35.3% in 1990–91.

Foreign direct investment in India

As the third-largest economy in the world in PPP terms, India is undoubtedly one of the most preferred destinations for foreign direct investments (FDI); India has strength in information technology and other significant areas such as auto components, chemicals, apparels, pharmaceuticals and jewellery. India has always held promise for global investors, but its rigid FDI policies were a significant hindrance in this regard. However, as a result of a series of ambitious and positive economic reforms aimed at deregulating the economy and stimulating foreign investment, India has positioned itself as one of the front-runners of the rapidly growing Asia Pacific Region. India has a large pool of skilled managerial and technical expertise. The size of the middle-class population at 300 million exceeds the population of both the US and the EU, and represents a powerful consumer market.

India's recently liberalised FDI policy (2005) allows up to a 100% FDI stake in ventures. Industrial policy reforms have substantially reduced industrial licensing requirements, removed restrictions on expansion and facilitated easy access to foreign technology and foreign direct investment FDI. The upward moving growth curve of the real-estate sector owes some credit to a booming economy and liberalized FDI regime. In March 2005, the government amended the rules to allow 100 per cent FDI in the construction business. This automatic route has been permitted in townships, housing, built-up infrastructure and construction development projects including housing, commercial premises, hotels, resorts, hospitals, educational institutions, recreational facilities, and city- and regional-level infrastructure.

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India is a net importer: in 2005, imports were \$89.33bn and exports \$69.18bn.

Economy of the Republic of Ireland

2008/9 Schools Wikipedia Selection. Related subjects: Economics

Economy of Ireland



Currency 1 Euro = 100 cent(s)

Fiscal year Calendar year

Trade organisations EU, WTO and OECD

Statistics

GDP (PPP) €161.6 bn (2005) (48th)

GDP growth 4.7% (2005 est.)

GDP per capita \$41,000 (2005 est.)

GDP by sector agriculture (5%), manufacturing (46%), services (49%) (2002)

Inflation (CPI) 3.9% (2006)

Population 10% (1997 est.)

below poverty line

Labour force 2.154 million (2006)

Labour force by occupation	services (64%), manufacturing (29%), agriculture (8%) (2005)
Unemployment	4.4% (July 2006)
Main industries	steel, lead, zinc, silver, aluminium, barite, and gypsum mining processing; food, brewing, textiles, clothing; chemicals, pharmacology; machinery, rail transportation equipment, passenger and commercial vehicles, ship construction and refurbishment; glass and crystal; computer software, tourism
External	
Exports	\$102 billion f.o.b. (2005 est.)
Export goods	machinery and equipment, computers, chemicals, pharmaceuticals; live animals, animal products
Main export partners	United States 18.7%, United Kingdom 17.3%, Belgium 15.1%, Germany 7.3%, Netherlands 4.8% (2005)
Imports	\$65.47 billion f.o.b. (2005 est.)
Import goods	data processing equipment, other machinery and equipment, chemicals, petroleum and petroleum products, textiles, clothing
Main import partners	UK 36.8%, United States 13.8%, Germany 9.1%, Netherlands 4.5% (2005)
Public finances	
Public debt	€37.2 bn (27% of GDP) (June 2006)

The **economy of Ireland** is modern and trade-dependent with growth averaging a robust 10% in 1995–2000. Agriculture, once the most important sector, is now dwarfed by industry, which accounts for 46% of GDP, about 80% of exports, and employs 29% of the labour force. Although exports remain the primary engine for Ireland's robust growth, the economy is also benefiting from a rise in consumer spending and recovery in both construction and business investment. The annual rate of inflation stands at 5.1% as of 2007, up from recent rates of between 3% and 4%. On the EU HICP inflation index, inflation is 2.7% , against an EU average of 1.8% . House price inflation has been a particular economic concern (average house price was €251,281 in February 2005). Unemployment is low but is rising and up to 30,000 jobs may be lost between 2007 and 2008 much of which is attributed to a slowdown in house building. Incomes have been rising rapidly as well as service charges (utilities, insurance, healthcare, legal representation, etc.). Dublin, the nation's capital, was ranked 16th in a worldwide cost of living survey in 2006 (up from 22nd in 2004 and 24th in 2003).

Ireland has the second highest per capita income of any country in the EU next to Luxembourg, and fourth highest in the world based on measurements of Gross Domestic Product (GDP) per capita. Many economists feel that GDP per capita is an inappropriate measure of national income for Ireland because it does not consider the repatriation of profits by multinational companies. Gross National Income per capita, takes account of this. In any case, the vast majority of wealth held by Irish citizens is invested in property . Furthermore, the construction sector, which is inherently cyclical in nature, accounts for a significant component of Ireland's GDP and GNP and any downturn in this sector is likely to have a profound impact. In 2005, the World Bank measured Ireland's GNI per head at \$41,140 - the seventh highest in the world, sixth highest in Western Europe, and the third highest of any EU member state.

History

The state known today as Ireland seceded from the United Kingdom in 1922. The state was troubled by poverty and emigration until the early 1990s. These problems virtually disappeared over the course of that decade, which saw the beginning of unprecedented economic growth, in a phenomenon known as the " Celtic Tiger". Over the past two decades, the Irish government has implemented a series of national economic programmes designed to curb inflation, ease tax burdens, reduce government spending as a percentage of GDP, increase labour force skills, and promote foreign investment. Ireland joined in launching the euro currency system in January 1999 along with ten other European Union countries. The economy felt the impact of the global economic slowdown in 2001, particularly in the high-tech export sector – the growth rate in that area was cut by nearly half. GDP growth continued to be exceptionally high in international terms, with a rate of about 6% in 2001 and 2002 – and it is expected to continue at more than 4 per cent (2006 onwards). Since 2001, GNI (which measures income to Irish residents rather than output) growth has been much slower.

Infrastructure

Revenues	€44.3 bn (2006)
Expenses	€45.4 billion (2006)
Economic aid	<i>donor</i> : ODA, €735 mn (2005)
Main data source: CIA World Factbook	
<i>All values, unless otherwise stated, are in US dollars</i>	

Life in the Republic of Ireland

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Politics	[Show]
Policies	[Show]

Ireland's transport infrastructure came under strain due to the economic expansion of the past decade. Since 1993, road transport has been coordinated by the National Roads Authority in the case of the National Primary Routes, which are the most heavily used roads, The National Secondary Routes act as regional roads and linkages between the primary routes. The Dublin area is served by a light rail network (the Luas), the Dublin Port Tunnel the M50, Dublin Airport, Dublin Suburban Rail and the DART.



The DART is a key piece of infrastructure in Dublin for commuters

Ireland's rail network is run by the semi-state body Iarnród Éireann, a subsidiary of CIÉ and is made up of 9 national lines and several regional commuter lines such as the DART. CIÉ retain some freight customers, though few new freight services have started in recent years. Only some major ports remain technically freight-connected, the connection at Sligo for example was removed in 2003, while the link to Foynes has remained unused since 1999. The efficiency of the train network is poor, with regular delays and overcrowding on major routes. Some regional routes have few services, and as a result, struggle to achieve passengers. Much new rolling stock has been acquired since 1994, and as of 2004, this is finally beginning to expand capacity rather than just replacing old stock. Most major routes have been relaid with continuous welded rail, and signalling has in most cases been upgraded from the more than century-old mechanical semaphores.

The country has a total of 15 airports and airfields, of which 3 - Dublin Airport, Shannon Airport and Cork Airport are of a substantial size. The country is served by several airlines, most notably Aer Lingus, Ryanair, Aer Arann, and CityJet. Air transport is relatively cheap. The main ports are Rosslare Europort, Limerick, Dublin, Cork and Waterford. There are daily

ferry services to Britain.

In Telecommunications, the deregulated market has ensured that other licenced operators now account for a 32% share of the market.

Broadband is now available in Ireland via DSL, Cable, Wireless and Satellite . As of November 2007, DSL is available to c. 88% of homes and businesses. Overall takeup of broadband (cable, dsl, wireless etc.) is 15.4% as of July '07 and there are 698,000 broadband subscriptions as of September '07 The average monthly subscription cost is \$40.41, 20% cheaper than the average of \$49 for the 35 OECD countries surveyed.

5% of lines connected to broadband-enabled exchanges cannot avail of DSL, due to distance and other issues.

The mobile market has four providers - 3 Ireland, O2 Ireland, Meteor and Vodafone Ireland. The electricity transmission system is run by the Electricity Supply Board and is available nationwide. The gas network is currently being expanded.

Energy

The vast majority of Irish energy needs are met by fossil fuels. About 98% of Ireland's final energy demand is produced by burning coal, petroleum, peat, or natural gas. This over reliance on fossil fuels - particularly oil - has left the Ireland vulnerable to international price fluctuations as it imports all of its oil needs.

As part of its National Development Plan the Government adopted the *Sustainable Energy Act (2002)* and created Sustainable Energy Ireland as the nation's energy regulator. As part of their objectives to promote environmentally and economically sustainable energy production, electrical generation from peat consumption, as a percent of total electrical generation, was reduced from 18.8% to 6.1%, between 1990 and 2004. Likewise, coal consumption was reduced from 41.7% to 27.6%. Making up for this, the share of natural gas in electrical generation increased from 26.7% to 44.8%. Renewable energy, from biomass, wind and hydro, also increased from 1.9% to 2.6% in the same time period. A forecast by Sustainable Energy Ireland predicts that oil will no longer be used for electrical generation but natural gas will be dominant at 71.3% of the total share, coal at 9.2%, and renewable energy at 8.2% of the market. Wind power is quickly developing in the country by Airtricity and Hibernia Wind Energy (a subsidiary of the Electricity Supply Board) and many other companies. As of December 2005, there were fifty wind farms operational in Ireland with a combined capacity of 500 MW - generating enough energy for 300,000 homes, depending on wind conditions. In addition, a further 600 MW of wind farms (40 more) have signed connection agreements to link to the power system at high voltage or low voltage, and up to 200 MW of wind farms have received connection offers. Should these reach capacity, Ireland may exceed its EU target of 13.2 per cent of electricity generated from renewable sources by 2010. In addition to wind farms, electricity is also generated at large scale hydro schemes on the Shannon, Erne, Liffey and Lee rivers, and at mini-hydro stations, as well as landfill gas generating plants in Cork and Dublin cities.

Statistics

- **Electricity production:** 23.41 billion kWh (2003)
- **Energy production by source:** *oil: 55.8% natural gas: 24.3% coal: 12.9% peat: 3.8% renewables: 2.2% nuclear: 0%(2004)*
- **Electricity consumption:** 22.97 billion kWh (2003)
- **Electricity exports:** 0 (2003)
- **Electricity imports:** 1.2 billion kWh (2003)
- **Oil consumption:** 175,600 bbl/day (27,918 m³) per day (2003 est.)
- **Natural gas production:** 673 million m³ (2003 est.)
- **Natural gas consumption:** 4.298 billion m³ (2003 est.)
- **Natural gas proved reserves:** 19.82 billion m³ (As of 1 January 2002)



Peat once provided much of Ireland's energy needs

Monetary system

As the country is a member of the Economic and Monetary Union of the European Union, the euro is the currency. The most common bills in circulation are the €5, €10, €20 and €50, the €100, €200 and €500 bills are rarely seen. The Central Bank and Financial Services Authority of Ireland is the country's central bank and financial services regulator, and an agent for the European Central Bank which sets the interest rates. The low interest rates of the ECB - to stimulate the Eurozone - has helped to sustain the very high growth rate of Ireland, leading to high levels of inflation in the country. For example, increased inflation on housing, from IRE£9,000 (€11,430) in 1973 to €220,000 in 2004 has led to young couples accepting large mortgages and the wealthy buying investment properties. It is arguable that if Ireland had its own currency, interest rates would be higher and inflation would be reduced- however so would economic growth. Fears of overheating (that is excessive growth) of the economy due to the Euro seem to be unfounded, at least up to the present.

While there are over 60 credit institutions incorporated in Ireland, the banking system is dominated by the Big Four - AIB Bank, Bank of Ireland, Ulster Bank and National Irish Bank. There is a large Credit Union movement within the country which offers an alternative to the banks. The Irish Stock Exchange is in Dublin, however, due to its small size, many firms also maintain listings on either the London Stock Exchange or the NASDAQ. The insurance industry in Ireland is a leader in both retail markets and corporate customers in the EU, in large part due to the International Financial Services Centre.

Economic sectors

The Irish economy's secondary and tertiary sectors are of a similar size in fiscal terms however in terms of labour, the tertiary sector is far larger. Similarly in fiscal terms the primary sector appears small, however it still employs about 8% of the workforce.

Primary sector

The primary sector constitutes 5% of Irish GDP, and 8% of Irish employment. Ireland's main economic resource is its large fertile pastures, particularly the midland and southern regions. In 2004, Ireland exported approximately €7.15 billion worth of agri-food and drink (about 8.4% of Ireland's exports), mainly as cattle, beef, and dairy products, and mainly to the United Kingdom. As the European Union's Common Agricultural Policy takes force Ireland's agriculture industry is expected to decline in importance.

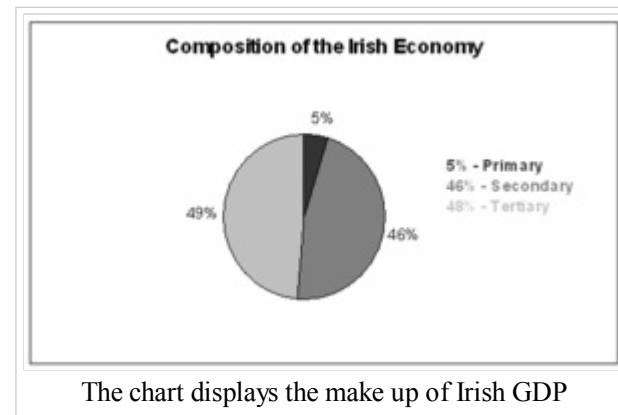


Trawlers sit in Killybegs harbour, in County Donegal, one of Ireland's biggest fishing ports. Over fishing has depleted Ireland's cod stocks in particular.

Due to unsustainable nineteenth century forestry practices the island was mostly deforested. In 2005, after years of national afforestation programs, about 9% of Ireland has become forested. It is still the least forested country in the EU and heavily relies on imported wood. Its coastline - once abundant in fish, particularly cod - has suffered overfishing and since 1995 the fisheries industry has focused more on aquaculture. Freshwater salmon and trout stocks in Ireland's waterways have also been depleted but are being better managed. Ireland is a major exporter of zinc to the EU and mining also produces significant quantities of lead and alumina. Beyond this, the country has significant deposits of gypsum, limestone, and smaller quantities of copper, silver, gold, barite, and dolomite. Peat extraction has historically been important, especially from midland bogs, however more efficient fuels and environmental protection of bogs has reduced peat's importance to the economy. Natural gas extraction occurs in the Kinsale Gas Field and the Corrib Gas Field in the southern and western counties, where there is 19.82 bn cubic metres of proven reserves.

Secondary sector

The secondary sector constitutes 46% of Irish GDP — but only 29% of the labour force. Dominated for many years by textile companies like Fruit of the Loom, the sector is now largely made up of high-tech/high value multi-nationals such as Dell, Intel, Pfizer and IBM. The secondary sector in Ireland manufactures products such as computers (25% of Europe's computers are made in Ireland, the European Headquarters of Apple Computer are



in Cork City), computer parts (Intel processors are made in Ireland), drugs (much of Europe's supply of Viagra is made in Cork), confectionery (HB, Jacobs and Cadbury-Schweppes all have significant Irish operations - although Cadbury-Schweppes does not manufacture Schweppes products in Ireland or the UK), beer (the Guinness and Smithwicks, and Harp Lager breweries are located in Ireland), high quality glass and crystal (Waterford Crystal is made in County Waterford), software (Ireland is the world's largest exporter of software - Oracle and Microsoft both have large operations in Dublin) and machinery. The sector faces increasing competition from cheaper Eastern European countries such as Poland and many Asian countries such as the People's Republic of China, particularly in the lower skill areas such as confectionery manufacturing. The industrial production growth rate in 2003 was 6.7%. Over the last decade, construction has become a major component of the economy, currently constituting 9% of economic activity. A recent downturn in residential property market sentiment, combined with the cyclical nature of construction has highlighted the over-exposure of the Irish economy to construction, which now presents a threat to economic growth.



Tourist sites such as Newgrange, County Meath are vital to the Irish economy

Tertiary sector

The tertiary sector constitutes 49% of Irish GDP and 64% of Irish employment. The tertiary sector is by far the largest driver of modern Irish economic growth — the *Celtic Tiger*. It is made up of several industries such as accountancy, legal services, call centres and customer service operations, finance and stock broking, catering, and tourism. Many US firms (such as IBM and Apple Computer) located their European customer service operations in Ireland due to the availability of a young, highly educated, English speaking workforce. Recruitment agencies also play a major role in this sector, connecting qualified work candidates to business clients looking to hire in these areas. The Irish tourism industry attracts over five million visitors annually and employs over 100,000. The IFSC in Dublin created some 14,000 jobs in the 1990s, all in the high-value finance and legal sectors. The hospitality and retail sectors are quite large — there are hundreds of domestic and foreign retail firms in Ireland (such as Next and Argos), and most cafe and restaurant firms operate in Ireland such as McDonalds, Starbucks, Burger King and

Subway.

State role in the economy

State ownership

At present the Irish Government controls several large and key parts of the economy:

- Through Córas Iompair Éireann (CIE) it controls most of the bus and all of the railway market. A significant portion of the scheduled land transport services are accounted for through CIE companies.
- Through the Electricity Supply Board (ESB) the government controls much of the electricity generation market, and all of the electricity transmission network.
- Through RTÉ the government control much of the radio and television broadcast sector, although commercial enterprises are gaining market share. The state does not generally use the media it owns to spread propaganda, but it has a large financial and regulatory control of the sector.

- Through An Post, the government has a monopoly of the light mail delivery industry and a large portion of the partially deregulated parcel and express delivery market.

Although the government owns the incumbents in the electricity, mail, broadcasting, land transport and air transport industries, many are wholly or partially open to competition from the private sector. Traditionally large and key sectors of the economy were dominated by government ownership. Some of these industries are currently being reformed and opened to competition however some of them are regarded as being slow to adopt change and reform to work practice — work pay and conditions are often much better than that in the private sector with some having overstaffing or underproductivity which is seen as an impediment to reform.

The government in 2006 privatised Aer Lingus and is currently considering the privatisation of part of the Electricity Supply Board, but it is somewhat reluctant because of an earlier situation that resulted from the privatisation of Eircom. In that case, hundreds of thousands of small shareholders lost money, private investors took control and established a virtual monopoly, while under-investment led to a slow roll out of broadband infrastructure.

Taxation

The present government (1997–) has favoured a low taxation policy to encourage foreign direct investment in Ireland. Consequently, the government opposes moves by the European Commission to restrict tax competition. The previous government of 1994-1997 introduced a corporate tax rate is only 12.5%, versus between 15% and 60% in the rest of Europe. The income tax system is designed to redistribute wealth from the richer to the poorer segments of society. There are 2 tax bands, based on income levels. These range from a maximum top rate of 41%, to a maximum bottom rate of 20%. In reality, however, a generous tax credits system ensures that the lower rates of taxation are normally 4% to 12%. The top rate of tax never exceeds 35% in practice.

The government receives much of its revenues from taxes on goods — these include a 21% VAT rate on most consumer goods, high levels of excise duty on tobacco, petrol, and alcohol and several smaller taxes on items such as plastic bags, cheques, ATM cards, credit cards and debit cards. The taxes in the personal financial sector, as well as the television licence, are often seen as regressive.

The welfare state

The Irish government runs a Welfare state system. The government provides free education at all levels for all EU citizens. Hospital care is free to all, though lower earners or people dependant on benefits receive all medical services for no charge, including dental, oral and aural services. People who are unemployed receive unemployment benefits and retired people are entitled to a state pension - both benefits are quite high by international comparisons. However, recent changes in the cost of living in Ireland have greatly eroded their relative buying power. Pension payments will increase to €200 (non-contributory) and €209.30 (contributory) per week in 2007.

Health care

Education

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The education system is comparatively very good with standards in mathematics, science and technology being among the highest in OECD member nations. The state has a virtual monopoly in higher education — there are few private colleges and these are highly specialised. The primary and secondary school enrolment levels are over 95% and at these levels choice is wide. Third level entry is competitive; all college and university tuition fees are free and courses adjusted to the needs of the economy. Irish adult literacy is 99% — in line with other OECD countries.

The only recognized universities are Dublin City University, National University of Ireland (with *constituent universities* at Cork, Dublin, Galway and Maynooth), University of Limerick and University of Dublin. The Institute of Technology system has recently overtaken the universities in terms of first year enrolment numbers and this trend appears to be accelerating.

Economic ties

United States

In 2003, trade between Ireland and the United States was worth around \$33 billion, a \$4 billion increase over 2002. U.S. exports to Ireland were valued at \$7.7 billion, an increase of almost \$1 billion over 2002. Irish exports to the U.S. were worth some \$25.7 billion — a 500% increase since 1997. Ireland had a trade surplus of over \$15 billion with the U.S. in 2003. The range of U.S. products imported to Ireland includes electrical components, computers and peripherals, drugs and pharmaceuticals, electrical equipment, and livestock feed. Exports to the United States include alcoholic beverages, chemicals and related products, electronic data processing equipment, electrical machinery, textiles and clothing, and glassware.

U.S. foreign direct investment in Ireland has been particularly important to the growth and modernization of Irish industry since 1980, providing new technology, export capabilities, and employment opportunities. The major U.S. investments in Ireland to date have included multi-billion dollar investments by Intel, Dell, Microsoft, IBM and Abbott Laboratories. Currently, there are more than 600 U.S. subsidiaries operating in Ireland, employing in excess of 100,000 people and spanning activities from manufacturing of high-tech electronics, computer products, medical supplies, and pharmaceuticals to retailing, banking and finance, and other services. Many U.S. businesses find Ireland an attractive location to manufacture for the EU market, since as a member of the EU it has tariff free access to the European Common Market. Government policies are generally formulated to facilitate trade and inward direct investment. The availability of an educated, well-trained, English-speaking work force and relatively moderate wage costs have been important factors. Ireland offers good long-term growth prospects for U.S. companies under an innovative financial incentive programme, including capital grants and favourable tax treatment, such as a low corporation income tax rate for manufacturing firms and certain financial services firms.



Once a beneficiary of the EU — particularly of CAP grant — Ireland is now a net contributor to the EU

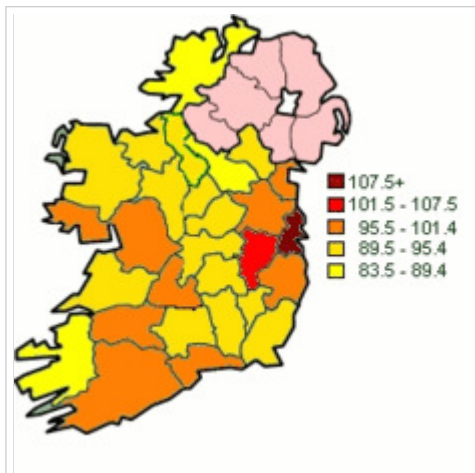
European Union

Although the USA is the single most important economic partner, it lags by far the EU as a whole which accounts for 63.3% of Ireland's exports (US 18.7%) and 57.4% of her imports (US 14.1%). (data for 2005).

Ireland has grown much closer to Europe in recent years — particularly since it joined the European Union (EU) in 1973. It is also part of the EMU and thus has the euro as its currency. Many US companies have located their European headquarters in Ireland and this has led to increased Irish-European ties. Ireland regularly comes near the top in polls of the most enthusiastic Europeans and spent some €60m during its presidency of the EU. The EU now accounts for the bulk of Irish trade, with the United Kingdom being the largest trading partner. Ireland's main exports to Europe are beef, computers (Dell, HP, EMC, and Apple Computer all have manufacturing facilities in Ireland) and software (Oracle and Microsoft have their European Headquarters in Ireland). Ireland's major imports from Europe include cars, machinery, trucks, steel, oil and consumer goods. A major economic bonus Ireland has received from EU membership has been agricultural subsidies

from the CAP and large amounts of EU investment in Irish road infrastructure. Since the acceptance of the 10 new Eastern European nations in 2004, Ireland's ties with Europe further increased. Since the accession event in 2004, several hundred thousand workers from countries such as Latvia, Poland and Estonia, no longer requiring work permits, came to live and work in Ireland.

Wealth distribution



Disposable income per person as a percentage of the national average.

Like many Western democracies wealth is partially redistributed among the poorer segments of society through the progressive tax system. Large disparities in wealth exist between those employed and those dependent on welfare payments. The percentage of the population at risk of relative poverty was 21% in 2004 - one of the highest rates in the European Union. Levels of wealth higher than the national average are concentrated among people living in the central eastern region and in Dublin. Despite this, there are many areas in Dublin marked by relative poverty, particularly in the inner city. The poorest members of society are those entirely dependent on welfare payments. Ireland's inequality of income distribution score on the Gini coefficient scale was 30.4 in 2000, slightly below the OECD average of 31. Ireland's 2000 score was less than 9 of the OECD member states but higher than 13 members. This has changed substantially since these statistics were published (see Recent Developments).

The national minimum wage is €8.65 per hour for full time staff over the age of 18 — this is one of the highest in the world. It is above the threshold for free healthcare assuming that the individual is single, has no children and works full-time. From 2007, someone working 39 hours per week at this rate will be exempt from income tax, as income below €17,600 per year will not be taxed. Unemployment benefit (*the dole*) and Jobseeker's Allowance for a single person in Ireland will be €181.80 per week, as of January 2007. This compares to £57.45 (€83.10) per week for a single

person aged 25 or over in the UK.

In contrast to most other countries in the European Union (with the exception of the UK, Greece and Hungary) Ireland has high rates of home ownership. In particular, house ownership (at approximately 80%) is the norm. In Continental Europe renting is the norm. Social housing schemes do exist and the government has invested €8.5 billion in the provision of over 34,000 social housing units between 2000 and 2005. Average rents for 2 bedroom apartments in Dublin range from €1,069.00 to €1,269.00 per four-week period. A single person living in shared accommodation can receive up to €98.00 per week (€392.00 every 4 weeks) in rent supplement. Therefore house sharing in rented accommodation is quite common in Ireland among single people receiving welfare payments and single people on low pay.

Recent Developments

In recent years, large and sustained increases in property values have had a substantial impact on the distribution of wealth. The high level of inequality in Ireland today is evident from an annual publication issued by the Bank of Ireland detailing the sources of wealth in Ireland.

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Economy of Northern Ireland

2008/9 Schools Wikipedia Selection. Related subjects: Economics

The **economy of Northern Ireland** is the smallest of the four Home Nations' economies of the United Kingdom. Northern Ireland has traditionally had an industrial economy, most notably in shipbuilding, rope manufacture and textiles, but most heavy industry has since been replaced by services. To this day, Northern Ireland still suffers from the results of the Troubles which occurred between the late 1960s until the mid-1990s between Unionists and Nationalists.

Overview

Output and economic growth

Northern Ireland has the smallest economy of any of the twelve NUTS 1 regions of the United Kingdom, at €37.3bn, or about two-thirds of the size of the next smallest, North East England. However, this is partly because Northern Ireland has the smallest population; at €19,603 Northern Ireland has a greater GDP per capita than both North East England and Wales.

Other Comparisons

Border Midland & Western Ireland (1.1 million)	Southern & Eastern Ireland (3 million)	Northern Ireland (1.75 million)
€25.5 bn GVA	€101,374 bn GVA	€37.3 bn
€23,637 GVA per person	€35,725 GVA per person	€19,603 per person

Throughout the 1990s, the Northern Irish economy grew faster than did the economy of the rest of the UK, due in part to the rapid growth of the economy of the Republic of Ireland and the so-called 'peace dividend'. Growth slowed to the pace of the rest of the UK during the down-turn of the early years of the new millennium, but growth has since rebounded; in 2005, the Northern Irish economy is estimated to have grown by 3.2%, almost twice as fast as the UK as a whole, and future growth is expected to be stronger than that of the rest of the United Kingdom,, though lower than that of the Republic. In April 2007 a Halifax survey found Northern Ireland's average house price to one of the highest in the UK, behind London, the South East and the South West. It also found Northern Ireland to have all of the top ten property "hot spots", with the Craigavon and Newtownards areas increasing by 55%.

Employment

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Unemployment in Northern Ireland has decreased substantially in recent years, and is now 4.5%, which is amongst the lowest of the regions of the United Kingdom, down from a peak of 17.2% in 1986. Youth unemployment and long-term unemployment have fallen most quickly. Despite low unemployment, working-age economic inactivity is 28%, which is the highest of any UK region.

Northern Ireland's macroeconomy is also characterised by considerably longer actual working hours and lower gender income disparity than in the United Kingdom as a whole.

Investment

During The Troubles, Northern Ireland received little foreign investment. Many believe this to be the result of Northern Ireland's portrayal as a warzone in the media, by both British and International during this period.

Since the signing of Good Friday Agreement investment in Northern Ireland has increased significantly. Most investment has been focused in Belfast and several areas of the Greater Belfast area. Major projects include the £400 million Victoria Square retail development in Belfast City Centre. The city will also see the largest waterfront development in Europe with the Titanic Quarter scheme, costing over £1,000 million and taking seven years to complete. The Laganside Corporation has been at the forefront of the redevelopment of the riverfront along the banks of the River Lagan, to date the corporation has overseen the investment of over £800 million in the riverside area. The Cathedral Quarter has also seen substantial investment.

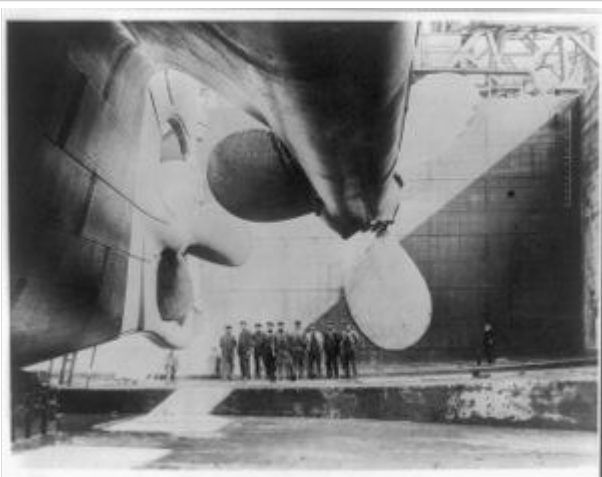
Agriculture

Agriculture in Northern Ireland is heavily mechanised, thanks to high labour costs and heavy capital investment, both from private investors and the European Union's Common Agricultural Policy. In 2000, agriculture accounted for 2.4% of economic output in Northern Ireland, compared to 1% in the United Kingdom as a whole. As in the rest of the United Kingdom, livestock and dairy account for the majority of agricultural output. The main crops are (in descending order of value) potatoes, barley, and wheat.

Manufacturing



Livestock is one of the major industries in Northern Ireland. In this picture sheep graze on a pasture at the edge of Giants Causeway near Bushmills, Northern Ireland.



The RMS *Titanic*, Northern Ireland's most famous manufacturing export, being admired by Harland and Wolff shipyard workers before its launch.

Heavy industry is concentrated in and around Belfast, although other major towns and cities also have heavy manufacturing areas. Machinery and equipment manufacturing, food processing, and textile and electronics manufacturing are the leading industries. Other industries such as papermaking, furniture manufacturing, aerospace and shipbuilding are also important, concentrated mostly in the eastern parts of Northern Ireland. Of these different industries, one of the most notable is that of Northern Ireland's fine linens, which is considered as one of the most well-known around Europe.

Although its share of economic output has declined, manufacturing output in Northern Ireland has remained almost unchanged over the past five years, after a period of steep manufacturing *growth* between 1998 and 2001. However, this overall picture of health hides a dramatic shift in manufacturing priorities, with the decline of traditional industries, such as textiles and shipbuilding, at the expense of high tech and capital-intensive industries. In 2005, chemicals and engineering (both of which belong firmly to the latter group) were the only two manufacturing sub-sectors to record growth, whilst output of textiles fell by 18%.

Engineering is the largest manufacturing sub-sector in Northern Ireland, particularly in the fields of aerospace and heavy machinery. Bombardier Aerospace is the province's largest industrial employer, with 5,400 workers at five sites in the Greater Belfast area. Other major engineering employers in Northern

Ireland include Bombardier Aerospace, Caterpillar, DuPont, Emerson Electric, Nortel, Northbrook Technology, Seagate and NACCO. Many of these manufacturers receive British government financial backing, and enjoy close academic and business links with Queen's University Belfast, which ranks as one of the best British universities for all engineering courses.

Services

As with all developed economies, services account for the majority of employment and output. Services account for almost 70% of economic output, and 78% of employees.

Tourism

Despite the negative image of Northern Ireland held in many foreign countries, on account of the Troubles, tourism is an important part of the Northern Irish economy. In 2004, tourism revenue rose 7% to £325m, or over 1% of the local economy, on the back of a rise of 4% in total visits to 2.1m in the year. Tourism is considered likely to become one of the main growth areas of the economy in the near future, with the continuation of the peace process and the normalisation of the image of Northern Ireland internationally. The most popular tourist attractions include Belfast, Armagh, the Giant's Causeway, and Northern Ireland's many castles.

Public sector

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The public sector accounts for 63% of the economy of Northern Ireland, which is substantially higher than 43% of the United Kingdom as a whole. In total, the British government subvention totals £5,000m, or 20% of Northern Ireland's economic output.

Many Unionists in Northern Ireland argue that a United Ireland could not sustain these levels of public sector employment, particularly as only 36% of the economy of the Republic of Ireland is contributed by government expenditure. Many in favour of a United Ireland argue that it is this dependence on the public sector that dissuades potential investors, causing Northern Ireland's relative poverty.

Currency

The official currency in use in Northern Ireland is the British Pound sterling. The euro, in use in the Republic of Ireland, is accepted by retailing chains closer to the border with the Republic of Ireland, Sterling however remains Northern Ireland's legal tender and the most widely circulated currency.

In addition, four Northern Ireland banks retain the right to print their own sterling-denominated banknotes: Bank of Ireland, First Trust Bank, Northern Bank, and Ulster Bank. These notes are circulated alongside, and in parity with, official Bank of England banknotes in Northern Ireland. However, they are often rejected by people in the rest of the United Kingdom, many of whom are unaware of the legitimacy of the notes. The Northern Bank robbery brought to national and international attention the Northern Irish system.

Energy

Northern Ireland's total primary energy consumption is approximately 4.90 million tonnes of oil equivalent. The vast majority of this energy comes from fossil fuels.

Electricity consumption in Northern Ireland was 7,867 GW·h in 2002/3. At 4.6 MW·h per person, this is 18% less than that of the rest of the United Kingdom (5.6 MW·h per person); although this may be expected of a less prosperous region, Northern Ireland's relative energy efficiency is seen as a successful transitional from its once heavily industrialised economy to a less energy-reliant services-based one. The main power station is located at Ballylumford, and is operated by Premier Power.

Northern Ireland's electrical grid is connected to that of the Republic of Ireland by three cross-border interconnectors. The main interconnector, between Tandragee and Louth has a capacity of 1,200 MW. Two back-up interconnectors have a combined capacity of 240 MW. This combined all-island grid is connected to the National Grid on the island of Great Britain by the 500 MW Moyle interconnector, under the North Channel.

Transport

Primary energy consumption		
Source	ktoe	%
Coal	1,440	29.4
Oil & LPG	1,290	26.3
Natural Gas	1,100	22.4
Vehicle fuel	926	18.9
Renewables	10	0.2
Electricity imports	140	2.8
Total	4,900	100

Northern Ireland has well-developed transport infrastructure. Northern Ireland has a total of 24,820 km (15,420 mi) of roads, or 1 km for each 68 people (1 mi for each 109 people), which is considerably more than in the United Kingdom as a whole (1 km per 162 people). There are seven motorways in Northern Ireland, extending radially from Belfast, and connecting that city to Antrim, Dungannon, Lisburn, Newtownabbey, and Portadown. The Northern Irish rail network is notable as being both the only part of the United Kingdom's railroads operated by a state-owned company, Northern Ireland Railways, and the only substantial part that carries no freight traffic.

Northern Ireland is home to three civilian airports: Belfast City, Belfast International, and City of Derry. Major seaports in Northern Ireland include the Port of Belfast and the Port of Larne. The Port of Belfast is one of the chief ports of the British Isles, handling 17 million tonnes (16.7 million long tons) of goods in 2005, equivalent to two-thirds of Northern Ireland's seaborne trade.

In addition to these existing links, several organisations have proposed a tunnel under the North Channel, with one possible site connecting eastern Northern Ireland to Wigtownshire. The idea has been given technical consideration since the 19th century, but, as of 2006, no major political party has advocated such a link, due to financial constraints.

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Economy of Pakistan

2008/9 Schools Wikipedia Selection. Related subjects: Economics

Pakistan, a rapidly developing nation, has a diverse economy that include textiles, chemicals, food processing, agriculture and other industries.

The economy has suffered in the past from decades of internal political disputes, a fast growing population, mixed levels of foreign investment, and a costly, ongoing confrontation with neighboring India. However, IMF-approved government policies, bolstered by foreign investment and renewed access to global markets, have generated solid macroeconomic recovery the last decade. Substantial macroeconomic reforms since 2000, most notably at privatizing the banking sector have helped the economy. Pakistan has seen a growing middle class population since then and poverty levels have decreased by 10% since 2001.

GDP growth, spurred by gains in the industrial and service sectors, remained in the 6-8% range in 2004-06. In 2005, the World Bank named Pakistan the top reformer in its region and in the top 10 reformers globally.

Islamabad has steadily raised development spending in recent years, including a 52% real increase in the budget allocation for development in FY07, a necessary step toward reversing the broad underdevelopment of its social sector. The fiscal deficit - the result of chronically low tax collection and increased spending, including reconstruction costs from the Great Pakistan earthquake in 2005 was manageable. Development in urban areas of Pakistan has remained high but is low in rural areas.

Inflation remains the biggest threat to the economy, jumping to more than 9% in 2005 before easing to 7.9% in 2006. The central bank is pursuing tighter monetary policy while trying to preserve growth. Foreign exchange reserves are bolstered by steady worker remittances, but a growing current account deficit - driven by a widening trade gap as import growth outstrips export expansion - could draw down reserves and dampen GDP growth in the medium term.

Economic history

First five decades

This is a chart of trend of gross domestic product of Pakistan at market prices estimated by the International

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Economy Of Pakistan	
Currency	100 Pakistani Rupee (PKR) = 1.64908 US dollar = 1.23810 Euro
Fiscal year	July 1— June 30
Current fiscal year	(2007—2008)
Central bank	The State Bank of Pakistan (SBP)
Trade organizations and treaties	ECO, SAFTA, ASEAN, WIPO and WTO
Fiscal Budget	\$24.5 billion (revenue) \$31.07 billion (expenditure)
Inflation	7.9% (2006 est.)
People	
President	Pervez Musharraf
Prime Minister	Mohammadmian Soomro
Commerce Minister	Shahzada Alam Monnoo
SBP Governor	Dr. Shamshad Akhtar
SECP	Razi ur Rehman Khan
Gross Domestic Product (GDP)	

Monetary Fund with figures in millions of Pakistani Rupees. See also

Year	Gross Domestic Product	US Dollar Exchange	Inflation Index (2000=100)
1960	20,058	4.76 Pakistani Rupees	
1980	283,460	9.90 Pakistani Rupees	21
1985	569,114	16.28 Pakistani Rupees	30
1990	1,029,093	21.41 Pakistani Rupees	41
1995	2,268,461	30.62 Pakistani Rupees	68
2000	3,826,111	51.64 Pakistani Rupees	100
2005	6,581,103	60.40 Pakistani Rupees	126

Pakistan was a very poor and predominantly agricultural country when it gained independence in 1947. Pakistan's average economic growth rate since independence has been higher than the average growth rate of the world economy during the period. Average annual real GDP growth rates were 6.8% in the 1960s, 4.8% in the 1970s, and 6.5% in the 1980s. Average annual growth fell to 4.6% in the 1990s with significantly lower growth in the second half of that decade.

Industrial-sector growth, including manufacturing, was also above average. In the late 1960s Pakistan was seen as a model of economic development around the world, and there was much praise for its economic progression. Later, economic mismanagement in general, and fiscally imprudent economic policies in particular, caused a large increase in the country's public debt and led to slower growth in the 1990s. Two wars with India in 1965 and 1971 adversely affected economic growth. In particular, the latter war brought the economy close to recession, although economic rebounded sharply until the nationalizations of the mid-1970s.

Economic resilience

Historically, Pakistan's overall economic output (GDP) has grown every year since a 1951 recession. Despite this record of sustained growth, Pakistan's economy had, until a few years ago, been characterized as unstable and highly vulnerable to external and internal shocks. However, the economy proved to be unexpectedly resilient in the face of multiple adverse events concentrated into a four-year period —

- the Asian financial crisis;
- economic sanctions — according to Colin Powell, Pakistan was "sanctioned to the eyeballs";

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GDP at PPP	\$475.5 billion (2007)
GDP at current exchange rates	
GDP real growth rate (at PPP)	6.9% (2006 est.)
GDP growth rate	7% (2007 est.)
GDP per capita	\$3,004 (2007)
GDP by sector	agriculture: 21.6% industry: 25.1% services: 53.3% (2006 est.)
Demographics	
Population	165,803,560 (2006 est.)
Population below poverty line	23% (2007)
Labor force	48.29 million
Unemployment rate	6.6% (2006 est.)
Production	
Agricultural products	cotton, wheat, rice, sugarcane, fruits, vegetables; milk, beef, mutton, eggs, shrimp, poultry, tea
Main industries	textiles, chemicals, food processing, steel, transport equipment, machinery, beverages, construction, materials, clothing, paper

- global recession;
- severe rioting in the port city of Karachi;
- a severe drought — the worst in Pakistan's history, lasting four years;
- heightened perceptions of risk as a result of military tensions with India — with as many as a million troops on the border, and predictions of impending (potentially nuclear) war;
- the post-9/11 military action in neighboring Afghanistan, with a massive influx of refugees from that country;
- the 2005 Pakistan earthquake

Despite these adverse events, Pakistan's economy kept growing, and economic growth accelerated towards the end of this period. This resilience has led to a change in perceptions of the economy, with leading international institutions such as the IMF, World Bank, and the ADB praising Pakistan's performance in the face of adversity.

Recent economic history

Pakistan's economic outlook has brightened in recent years in conjunction with rapid economic growth and a dramatic improvement in its foreign exchange position as a result of its current account surplus and a consequent rapid growth in hard currency reserves.

The state-owned firm in early 2002 signed agreements with five international telecom companies for terminating additional international incoming traffic to capture the grey market by using voice over Internet protocol (VoIP) technology from the US and Europe into Pakistan.

The conditionality of the IMF program, which was suspended in July 1999 and resumed later during the administration of Pervez Musharraf. Having improved its finances, Pakistan's government announced in 2004 that it would no longer require IMF assistance, and the assistance program ended in that year.

With accelerating economic growth, economists are now emphasizing a different range of problems. According to Ahmed Rashid, the World Bank Country Director for Pakistan,

Now Pakistan faces higher quality problems—the problems of success. Demand has risen faster than supply. This has shown up in high inflation and a zooming trade deficit. The “tight fiscal, easy money” formula to get growth going needs to be “tight fiscal, tight money and credit” to sustain rapid growth. Idle domestic production capacity allowed the rising demand to be accommodated by rising capacity utilization in cement, steel, fertilizer, textiles, automobiles and motorcycles. Now that capacity is more than fully utilized, resulting in backlogs and imports.

	products.
International trade	
Imports (2006 est.)	\$32.14 billion f.o.b (57th) (2006 est.)
Major imported commodities	Petroleum, Petroleum products, Machinery, Plastics, Transportation equipment, Edible oils, Paper and paperboard, Iron and steel, Tea
Main import partners (2006)	China 14.7%, Saudi Arabia 10.1%, UAE 8.7%, Japan 6.5%, United States 5.3%, Germany 5%, Kuwait 4.9% (2006 est.)
Exports	\$17.56 billion (2006 est.) (67th) (2006 est.)
Major exported commodities	textile goods (garments, bed linen, cotton cloths, and yarn), rice, leather goods, sports goods, chemicals manufactures, carpets and rugs.
Main export partners	United States 22.4%, UAE 8.3%,UK 6%, China 5.4%, Germany 4.7% (2006 est.)
Overall balance of payments (2006)	-\$1.753 billion

Musharraf's economic agenda continues to include measures to widen the tax net, privatize public sector assets, and improve its balance of trade. Pakistan has made governance reforms, privatization, and deregulation the cornerstones of its economic revival .

Although it received a positive endorsement from international financial institutions such as the World Bank, the International Monetary Fund and the Asian Development Bank, as well as improved credit ratings from Standard & Poor's and Moody's.

Pakistan's current account surplus had put upward pressure on the Pakistani rupee, which rose from 64 rupees per dollar to 57 rupees per dollar. The State Bank of Pakistan (the central bank) stabilized the rise by lowering interest rates and buying dollars. After short-term Pakistani T-bond rates fell below 2%, with government borrowing having declined, banks greatly expanded their lending to businesses and consumers. Construction activity, sales of durable goods such as trucks and automobiles, and housing purchases have all jumped to record levels. Private sector credit expanded by 28.5% in 2003, and continues to expand despite monetary restraints — the SBP imposed interest-rate increases to moderate money supply and prevent "overheating".

Pakistan's nominal gross domestic product (GDP) in 1997 was US\$ 75.3 billion. Five years later in 2002, the country's nominal GDP came down to US\$ 71.5 billion. During this five-year period, the real GDP grew by a meagre 3.0 per cent on an average. Pakistan government's debt was 82 per cent of its GDP in 2002. Over one-third of the government's revenue was being used up in making interest payments on the national debt. The near stagnant economy suddenly started showing miraculous growth in 2002 after lifting of economic sanctions imposed after Pakistan's 1998 nuclear tests. The economy grew at 5.1 per cent in 2003, 6.4 per cent in 2004 and 7.0 per cent in 2005. The US\$ 72 billions economy of 2002 has swelled into a US\$ 108 billion economy in 2005. During 1997-2002 Pakistan's average export growth has been 1.2 per cent per year and increased to 13 per cent per year during 2003-05. Pakistan's debt as a percentage of the GDP came down to 59 per cent in 2005 from 82 per cent in 2002. Pakistan government's interest payment as a percentage of revenue collection came down to 23 per cent in 2005 as compared to 35 per cent in 2002.

According to the Asian Development Bank, the first half of FY2006 was marked by a slowdown in both industry and agriculture in Pakistan. Output of cotton declined by an estimated 10.9 per cent from an all-time high of 14.6 million bales harvested in FY2005. Production of sugarcane, another major summer crop, is also estimated lower than last year. The growth of large-scale manufacturing slowed to 8.7 per cent in the first quarter of FY2006 from 24.9 per cent in the same period of last year, primarily due to capacity constraints and the high-base effect. Among individual industries in the first quarter, growth of textiles tumbled to 7.2 per cent from 29.6 per cent year on year. Automobile assembly and electronics, which have shown the fastest expansion among sub-sectors in the last 2-3 years, also decelerated. Inflation accelerated in FY2005 after five years of price stability. Annual inflation, based on the consumer price index, more than doubled to 9.3 per cent from 4.6 per cent, mainly because of higher food prices and rising house rents. Due to a sharp increase in domestic oil prices, transport costs also jumped. Core -- nonfood, non-oil -- inflation also doubled, from 3.7 per cent to 7.4 per cent.

Pakistan is a middle income country. It's economy is among the fastest growing in the world as its economy has reached the size of \$140 billion from a mere \$70 billion a few years earlier, Federal Advisor on Finance Dr Salman Shah informed the media. Per capita income now stands at \$808.

Note:

1. Data is for 2005-06, unless specified otherwise.
2. Pakistan's ranking, where applicable, are specified in brackets, and linked to the source data.
3. *CIA Pakistan Section* from The World Factbook, dated November 1, 2005.
4. Pakistan Government Website

The Economic Survey of Pakistan for 2006-2007 has concluded the country's economy recorded 7.3 percent growth. Former Prime Minister Shaukat Aziz said that Pakistan's economy should continue to grow every year at about seven percent and he also assured that many measures will be taken to give the economy a further boost. He promised privatization of companies and he also invested in the economy by allowing free education for under 16's and also came up with a scheme to pay girls two hundred rupees a month as an incentive to attend school. Also in the next five years many foreign universities from different European nations have announced they will be opening campuses in Pakistan.

Macroeconomic reform and prospects

According to many sources, the Pakistani government has made substantial economic reforms since 2000, and medium-term prospects for job creation and poverty reduction are the best in nearly a decade.

Government revenues have greatly improved in recent years, as a result of economic growth, tax reforms - with a broadening of the tax base, and more efficient tax collection as a result of self-assessment schemes and corruption controls in the Central Board of Revenue - and the privatization of public utilities and telecommunications. Pakistan is aggressively cutting tariffs and assisting exports by improving ports, roads, electricity supplies and irrigation projects. Islamabad has doubled development spending from about 2% of GDP in the 1990s to 4% in 2003, a necessary step towards reversing the broad underdevelopment of its social sector.

Liberalization in the international textile trade has already yielded benefits for Pakistan's exports, and the country also expects to profit from freer trade in agriculture. As a large country, Pakistan hopes to take advantage of significant economies of scale, and to replace China as the largest textile manufacturer as the latter China moves up the value-added chain. These industries play to Pakistan's relative strengths in low labor costs.

Growing stability in the nation's monetary policies has contributed to a reduction in money-market interest rates, and a great expansion in the quantity of credit, changing consumption and investment patterns in the nation. Pakistan's domestic natural gas production, and its significant use of CNG in automobiles, has cushioned the effect of the oil-price shock of 2004-2005. Pakistan is also moving away from the doctrine of import substitution which some developing countries (such as Iran) dogmatically pursued in the twentieth century. The Pakistani government is now pursuing an export-driven model of economic growth successfully implemented by South East Asia and now highly successful in China.

In 2005, the World Bank reported that

"Pakistan was the top reformer in the region and the number 10 reformer globally — making it easier to start a business, reducing the cost to register property, increasing penalties for violating corporate governance rules, and replacing a requirement to license every shipment with two-year duration licenses for traders."

In addition, reduced tensions with India and the ongoing peace process raise new hopes for a prosperous and stable South Asia, with more intra-regional trade.

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Islamabad Business Offices

Shahid Javed Burki, former vice president of World Bank and who was in charge of the bank's Latin American division when Mexico was hit by the crisis in 1994, said Pakistan is facing symptoms that preceded the Mexican financial crisis more than 10 years ago. He points to the nation's current account deficit, 'excessive' speculative business activity and weak banking system.

The economy today

Stock market

In the first four years of the twenty-first century, Pakistan's KSE 100 Index was the best-performing stock market index in the world as declared by the international magazine "Business Week".

The stock market capitalisation of listed companies in Pakistan was valued at \$45,937 million in 2005 by the World Bank. As a result, the corporate sector of Pakistan has grown dramatically in significance in recent times.

Manufacturing and finance

Pakistan's manufacturing sector has experienced double-digit growth in recent years, with large-scale manufacturing growing by 18% in 2003. A reduction in the fiscal deficit has resulted in less government borrowing in the domestic money market, lower interest rates, and an expansion in private sector lending to businesses and consumers. Foreign exchange reserves continued to reach new levels in 2003, supported by robust export growth and steady worker remittances.

Growing middle class

Measured by purchasing power, Pakistan has a 30 million strong middle class, according to Dr. Ishrat Husain, Ex-Governor (2 December 1999 - 1 December 2005) of the State Bank of Pakistan. It is a figure that correlates with research by Standard Chartered Bank which estimates that Pakistan possesses a "a middle class of 30 million people that Standard Chartered estimates now earn an average of about \$10,000 a year." In addition, Pakistan has a growing upper class with relatively high per capita incomes.

On measures of income inequality, the country ranks slightly better than the median. In late 2006, the Central Board of Revenue estimated that there were almost 2.8 million income-tax payers in the country.

Poverty alleviation expenditures



Karachi - the financial capital of Pakistan

Pakistan government spent over 1 trillion Rupees (about \$16.7 billion) on poverty alleviation programs during the past four years, cutting poverty from 35 percent in 2000-01 to 24 percent in 2006. Rural poverty remains a pressing issue, as development there has been far slower than in the major urban areas.

Demographics

With a per capita GDP of over \$3000 (PPP, 2006) compared with \$2600 (PPP, 2005) in 2005 the World Bank considers Pakistan a medium-income country, although it is recorded as a "Medium Development Country" on the Human Development Index 2005. Pakistan has a large informal economy, which the government is trying to document and assess. Approximately 41% of adults are literate, and life expectancy is about 62 years. The population, about 165 million in 2006, is growing at about 1.96%.

Relatively few resources in the past had been devoted to socio-economic development or infrastructure projects. Inadequate provision of social services, high birth rates and immigration from nearby countries in the past have contributed to a persistence of poverty. An influential recent study concluded that the fertility rate peaked in the 1980s, and has since fallen sharply. Pakistan has a family-income Gini index of 41, close to the world average of 39.

Employment

The high population growth in the past few decades has ensured that a very large number of young people are now entering the labor market. Even though it is among the seven most populous Asian nations, Pakistan has a lower population density than Bangladesh, Japan, India, and the Philippines. In the past, excessive red tape made firing from jobs, and consequently hiring, difficult. Significant progress in taxation and business reforms has ensured that many firms now are not compelled to operate in the underground economy.

Image:Saif2.jpg
Tourism to northern areas in the Himalaya mountain range is very popular.

In late 2006, the government launched an ambitious nationwide service employment scheme aimed at disbursing almost \$2 billion over five years.

Tourism

Tourism in Pakistan is a growing industry. Attractions range from ruins of ancient civilizations to the Himalayas, which are the highest mountain range in the world. These areas attract adventurers and mountaineers from around the world, especially K2, the second highest mountain in the world. Pakistan's Kaghan Valley is one of the most beautiful landscapes in the world.

Revenue

The Board of Revenue has collected nearly Rs. 700 billion (\$11.6 billion) in taxes in the 2005-2006 financial year.

Currency system

Rupee

The basic unit of currency is the Rupee, which is divided into 100 paisas. Since the turn of the century, a strengthening economy and large current-account surplus has caused the rupee's exchange rate to rise in value. In response, Pakistan's central bank has prevented the rupee from rising too much, by lowering interest rates and buying dollars, in order to preserve the country's export competitiveness. As of 2005, one US dollar is approximately equal to 60 rupees. Currently the newly printed 5,000 rupee note is the largest denomination in circulation. Recently the SBP has introduced all new design notes of Rs.10, 20, 100, 500, 1000, 5000 denomination, while the work of Rs.10,000 note is in progress which will help the banking industry in keeping few notes in saving accounts.

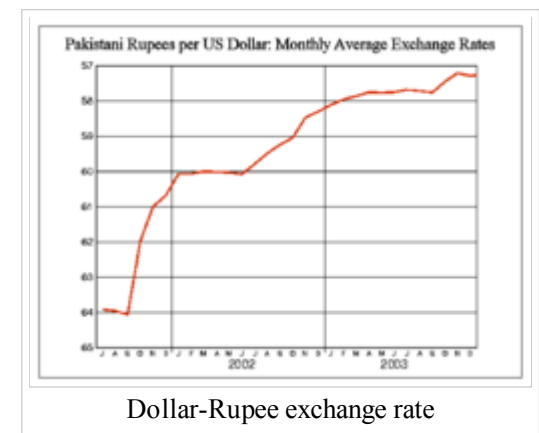
The new notes have been designed using the Euro technology and are made in good bright colors.

Foreign exchange rate

1 Pakistani Rupee (PKR) = 100 Paise

The Pakistani rupee depreciated against the US dollar until the turn of the century, when Pakistan's large current-account surplus pushed the value of the rupee up versus the dollar. Pakistan's central bank then stabilized by lowering interest rates and buying dollars, in order to preserve the country's export competitiveness

- Exchange rates: Pakistani rupee (PKR) per US\$1
 - 60.50 (01/11/07)
 - 60.75 (05/08/2007)
 - 58 (2004)
 - 57.752 (2003)
 - 59.7238 (2002)
 - 61.9272 (2001)
 - 53.6482 (2000)
 - 51.90 (1999)
 - 44.550 (1998)
 - 40.185 (1997)
 - 35.266 (1996)
 - 30.930 (1995)



Foreign exchange reserves

In 2007 Pakistan's foreign exchange reserves were over \$16 billion - a twelvefold rise since 2001.

Structure of economy

From modest beginnings, Pakistani economy has moved successfully to a low-inflation high-growth trajectory since 2000. The central bank has controlled inflation at around 3% per annum in recent years - a record since 1980.

Over 1,081 patent applications were filed by non-resident Pakistanis in 2004 revealing a new-found confidence.

Agriculture accounted for about 53% of GDP in 1947. While per-capita agricultural output has grown since then, it has been outpaced by the growth of the non-agricultural sectors, and the share of agriculture has dropped to roughly one-fifth of Pakistan's economy.

In recent years, the country has seen rapid growth in industries (such as apparel, textiles, and cement) and services (such as telecommunications, transportation, advertising, and finance).

Sectoral contribution to GDP Growth
Most of the recent acceleration in GDP growth has come from
the industrial and service sectors.

GDP growth by sector, as a percentage of GDP				
Sector	2001-02	2002-03	2003-04	2004-05
Agriculture	0.03	1.01	0.53	1.74
Industry	0.61	1.08	2.74	2.46
<i>Manufacturing</i>	<i>1.71</i>	<i>1.11</i>	<i>2.31</i>	<i>2.19</i>
Service	2.47	2.75	3.16	4.16
Real GDP (fc)	3.1%	4.8%	6.4%	8.4%
<i>Source: Economic Survey of Pakistan 2005</i>				

Structure of production

Share of Various Sectors in GDP					
Sector	2000-01	2001-02	2002-03	2003-04	2004-05
Goods (1+2+3+4+5)	48.2	47.3	47.1	47.4	47.6
1. Agriculture	25.1	24.4	24.2	23.3	23.1
2. Mining	1.3	1.4	1.5	1.5	1.4
3. Manufacturing	15.9	16.1	16.4	17.6	18.3
4. Construction	2.4	2.4	2.4	2.1	2.0
5. Energy Distribution	3.4	3.0	2.5	2.9	2.7
Services (6+7+8+9+10+11)	51.8	52.7	52.9	52.6	52.4
6. Transportation & Comm.	11.7	11.5	11.5	11.4	11.1
7. Trade	18.1	18.0	18.2	18.5	19.1
8. Finance & Insurance	3.1	3.6	3.3	3.3	3.7
9. Ownership of Dwellings	3.2	3.2	3.2	3.1	2.9
10. Public Admin. & Defense	6.3	6.5	6.7	6.5	6.0
11. Other Services	9.4	9.9	10.0	9.9	9.6
Note: GDP is estimated at constant factor cost. Figures are in percentage. Source: <i>Economic Survey of Pakistan 2005</i>					

Commodity producing sector

Agriculture

Pakistan is one of the world's largest producers and suppliers of the following according to the 2005 Food and Agriculture Organization of The United Nations and FAOSTAT given here with ranking:

- Chickpea (2nd)
- Apricot (4th)
- Cotton (4th)
- Sugarcane (4th)
- Milk (5th)
- Onion (5th)
- Date Palm (6th)
- Mango (7th)
- Tangerines, mandarin orange, clementine (8th)
- Rice (8th)
- Wheat (9th)
- Oranges (10th)

Pakistan ranks fifth in the Muslim world and twentieth worldwide in farm output. It is the world's fifth largest milk producer.

Pakistan's principal natural resources are arable land and water. About 25% of Pakistan's total land area is under cultivation and is watered by one of the largest irrigation systems in the world. Pakistan irrigates three times more acres than Russia. Agriculture accounts for about 23% of GDP and employs about 44% of the labor force.

Crops

The most important crops are wheat, sugarcane, cotton, and rice, which together account for more than 75% of the value of total crop output.

Pakistan's largest food crop is wheat. In 2005, Pakistan produced 21,591,400 metric tons of wheat, more than all of Africa (20,304,585 metric tons) and nearly as much as all of South America (24,557,784 metric tons), according to the FAO

Pakistan has also cut the use of dangerous pesticides dramatically.

Pakistan is a net food exporter, except in occasional years when its harvest is adversely affected by droughts. Pakistan exports rice, cotton, fish, fruits, and vegetables and imports vegetable oil, wheat, cotton, pulses and consumer foods. The country is Asia's largest camel market, second-largest apricot and ghee market and third-largest cotton, onion and milk market.

The economic importance of agriculture has declined since independence, when its share of GDP was around 53%. Following the poor harvest of 1993, the government introduced agriculture assistance policies, including increased support prices for many agricultural commodities and expanded availability of agricultural credit. From 1993 to 1997, real growth in the agricultural sector averaged 5.7% but has since declined to about 4%. Agricultural reforms, including increased wheat and oilseed production, play a central role in the government's economic reform package.

Much of the Pakistan's agriculture output is utilized by the country's growing processed-food industry. The value of processed retail food sales has grown 12 percent annually during the Nineties and was estimated at over \$1 billion in 2000, although supermarkets accounted for just over 10% of the outlets.

The Federal Bureau of Statistics provisionally valued *major crop* yields at Rs.504,868 million in 2005 thus registering over 55% growth since 2000 while *minor crop* yields were valued at Rs.184,707 million in 2005 thus registering over 41% growth since 2000.

Livestock

According to the *Economic Survey of Pakistan*, the livestock sector contributes about half of the value added in the agriculture sector, amounting to nearly 11 per cent of Pakistan's GDP, which is more than the crop sector.

The leading daily newspaper *Jang* reports that the national herd consists of 24.2 million cattle, 26.3 million buffaloes, 24.9 million sheep, 56.7 million goats and 0.8 million camels. In addition to these there is a vibrant poultry sector in the country with more than 530 million birds produced annually. These animals produce 29.472 million tons of milk (making Pakistan the 5th largest producer of milk in the world), 1.115 million tons of beef, 0.740 million tons of mutton, 0.416 million tons of poultry meat, 8.528 billion eggs, 40.2 thousand tons of wool, 21.5 thousand tons of hair and 51.2 million skins and hides.

The Food and Agriculture Organization reported in June 2006 that in Pakistan, the world's fifth largest milk producing country, government initiatives are being undertaken to modernize milk collection and to improve milk and milk product storage capacity.

The Federal Bureau of Statistics provisionally valued this sector at Rs.758,470 million in 2005 thus registering over 70% growth since 2000.

Fishery

Fishery plays an important role in the national economy. It provides employment to about 400,000 fishermen directly. In addition, another 500,000 people are employed in ancillary industries. It is also a major source of export earning. In July-May 2002-03 fish and fishery products valued at US \$ 117 million were exported from Pakistan. Federal Government is responsible for fishery of Exclusive Economic Zone of Pakistan.

The major fish harbours of Pakistan are:

- Karachi Fisheries Harbour is being operated by Provincial Government of Sindh.
- Karachi Fish Harbour handles about 90% of fish and seafood catch in Pakistan and 95% of fish and seafood exports from Pakistan.
- Korangi Fish Harbour is being managed by Federal Ministry of Food, Agriculture and Livestock.
- Pasni Fish Harbour being operated by Provincial Government of Balochistan.
- Gwadar Fish Harbour being operated by Federal Ministry of Communication.

The Federal Bureau of Statistics provisionally valued this sector at Rs.18,290 million in 2005 thus registering over 10% growth since 2000.

Forestry

The Federal Bureau of Statistics provisionally valued this sector at Rs.25,637 million in 2005 thus registering over 3% decline since 2000.

Industry

Pakistan ranks forty-first in the world and fifty-fifth worldwide in factory output.

Pakistan's industrial sector accounts for about 24% of GDP. Cotton textile production and apparel manufacturing are Pakistan's largest industries, accounting for about 66% of the merchandise exports and almost 40% of the employed labour force. Other major industries include cement, fertilizer, edible oil, sugar, steel, tobacco, chemicals, machinery, and food processing.

The government is privatizing large-scale parastatal units, and the public sector accounts for a shrinking proportion of industrial output, while growth in overall industrial output (including the private sector) has accelerated. Government policies aim to diversify the country's industrial base and bolster export industries.

Mining and quarrying

Important minerals found in Pakistan are gypsum, limestone, chromites, iron ore, rock salt, silver, gold, precious stones, gems, marble, copper, coal, graphite, sulphur, fire clay, silica. The salt range in Punjab Province has large deposits of pure salt. Balochistan province is a mineral rich area having substantial mineral, oil and gas reserves which have not been exploited to their full capacity. The province has significant quantities of copper, chromite and iron, and pockets of antimony and zinc in the south and gold in the far west. Natural gas was discovered near Sui in 1952, and the province has been gradually developing its oil and gas projects over the past fifty years.

Major reserves of copper and gold in Balochistan's Rekodiq area have been discovered in early 2006. The Rekodiq mining area has proven estimated reserves of 2 billion tons of copper and 20 million ounces of gold. According to the current market price, the value of the deposits has been estimated at about \$65 billion, which would generate thousands of jobs.

The discovery has ranked Rekodiq among the world's top seven copper reserves. The Rekodiq project is estimated to produce 200,000 tons of copper and 400,000 ounces of gold per year, at an estimated value of \$1.25 billion at current market prices. The copper and gold are currently traded at about \$5,000 per ton and \$600 per ounce respectively in the international market.

North West Frontier Province accounts for at least 78% of the marble production in Pakistan.

The Federal Bureau of Statistics provisionally valued this sector at Rs.211,851 million in 2005 thus registering over 99% growth since 2000.

Pakistan's 2 leading companies, as per Forbes Global 2000 ranking for 2005.

Global ranking	Company Name
1,284	Oil & Gas Development
1,316	PTCL
Forbes Global 2000	

Fuel extraction industry

Pakistan's first oil field was discovered in the late 1952 in Baluchistan near a giant gas field at Sui in Balochistan. The Toot oilfield was discovered in the early 1960's the Islamabad in the Punjab. Production has steadily increased since then.

Pakistan's first gas field was the giant gas field at Sui in Balochistan which was discovered in the late 1952.

Pakistan is also a major producer of Bituminous coal, Sub-bituminous coal and Lignite. Coal mining started in the British colonial era and has continued to be used by Pakistani industries after independence in 1947.

Pakistan produced about 45 tonnes of Uranium in 2006.

Manufacturing

In FY 2002-03, real growth in manufacturing was 7.7%. In the twelve months ending 30 June 2004, large-scale manufacturing grew by more than 18% compared to the previous twelve-month period. The textile and garment industry's share in the economy along with its contribution to exports, employment, foreign-exchange earnings, investment and value added make it Pakistan's single largest manufacturing sector. The industry is comprised of 453 textile mills: 50 integrated units; and 403 spinning units, with 9.33 million spindles and 148,000 rotors, The capacity utilization was 83% for spindles and 47% for rotors during 2003.

The Federal Bureau of Statistics provisionally valued large-scale manufacturing at Rs.981,518 million in 2005 thus registering over 138% growth since 2000 while small-scale manufacturing was valued at Rs.356,835 million in 2005 thus registering over 80% growth since 2000.

Construction

After the devastating 2005 Kashmir earthquake Pakistan has instituted stricter building codes. The cost of construction in Pakistan will increase 30 to 50% due to implementation of a new building code which requires strengthening of structures to withstand earthquake of 8 to 8.5 magnitude. The demand for cement has increased due to reconstruction after the earthquake. The price of cement has increased by 50% and Pakistan government banned export of cement to lower the prices and the reconstruction costs.

Dubai Ports World, announced on June 1, 2006 that it will spend \$10 billion to develop transport infrastructure and real estate in Pakistan. Dubai Ports World is also discussing the possibility of the company taking over operational management of Gwadar port in Balochistan.

Emaar Properties, announced on May 31, 2006 three real estate developments in the cities of Islamabad and Karachi in Pakistan. The projects, with a total investment of \$2.4 billion, will include a series of master planned communities that will set new benchmarks in commercial, residential and retail property within Pakistan.

In addition the conglomerate signed a unprecedented \$43 billion deal to develop two island resorts - Bundal Island and Buddo Island - over the next decade.

The Federal Bureau of Statistics provisionally valued this sector at Rs.178,819 million in 2005 thus registering over 88% growth since 2000.

Electricity, gas and water supply

Pakistan has extensive energy resources, including fairly sizable natural gas reserves, some proven oil reserves, coal (Pakistan has the fourth-largest coal reserves in the world), and a large hydropower potential. However, the exploitation of energy resources has been slow due to a shortage of capital and domestic political constraints. Domestic petroleum production totals only about half the country's oil needs, and the need to import oil has contributed to Pakistan's trade deficits and past shortages of foreign exchange.

The current government has announced that privatization in the oil and gas sector is a priority, as is the substitution of indigenous gas for imported oil, especially in the production of power. Pakistan is a world leader in the use of compressed natural gas (CNG) for personal automobiles.

The short-term national energy demand has expanded significantly since 2001 due to massive rise in sales of durable goods like refrigerators, washing machines, split air conditioners, *et al.*

In 2004, Access Group International announced plans to invest \$1 billion over the next 5 years in solar cell manufacture and wind farms. MOUs have been signed with Alternate Energy Development Board. In early 2005, the government approved a 25-year Energy Security Plan to boost electric capacity eightfold.

The Canadian conglomerate Cathy Oil and Gas signed a memorandum of understanding in late 2006 to invest \$5 billion in oil and gas exploration, development, production and commercialisation in Pakistan.

The World Bank estimates that it takes about 32 days only to get an electrical connection in Pakistan.

The Federal Bureau of Statistics provisionally valued this sector at Rs.215,662 million in 2005 thus registering over 62% growth since 2000.

Services sector

Pakistan's service sector accounts for about 53.3% of GDP. Transport, storage, communications, finance, and insurance account for 24% of this sector, and wholesale and retail trade about 30%. Pakistan is trying to promote the information industry and other modern service industries through incentives such as long-term tax holidays.

The government is acutely conscious of the immense job growth opportunities in service sector and has launched aggressive privatisation of telecommunications, utilities and banking despite union unrest.

Transport, storage and communication

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Pakistan Telecommunication Company Ltd has emerged as a successful Forbes 2000 conglomerate with over \$1 billion in sales in 2005. Cellphone market has exploded almost fourteen fold since 2000 to reach a subscriber base of over 60 million in 2007. In addition, there are over 6 million landlines in the country. . As a result, Pakistan won the prestigious Government Leadership award of GSM Association in 2006.

The World Bank estimates that it takes about 50 days only to get a phone connection in Pakistan.

In Pakistan, following are the top mobile phone operators:

1. Mobilink
2. Ufone
3. Telenor
4. Warid
5. Instaphone
6. Paktel (recently been acquired by China Mobile for US\$ 450 million)

The cellular base in Pakistan is growing at around 14% per year and already the cellular customer has outpaced the fixed line customers. Wireless revolution has swept Pakistan, and competition among the mobile operators is pulling the prices down. Its as cheap as Rs.2 to call to USA per minutes (that is 3-4 cents per minutes). Sony Ericsson, Nokia and Motorola along with Samsung and LG remain to be the popular brands among customers. Though Nokia has a strong market presence, this has been somewhat taken over by Sony Ericsson, through aggressive marketing and advertisement.

Pakistan is on the verge of Telecom revolution and it is by far the most attracted sector in Pakistan in terms of Foreign Direct investment coming in Pakistan. It is estimated alone that this year 2006-07, FDI attracted by Telecom will be US\$ 2 Billion out of the total FDI of US\$ 6 Billion, the highest in Pakistan history.

Pakistan International Airlines, the flagship airline of Pakistan's civil aviation industry, has turnover exceeding \$1 billion in 2005. The government announced a new shipping policy in 2006 permitting banks and financial institutions to mortgage ships. A massive rehabilitation plan worth \$1 billion over 5 years for Pakistan Railways has been announced by the government in 2005.

Private sector airlines in Pakistan include Airblue, Aeroasia and Shaheen Air International. Many private airlines are in pipeline including Air Mahreq, Dewan Air and Pearl Air.

Airblue is using the state of the art A-320 and A-321 aircraft for flying across Pakistan and will soon commence UK operation. Airblue has recently ordered 6 New A-321 aircraft, while 2 aircraft will be taken on lease which will be added to the existing fleet of 4-5 aircraft, making it the second biggest fleet behind PIA which has 42 aircraft.

The Government of Pakistan has, over the last few years, granted numerous incentives to technology companies wishing to do business in Pakistan. A combination of decade-plus tax holidays, zero duties on computer imports, government incentives for venture capital and a variety of programs for subsidizing technical education, are intended to give impetus to the nascent Information Technology industry. This in recent years has resulted in impressive growth in that

sector. Pakistan saw an increase in IT export cash inflows of 50% from 2003-4 to 2004-5, with total export cash inflows standing at \$48.5 million. In 2005-6 export cash inflows increased to greater than \$73 million. This year the government has set a goal of \$108 million. Exports account for 11% of the total revenues of the IT sector in Pakistan. Compared to India, Pakistan's IT sector is relatively small, but recent growth has been extremely high leading economists to be optimistic about the IT industries future prospects in Pakistan. Gartner, one of the world's leading information technology research and advisory companies has placed Pakistan amongst the top countries of the world in terms of suitability for offshore outsourcing.

Paging and mobile (cellular) telephone were adopted early and freely. Cellular phones and the Internet were adopted through a rather laissez-faire policy with a proliferation of private service providers that led to fast adoption. Both have taken off and in the last few years of the 1990s and first few years of the 2000s. With a rapid increase in the number of internet users and ISPs, and a large English-speaking population, Pakistani society has seen major changes.

- Pakistan has more than 20 million internet users as of 2005. The country is said to have a potential to absorb up to 50 million mobile phone Internet users in the next 5 years thus a potential of nearly 1 million connections per month.
- Almost all of the main government departments, organizations and institutions have their own websites.
- The use of search engines and instant messaging services is also booming. Pakistanis are some of the most ardent chatters on the Internet, communicating with users all over the world. Recent years have seen a huge increase in the use of online marriage services, for example, leading to a major re-alignment of the tradition of arranged marriages.
- As of 2007 there were 6 cell phone companies operating in the country with nearly 60 million mobile phone users in the country.
- Wireless local loop and the landline telephony sector has also been liberalized and private sector has entered thus increasing the teledensity rate from less than 3% to more than 10% in span of two years.

The Federal Bureau of Statistics provisionally valued this sector at Rs.982,353 million in 2005 thus registering over 91% growth since 2000.

Wholesale and retail trade

The Federal Bureau of Statistics provisionally valued this sector at Rs.1,358,309 million in 2005 thus registering over 96% growth since 2000.

Finance and insurance

A reduction in the fiscal deficit has resulted in less government borrowing in the domestic money market, lower interest rates, and an expansion in private sector lending to businesses and consumers. Foreign exchange reserves continued to reach new levels in 2003, supported by robust export growth and steady worker remittances.

Credit card market continued its strong growth with sales crossing the 1 million mark in mid-2005.

Since 2000 Pakistani banks have begun aggressive marketing of consumer finance to the emerging middle class, allowing for a consumption boom (more than a 7-month waiting list for certain car models) as well as a construction bonanza.

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The Federal Bureau of Statistics provisionally valued this sector at Rs.311,741 million in 2005 thus registering over 166% growth since 2000.

Ownership of dwellings

The property sector has expanded twenty-threefold since 2001, particularly in metropolises like Lahore. Nevertheless, the Karachi Chamber of Commerce and Industry estimated in late 2006 that the overall production of housing units in Pakistan has to be increased to 0.5 million units annually to address 6.1 million backlog of housing in Pakistan for meeting the housing shortfall in next 20 years. The report noted that the present housing stock is also rapidly ageing and an estimate suggests that more than 50 percent stock is over 50 years old. It is also estimated that 50 percent of the urban population now lives in slums and squatter settlements. The report said that meeting the backlog in housing, besides replacement of out-lived housing unit is beyond the financial resources of the government. This necessitates putting in place of framework to facilitate financing in the formal private sector and mobilise non-government resources for a market-based housing finance system.

The Federal Bureau of Statistics provisionally valued this sector at Rs.185,376 million in 2005 thus registering over 49% growth since 2000.

Public administration and defence

The Federal Bureau of Statistics provisionally valued this sector at Rs.389,545 million in 2005 thus registering over 65% growth since 2000.

Social, community and personal services

The Federal Bureau of Statistics provisionally valued this sector at Rs.631,229 million in 2005 thus registering over 78% growth since 2000.

Economic aid

Pakistan receives economic aid from several sources as loans and grants. The International Monetary Fund (IMF), World Bank (WB), Asian Development Bank (ADB), etc provides long term loans to Pakistan. Pakistan also receives bilateral aid from developed and oil-rich countries.

The Asian Development Bank will provide close to \$6 billion development assistance to Pakistan during 2006-9. The World Bank unveiled a lending program of up to \$6.5 billion for Pakistan under a new four-year, 2006-2009, aid strategy showing a significant increase in funding aimed largely at beefing up the country's infrastructure. Japan will provide \$500 million annual economic aid to Pakistan.

Remittance

The remittance of Pakistanis living abroad has played important role in Pakistan's economy and foreign exchange reserves. The Pakistanis settled in Western Europe and North America are important sources of remittance to Pakistan. Since 1973 the Pakistani workers in the oil rich Arab states have been sources of

billions dollars of remittance.

Pakistan received \$5.493 billion as workers' remittances during the last fiscal year 2006-07 up by 19.42 Percent against over \$4.6 billion in 2005-06.

An IMF research paper has revealed that workers' remittances contribute 4% to the GDP of Pakistan and are equivalent to about 22 percent of annual exports of goods and services.

Investment

Foreign direct investment (FDI) in Pakistan soared by 180.6 per cent year-on-year to US\$2.22 billion and portfolio investment by 276 per cent to \$407.4 million during the first nine months of fiscal year 2006, the State Bank of Pakistan (SBP) reported on April 24. During July-March 2005-06, FDI year-on-year increased to \$2.224 billion from only \$792.6 million and portfolio investment to \$407.4 million, whereas it was \$108.1 million in the corresponding period last year, according to the latest statistics released by the State Bank. Pakistan has achieved FDI of almost \$7 billion in the financial year 06/07, surpassing the government target of \$4 billion.

Pakistan is now the most investment-friendly nation in South Asia. Business regulations have been profoundly overhauled along liberal lines, especially since 1999. Most barriers to the flow of capital and international direct investment have been removed. Foreign investors do not face any restrictions on the inflow of capital, and investment of up to 100% of equity participation is allowed in most sectors (local partners must be brought in within 5 years and contribute up to 40% of the equity in the services and agriculture sectors). Unlimited remittance of profits, dividends, service fees or capital is now the rule. Business regulations are now among the most liberal in the region. This was confirmed by a World Bank report published in late 2006 ranking Pakistan (at 74th) well ahead of neighbors like China (at 93rd) and India (at 134th) based on ease of doing business.

Pakistan is attracting an increasingly large amount of private equity and was ranked as number 20 in the world based on the amount of private equity entering the nation. Pakistan has been able to attract a large portion of the global private equity investments because of economic reforms initiated in 2003 that have provided foreign investors with greater assurances for the stability of the nation and their ability to repatriate invested funds in the future.

Tariffs have been reduced to an average rate of 16%, with a maximum of 25% (except for the car industry). The privatisation process, which started in the early 1990s, has gained momentum, with most of the banking system privately owned, and the oil sector targeted to be the next big privatisation operation.

The recent improvements in the economy and the business environment have been recognised by international rating agencies such as Moody's and Standard and Poor's (country risk upgrade at the end of 2003).

Foreign trade



Pakistan is a member of the World Trade Organization, and has bilateral and multilateral trade agreements with many nations and international organizations.

Fluctuating world demand for its exports, domestic political uncertainty, and the impact of occasional droughts on its agricultural production have all contributed to variability in Pakistan's trade deficit.

In the six months to December 2003, Pakistan recorded a current account surplus of \$1.761 billion, roughly 5% of GDP.

Pakistan's exports continue to be dominated by cotton textiles and apparel, despite government diversification efforts. Exports grew by 19.1% in FY 2002-03. Major imports include petroleum and petroleum products, edible oil, chemicals, fertilizer, capital goods, industrial raw materials, and consumer products.

Past external imbalances left Pakistan with a large foreign debt burden. Principal and interest payments in FY 1998-99 totaled \$2.6 billion, more than double the amount paid in FY 1989-90. Annual debt service peaked at over 34% of export earnings before declining.

With a current account surplus in recent years, Pakistan's hard currency reserves have grown rapidly. Improved fiscal management, greater transparency and other governance reforms have led to upgrades in Pakistan's credit rating. Together with lower global interest rates, these factors have enabled Pakistan to prepay, refinance and reschedule its debts to its advantage. Despite the country's current account surplus and increased exports in recent years, Pakistan still has a large merchandise-trade deficit. The budget deficit in fiscal year 1996-97 was 6.4% of GDP. The budget deficit in fiscal year 2003-04 is expected to be around 4% of GDP.

In the late 1990s Pakistan received about \$2.5 billion per year in loan/grant assistance from international financial institutions (e.g., the IMF, the World Bank, and the Asian Development Bank) and bilateral donors. Increasingly, the composition of assistance to Pakistan shifted away from grants toward loans repayable in foreign exchange. All new U.S. economic assistance to Pakistan was suspended after October 1990, and additional sanctions were imposed after Pakistan's May 1998 nuclear weapons tests. The sanctions were lifted by president George W. Bush after Pakistani president Musharraf allied Pakistan with the U.S. in its war on terror. Having improved its finances, the government refused further IMF assistance, and consequently the IMF program was ended. The government is also reducing tariff barriers with bilateral and multilateral agreements.

While the country has a current account surplus and both imports and exports have grown rapidly in recent years, it still has a large merchandise-trade deficit. The budget deficit in fiscal year 2004-2005 was 3.4% of GDP. The budget deficit in fiscal year 2005-06 is expected to be over 4% of GDP. Economists believe that the soaring trade deficit would have an adverse impact on Pakistani rupee by depreciating its value against dollar (1 US \$ = 60 Rupees (March 2006)) and other currencies.

One of the main reasons that contributed to the increase in trade deficit is the increased imports of earthquake relief related items, especially tents, tarpaulin and plastic sheets to provide temporary shelter to the survivors of earthquake of October 8, 2005 in Azad Jammu and Kashmir and parts of the NWFP, an official said. The rise in the trade gap was also fuelled by high oil import prices, food items, machinery and automobiles.

The Petroleum Ministry says that this year the bill of oil imports was expected to reach \$6.5 billion against \$4.6 billion in the last fiscal year, which is the main

reason behind the all-time high trade deficit.

The EU is the single largest trading partner of Pakistan absorbing over one-third of the exports in 2003.

Exports

Pakistan's exports stood at \$17.011 billion in the financial year 2006-2007, up by 3.4 percent from last year's exports of \$16.451 billion.

Pakistan exports rice, furniture, cotton fibre, cement, tiles, marble, textiles, clothing, leather goods, sports goods (renowned for footballs/soccer balls), surgical instruments, electrical appliances, software, carpets, and rugs, ice cream, livestock meat, chicken, powdered milk, wheat, seafood (especially shrimp/prawns), vegetables, processed food items, Pakistani assembled Suzukis (to Afghanistan and other countries), defense equipment (submarines, tanks, radars), salt, marble, onyx, engineering goods, and many other items. Pakistan now is being very well recognized for producing and exporting cements in Asia and Mid-East. Starting August 2007, Pakistan will be exporting Cement to India.

Imports

Pakistan's imports stood at \$30.54 billion in the financial year 2006-2007, up by 8.22 percent from last year's imports of \$28.58 billion.

Pakistan's single largest import category is petroleum and petroleum products. Other imports include: industrial machinery, construction machinery, trucks, automobiles, computers, computer parts, medicines, pharmaceutical products, food items, civilian aircraft, defense equipment, iron, steel, toys, electronics, and other consumer items.

Sales tax is levied at 15 percent both on imports and domestically produced products. The income withholding tax is levied at 6 percent on imports and at 3.5 percent on the sales of domestic taxpayers.

Deficit in economy

Pakistan suffered a merchandise trade deficit of \$13.528 billion for the financial year 2006-7. The gap has considerably widened since 2002-3 when the deficit was only \$1.06 billion. Services sector deficit for 2006-2007 stood at \$4.125 billion which equals the services export of \$4.125 billion for the same year.

The combined deficit in services and goods stand at \$17.653 billion which is approx 83.5 percent of country's total export of \$21.136 (Goods and services). The rise in the trade gap has been attributed to high oil import bill, and rise in the prices of food items, machinery and automobiles.

Current account deficit - Current account deficit for 2006-7 reached \$7.016 billion up by 41 percent over previous year's \$4.490 billion.

Bonds

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Pakistan is expected to sell a dual-tranche sovereign bond worth \$750 million on March 23, 2006 that analysts said should ensure a favorable reception in the bond market. The 10-year tranche would be \$500 million and the 30-year portion \$250 million. Pricing is expected during New York trading hours on March 23, 2006. The sources said that the 10-year tranche was expected to be priced at around 7.125 percent, while the longer-dated tranche was expected to be sold at around 7.875 percent, the top end of the indicative yield range of 7.75 to 7.875 percent.

The bonds, comprising 10-year and 30-year tranches, had generated \$1.5 billion in orders and a total size of as much as \$1.25 billion had been anticipated for what is Pakistan's third foray into the international debt market since 2004.

Government of Pakistan has been raising money from the international debt market from time to time.

Details of amount raised in various issues is as follows:-

1999 - \$623 million

2004 - \$500 million @ 6.75 Percent

2005 - \$600 million worth Islamic bonds

2007 - \$ 750 million @ 6.875 Percent worth Euro Bonds which were highly over subscribed

Foreign acquisitions and mergers

With the rapid growth in Pakistan's economy, foreign investors are taking a keen interest in the corporate sector of Pakistan. In the recent years, majority stakes in many corporations have been acquired by multinational groups.

- PICIC by Singapore based Tamasek holdings for \$339 million
- Union Bank by Standard Chartered bank for \$487 million
- Prime commercial bank by ABN Amro for \$228 million
- PakTel ltd by China Mobile Ltd for \$460 million
- Additional 57.6 percent shares of Lakson Tobacco company acquired by Philip Morris international for \$382 million

The foreign exchange receipts from these sale outs are also helping covering the massive current account deficit.

Fiscal budget

- Fiscal year: 1 July - 30 June

- Revenues: \$19.8 billion
- Expenditures: \$25 billion (2006 est.)
- Debt - external: \$39.94 billion (2005 est.)
- Economic aid - recipient: \$2 billion (FY97/98)

Industrial sector

- Industries: textiles (8.5% of the GDP), food processing, beverages, construction materials, clothing, paper products, shrimp
- Industrial production growth rate: 10.7% (2005)
- Large-scale manufacturing growth rate: 18% (2003)

Income distribution

- Gini Index: 41
- Household income or consumption by percentage share:
 - lowest 10%: 4.1%
 - highest 10%: 27.7% (1996)
 - lowest 20% : 27.7% (2006)

Electricity

Electricity production

- Electricity - production: 88.42 TWh (2005)
- Electricity - production by source (2003)
 - fossil fuel: 63.7% of total
 - hydro: 33.9% of total
 - nuclear: 2.4% of total

Last week's reports of Pakistan's electricity producers seeking a parity in returns for both domestic and foreign investors is indicative of one of the key unresolved issues in overseeing a surge in electricity generation when the country faces growing shortages.

For years, the matter of balancing Pakistan's supply against the demand for electricity has remained a largely unresolved matter. Pakistan faces a significant challenge in revamping its network responsible for the supply of electricity.

While the government claims credit for overseeing a turnaround in the economy through a comprehensive recovery, it has just failed to oversee a similar improvement in the quality of the network for electricity supply.

Some officials even go as far as claiming that the frequent power cuts across Pakistan today are indicative of an emerging prosperity as there is fast rising demand for electricity. And yet, the failure to meet the demand is indeed indicative of a challenge to that very prosperity.

Growing demand

In the short run addressing difficult challenges such as the demand for a parity of treatment to both domestic and foreign investors must make some difference by way of attracting investors across the board. Given the growing demand for electricity, foreign investors must have a role in helping Pakistan meet this challenge.

But the challenges faced by Pakistan are by no means easy. It is indeed the case that the business of reforming the electricity supply network is just not about short term and often incomplete measures of the kind that Pakistanis have been accustomed to.

Even if Pakistan successfully set aside the vast funds which are necessary to finance such a turn-around, the time taken to ensure the supply of all the technical ingredients must in itself make the task formidably challenging.

Popular habits

In the environment which prevails across the world today, there is already a considerable line-up of both individuals and countries which have placed orders to buy new equipment. Indeed, Pakistani officials are all too aware of international market conditions which only add to the difficulty surrounding their task.

Though sorting out global market conditions are just not in reach of one country alone, other matters are indeed within Pakistan's grasp. These include the need to turn around popular habits which hardly help to curtail the usage of electricity, with wastages and deliberate inefficiencies being the principal factors. But the lead for such an endeavour must come in part from Pakistani leaders.

Electricity consumption

- Electricity - consumption: 74.62 TWh (2004)
- Electricity - exports: 0%
- Electricity - imports: 0%
- Electricity Consumption per Capita = 345.00 kWh/capita

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Economy of Scotland

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The **economy of Scotland** is closely linked with the rest of the United Kingdom and the wider European Economic Area, it is essentially a mixed economy. Scotland has the second largest GDP per capita of any region in the United Kingdom after the South East of England, which includes Greater London.

Scotland was one of the industrial powerhouses of Europe from the time of the Industrial Revolution onwards, being a world leader in manufacturing and shipbuilding related industries, at the time, which today has left a legacy in the diversity of goods and services which the Scottish economy produces from textiles, whisky and shortbread to aeroengines, buses, computer software, ships, avionics and microprocessors to banking, insurance, fund management and other related financial services.

In common with most other advanced industrialized economies, Scotland has seen a decline in the importance of the manufacturing industries and primary-based extractive industries. This has, however, been combined with a rise in the service sector of the economy which is now the largest sector in Scotland, with significant rates of growth over the last decade.

The British Pound Sterling is the official currency of Scotland, and the central bank of the UK is the Bank of England which retains responsibility for the monetary policy of the whole of the United Kingdom.

Overview

After the Industrial Revolution, the Scottish economy concentrated on heavy industry, dominated by the shipbuilding, coal mining and steel industries. Scottish participation in the British Empire also allowed the Scottish economy to export its output throughout the world. However heavy industry declined in the latter part of the 20th century leading to a remarkable shift in the economy of Scotland towards a technology and service sector based economy. The 1980s saw an economic boom in the Silicon Glen corridor between Glasgow and Edinburgh, with many large technology firms relocating to Scotland. Today the industry employs over 41,000 people. Scottish-based companies have strengths in information systems, defence, electronics, instrumentation and semi-conductors. There is also a dynamic and fast growing electronics design and development industry, based around links between the universities and indigenous companies like Wolfson, 4i2i, Linn, Nallatech and Axon. There is also a significant presence of global players like National Semiconductor and Motorola. Other major industries include banking and financial services, education, entertainment, biotechnology, transport equipment, oil and gas, whisky, and tourism. The Gross Domestic Product (GDP) of Scotland was measured at just over £86.3 billion (€126 billion, \$170 billion) by the Office for National Statistics in 2005 , giving a per capita GDP of £16,944 (€24,792, \$33,460). Average annual economic growth for 2006 was at 2.2% .



The headquarters of the Bank of Scotland, located on the Mound in Edinburgh.



Royal Bank of Scotland £100 notes

Edinburgh is the financial services centre of Scotland and the sixth largest centre in Europe, with many large financial firms based there, including the Royal Bank of Scotland (the second largest bank in Europe), HBOS (owners of the Bank of Scotland) and Standard Life Insurance. Glasgow is Scotland's leading seaport and is the fourth largest manufacturing centre in the UK, accounting for well over 60% of Scotland's manufactured exports. Shipbuilding, although significantly diminished from its heights in the early 20th century, is still a large part of the Glasgow economy. The city has the UK's largest and most economically important commerce and retail district after London's West End. Glasgow is also one of Europe's top 20 financial centres and is home to many of the UK's leading companies. Other important industries include

textile production, chemicals, distilling, brewing and fishing.

Manufacturing

Manufacturing in Scotland has shifted its focus in recent years with heavy industries such as shipbuilding and iron and steel declining in their importance and contribution to the economy. It is generally argued that this has been in response to increasing globalisation and competition from low cost producers across the world, which has eroded Scotland's comparative advantage in such industries over the later half of the 20th century. However, the decline in heavy industry in Scotland has been supplanted with the rise in the manufacture of lighter, less labour intensive products such as optoelectronics, software, chemical products and derivatives as well as life sciences. The Engineering and Defence sectors employ around 30,000 people in Scotland. The principal companies operating in the sector include; BAE Systems, Rolls-Royce, Raytheon, Alexander Dennis, Thales, Selex and Babcock. Not only has the decline of heavy industry, in the last 20 to 30 years, resulted in a sectoral shift of labour, it has led to smaller firms, strengthening links with the academic community and substantial, industry-specific retraining programmes for the workforce.



Whisky stills at Glenfiddich Distillery in Moray.

Whisky

Scotch Whisky is probably the best known of Scotland's manufactured exports contributing around £800 million to the Scottish economy, supporting 41,000 jobs as well as adding £2 billion to the balance of trade making it one of the UK's top five manufacturing export earners. The Whisky industry also generates a substantial income for the government with around £1.6bn raised in duty each year. The principal whisky producing areas include Speyside and the island of Islay where there are 8 distilleries providing a major source of employment for the island. In many areas the whisky industry is closely related with tourism, with many distilleries also functioning as tourist attractions.

Electronics

The electronics industry in Scotland Silicon Glen is the phrase that is used to describe the growth and development of Scotland's hi-tech and electronics industries in the Central Belt through the 1980s and 1990s, analogous to the larger concentration of hi-tech industries in Silicon Valley, California. Companies such as IBM (which maintains a plant at Greenock near Glasgow) have been in Scotland since the 1950's being joined in the 1980's by others such as Sun Microsystems at Linlithgow. 45,000 people are employed by electronics and electronics-related firms, accounting for 12% of manufacturing output. Today, Scotland produces 28% of Europe's PCs; more than seven per cent of the world's PCs; and 29% of Europe's notebooks.

Textiles

Historically textiles were a large employer in Scotland in places such as the Scottish Borders, Shetland and the Outer Hebrides - areas where there is much production of wool. Knitwear and tweed are traditionally seen as cottage industries but names like Pringle have given Scottish knitwear and apparel a presence on the international market. Despite increasing competition from low-cost textile producers in SE Asia and the Indian subcontinent, textiles in Scotland is still a major employer with a workforce of around 22,000. Furthermore the textiles industry is the 7th largest exporter in Scotland accounting for over 3% of all Scottish manufactured products

Exports

In 2004, total Scottish exports (excluding intra-UK trade) was provisionally estimated to be £17.5 billion, of which 70% (£12.2 billion) were attributable to manufacturing. The largest export products for Scotland are whisky, electronics, and financial services.

Major Trading Partners

Excluding intra UK trade, the United States and the EU constitute the largest markets for Scotland's exports. As part of the United Kingdom and the European Union, Scotland fully participates in the Single Market and Free Trade Area which exists across all EU member states and regions. Recently with the high rates of growth in many emerging economies of SE Asia such as China, Thailand and Singapore, there has been a drive towards marketing Scottish products and manufactures in these countries, with Singapore entering the top ten markets for Scottish exports in 2004.



HMS *Daring* was built in Glasgow and launched in 2006. Although diminished from its early 20th century heights, Glasgow remains the hub of the UK's Shipbuilding industry.

Top 10 export destinations, 2007

Export destination	Value (£billion)
USA	3,610
Netherlands	2,645
Germany	2,600
France	2,165
Spain	1,775
Republic of Ireland	1,700
Switzerland	1,585
Belgium	955
Italy	925
Singapore	865

Source: Scottish Executive Global Connections Survey 2005

Services

Banking

Edinburgh is Europe's fifth largest financial centre, with influential financial players such as the Royal Bank of Scotland, the Bank of Scotland, Scottish Widows and Standard Life all having a presence in the city.

Banking in Scotland has a long history, beginning with the creation of the Bank of Scotland, in Edinburgh, in 1695. Today Scotland is home to 4 clearing banks - the Bank of Scotland, the Royal Bank of Scotland, the Clydesdale Bank and Lloyds TSB Scotland. The Royal Bank of Scotland which is the second largest bank in Europe, fifth largest in the world by market capitalisation and has significant international operations recently opened its new global headquarters in Edinburgh augmenting the city's position as a major financial centre. Many other international banks are beginning to operate bases in Scotland, as the sector expands. In 2005 Scotland ranked second only to London in the European league of headquarters locations of the 30 largest banks in Europe as measured by market value.

Finance in Scotland also features unique characteristics. Although the Bank of England remains the central bank for the UK Government, three Scottish clearing banks still issue their own banknotes: (the Bank of Scotland, the Royal Bank of Scotland and the Clydesdale Bank). These notes have no status as legal tender in England, Wales or Northern Ireland; but in practice they are universally accepted throughout the UK, as well as in the Isle of Man and the Channel Islands. The full range of Scottish bank notes commonly accepted are £5, £10, £20, £50 and £100. (See British banknotes for further discussion).

Centered primarily on the cities of Edinburgh and Glasgow, the development of financial services industry in the Scottish Economy, has taken place over the last 10 to 20 years. The sector makes a significant contribution to the economy employing 5% of the Scottish workforce or 113,160 people and generating £5bn or 6% of Scotland's GDP. The financial services industry in Scotland is also one of its fastest growing areas with a growth rate of over 35% over the period 2000 to 2005.

Investment, Insurance and Asset Servicing

Scotland is one of the world's biggest fund management centres with over £300bn worth of assets directly serviced or managed in the country. Scottish fund management centres have a major presence in areas such as pensions, property funds, investment trusts as well as in retail and private client markets. Similarly asset servicing on behalf of fund managers has become an increasingly important component of the financial services industry in Scotland with Scottish based companies providing expertise in securities servicing, investment accounting, performance measurement, trustee and depositary services and treasury services.



Standard Life Bank, in the Financial District of Edinburgh

Tourism

It is estimated that tourism accounts for 3% of Scotland's economic output. Scotland is a well-developed tourist destination with attractions ranging from unspoilt countryside, mountains and abundant history. Tourism is responsible for sustaining 200,000 jobs mainly in the service sector, with tourist spending averaging at £4bn per year . Domestic tourists (those from the United Kingdom) make up the bulk of visitors to Scotland. In 2002, for example, UK visitors made 18.5 million visits to Scotland, staying 64.5 million nights and spending £3.7 billion. In contrast, overseas residents made 1.58 million visits to Scotland, staying 15 million nights and spending £806 million. In terms of overseas visitors, those from the United States made up 24% of visits to Scotland, with the United States being the largest source of overseas visitors, and Germany (9%), France (8%), Canada (7%) and Australia (6%), following behind.

Infrastructure

Infrastructure in Scotland is varied in its provision and its quality. The densest network of roads, railways and motorways is concentrated in the Central Lowlands of the country where around 70% of the population live. The motorway and trunk road network is principally centred on the cities of Edinburgh and Glasgow and connecting them to other major concentrations of population, and is vitally important to the economy of Scotland. Key routes include the M8 motorway, which is one of the busiest and most important major routes in Scotland, with other primary routes such as the A9 connecting the Highlands to the Central Belt, and the A90/ M90 connecting Edinburgh and Aberdeen in the east. The M74 and A1, in the west and east of the country, respectively, provide the main road corridors from Scotland to England. The Scottish Executive has stated that it intends to spend £3bn on a capital investment scheme to improve Scotland's road and rail system, over the next decade , with the setting up of a national agency in January 2006 - Transport Scotland to oversee this. Many roads in the Highlands are single track, with passing places.

The rail network is primarily centred on the central belt and is used principally as a means of public transport, with some freight movements - for example from the port facilities at Grangemouth and Hunterston Ore Terminal. After a large rationalisation of routes in the 1960s, which led to station and line closures, the rail network is currently being expanded, to cope with ever increasing levels of passenger demand. The rail-operator First ScotRail operates most routes within Scotland, with long-distance connections to London operated by GNER or Virgin Trains. Proposals which have been mooted include the construction of a high-speed MAGLEV rail system connecting Edinburgh and Glasgow which, it estimated, will cut journey times between the two cities by around 30 minutes . Other measures suggested include the electrification of the rail system in order to cut journey times.



Gleneagles Hotel, Perthshire. Tourism is one of Scotland's fastest growing economic sectors.



Glasgow International Airport, the second largest passenger airport in Scotland.

In 2004, 22.6 million passengers used Scotland's airports, with their being 514,000 aircraft movements with Scottish airports being amongst the fastest growing in the United Kingdom in terms of passenger numbers. Plans have been published by the major airport operator BAA plc to facilitate the expansion of capacity at the major international airports of Glasgow, Edinburgh and Aberdeen, including new terminals and runways to cope with a large forecasted rise in passenger use. Prestwick Airport also has large air freight operations and cargo handling facilities. Scotland is well-served by many airlines and has an expanding international route network, with recent long-haul services to Dubai, New York, Atlanta and Canada.

Major deep-water Port facilities exist at Aberdeen, Grangemouth, Greenock, Peterhead, Scapa Flow and Sullom Voe. Scotland is connected to mainland Europe by a dedicated ferry service between Rosyth (near Edinburgh) and Zeebrugge in Belgium. In addition to this many remote island communities on Scotland's western seaboard are served by lifeline ferry services operated by the state-owned company Caledonian MacBrayne, which carry tourists as well as freight and are vital to the economies of these islands.

The Role of the Public Sector

The public sector, in Scotland, has a significant impact upon the economy and comprises central government departments, local government, and public corporations. In quarter 3 of 2005, there were 577,300 people employed in the public sector, which accounts for 23.4% of employment in Scotland - this includes all medical professionals employed within the National Health Service in Scotland, those employed in the emergency services and those employed in the state education and higher education sector. This is in addition to employees of the government in the civil service and in local government as well as public bodies and corporations.

There is a clear separation of responsibility of the powers of both the UK government and the devolved Scottish Executive in relation to the formulation and execution of national economic policy as it affects Scotland - this is set out under Section 5 of the Scotland Act 1998.

UK Government

The UK Government along with the Parliament of the United Kingdom retains full control over Scotland's fiscal environment, in relation to taxation (including tax rates and tax collection) and the overall share of central government expenditure apportioned to Scotland, in the form of an annual block grant. It also retains complete responsibility for the operation of the Welfare State, in terms of pensions, unemployment insurance and child benefit - as part of the UK-wide Welfare State exercised by the UK Department for Work and Pensions and HM Treasury.

Scottish Government

The Scottish Executive has very limited power to raise or lower the rate of income tax in Scotland by up to 3p in the pound, but has the power to vary business rates and can regulate the application of local taxes such as the council tax levied by local authorities in Scotland. Nevertheless the Scottish Executive has full control over how Scotland's annual block grant is divided between government departments, such as healthcare and education and on state-owned enterprises, such as Scottish Water and Caledonian MacBrayne. The Scottish Executive does however have control over Economic Development policy, and controls, funds

and regulates the national Economic development Agency - Scottish Enterprise. In 2006, for example, the budget of the Scottish Executive was around £25bn, which the Scottish Executive can spend on the areas under its jurisdiction such as education, healthcare, transport, the environment and justice.

Local

The 32 unitary authorities in Scotland have the ability to levy a local tax, called the Council Tax which is used to pay for local services such as refuse collection, street lighting, roads, pavements, public parks and museums. The value of residential property is the base for the tax, with each dwelling allocated to one of eight bands coded by letters A through H (H being the highest) on the basis of its assumed capital value. Each local authority sets a tax rate expressed as the annual levy on a Band D property inhabited by two liable adults. The budget of local authorities is supplemented by direct grants from the Scottish Executive.

Education

Education in Scotland is well-funded with very high levels of participation in all sectors of education. Participation in further and higher education is especially high, with Scottish universities generally being recognised as amongst the best in the teaching of medicine, law, engineering, science and technology. Increasingly Scotland is being seen as an exporter of education, with the number of overseas students applying to studying at universities throughout Scotland, rising substantially in recent years . Most universities are linked with a flourishing research and development sector; the University of Dundee is at the heart of a biotechnology and medical research cluster ; the University of Edinburgh is a centre of excellence in the field of Artificial Intelligence and the University of Aberdeen is a world-leader in the study of offshore technology in the oil and gas industry . Scotland generally has a well-educated population - adult Literacy rates are at over 99%.

Health

Another major component of central government expenditure in Scotland is on healthcare and healthcare related services. The National Health Service (NHS) is the publicly controlled provider of the majority of healthcare in Scotland, with the NHS being a major employer not only in terms of doctors nurses and other key healthcare workers, but also in terms of administration. The service is administered differently from the rest of the United Kingdom and is largely *free at the point of use* to residents in Scotland, except for dental services (where those over 19 must pay) and prescriptions (free to the elderly and subsidised for others). In the short term spending on healthcare in Scotland remains high in response to the nations' poor diet and high instance of heart disease. In the medium to long term, the challenges of an ageing population are likely to increase demand for health services and put increasing pressure on the health service in Scotland.

Other Economic Indicators

Total Population: 5,494,801 (2007 est)

Working Age Population: 2,475,386 (2007 est.)

GDP (£billion): 186.3 (2006)

Manufacturing GVA (£million): 28 900 (2007)

Number of VAT registered companies: 185,925 (2007 est.)

Number of Large Companies (250+ employees) in Scotland: 2,240 (2007)

Employment Rate (% of adults of working age): 78.7 (2007)

Median Gross Weekly Earnings of full-time workers on adult rates (£): 592.70

Claimant Unemployment Rate (%): 2.1 (2007)

People of working age claiming key Social Security benefits (%): 11.7 (Feb. 2007)

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Economy of the European Union

2008/9 Schools Wikipedia Selection. Related subjects: Economics

If it were considered as a single state, the **economy of the European Union's** twenty-seven member states would be the world's largest national economy. The EU accounts for 30.3% of the world's total GDP in 2005 (World Bank figures).

Currency

The official currency of the European Union is the euro, used in all its documents and policies. The Stability and Growth Pact sets out the fiscal criteria to maintain for stability and (economic) convergence. The euro is also the most widely used currency in the EU, which is in use in 15 member states known as the Eurozone. All other member states, apart from Denmark and the United Kingdom which have special opt-outs, have committed to changing over to the Euro once they have fulfilled the requirements needed to do so - although Sweden also has an effective opt-out by choosing when or whether to join the European Exchange Rate Mechanism which is the preliminary step towards joining. The remaining states are committed to join the Euro through their Treaties of Accession.























Economic variation

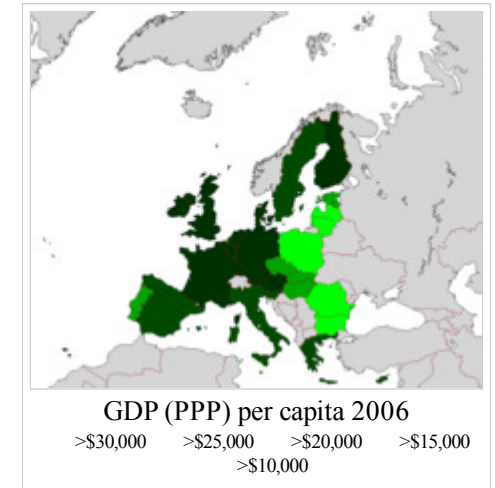
Below is a table showing, respectively, the GDP (PPP) and the GDP (PPP) per capita for the European Union and for each of its 27 member states, sorted by GDP (PPP) per capita. This can be used as a rough gauge to the relative standards of living among member states, with Luxembourg and Ireland the highest; Romania and Bulgaria the lowest. Eurostat, based in Luxembourg, is the Official Statistical Office of the European Communities releasing yearly GDP figures for the member states as well as the EU as a whole, which are regularly updated, supporting this way a measure of wealth and a base for the European Union's budgetary and economic policies. Figures are stated in euro. All data for 2007 are projections.










These are the official Eurostat figures, as of 21 April 2007.

Economy of the European Union	
Currency	1 Euro (€) = 100 cents
<p>Other currencies in member states Bulgarian lev • Czech koruna • Danish krone • Estonian kroon • Hungarian forint • Latvian lats • Lithuanian litas • Polish zloty • Romanian leu • Swedish krona • Slovak koruna • Pound sterling</p>	
Statistics	
GDP ranking	1st (2006)
GDP (PPP)	US \$13.06 trillion (2006)
GDP growth rate	3.1% (2006)
GDP per capita	US \$29,900 (2006)
GDP by sector (2006)	70.5% services 27.3% industry 2.1% agriculture
Inflation	1.9% (2007)
Population below poverty threshold	17%
Labour force	221.5 million
Labour force by occupation (2006)	67.0% services 27.3% industry 4.4% agriculture

Unemployment	7.0% (May 2007)
Sources:	
Trading partners	
Imports	US \$1.466 trillion (2006)
Main import partners (2005) China, Japan, Russia, United States	
Exports	US \$1.33 trillion (ranking: 1st) (2006)
Main export partners (2005) China, Russia, Switzerland, United States	
Public finances	
Public debt	€ 7,240.8 billion (58.7% of GDP) (2007)
Public deficit	€ 109.5 billion (-0.9% of GDP) (2007)
Expenditure	€ 5,648.6 billion (2007)
Revenue	€ 5,537.6 billion (2007)
<p>Note: The data in this section is derived from the combined public finance figures of each of the 27 EU member states</p> <p>Sources: Eurostat Data 2008</p>	

Member States	GDP (PPP) 2007 millions of euro	GDP (PPP) per capita 2007 euro	Percentage of EU27 average GDP (PPP) per capita
 European Union	<i>12,172,536</i>	<i>24,600</i>	<i>100%</i>
1  Germany €	2,340,372	28,200	115%
2  United Kingdom	1,847,105	29,400	120%
3  France €	1,744,444	27,800	113%
4  Italy €	1,500,475	25,500	104%
5  Spain €	1,121,961	25,400	103%
6  Netherlands €	530,564	32,800	133%
7  Poland	525,277	15,143	55%
8  Belgium €	319,867	30,200	123%
9  Sweden	274,499	30,000	122%
10  Austria €	264,472	31,900	130%
11  Greece €	246,671	22,100	90%
12  Romania	208,220	9,700	39%
13  Czech Republic	207,174	20,100	82%
14  Portugal €	190,882	18,200	74%
15  Denmark	171,298	31,200	127%
16  Hungary	166,031	16,200	66%
17  Ireland €	157,070	35,700	147%
18  Finland €	153,595	28,900	117%
19  Slovakia	88,602	16,400	67%
20  Bulgaria	86,500	10,844	41%
21  Lithuania	50,241	15,000	61%



22	 Slovenia €	44,040	21,800	89%
23	 Latvia	33,630	14,900	61%
24	 Luxembourg €	31,376	69,900	284%
25	 Estonia	23,919	17,900	73%
26	 Cyprus €	17,773	22,900	93%
27	 Malta €	7,824	18,600	76%
Candidate countries: (not included in the EU total above)				
	 <i>Croatia</i>	57,948	14,153	57%
	 <i>Turkey</i>	541,418	7,300	30%
	 <i>Republic of Macedonia</i>	13,897	6,900	28%

Source:GDP(PPP): EUROSTAT

PERCENTAGES: EUROSTAT(). Recalculated manually to EU27.


























Economies of member states




Economic performance varies from state to state. The Growth and Stability Pact governs fiscal policy with the European Union. It applies to all member states, with specific rules which apply to the eurozone members that stipulate that each state's deficit must not exceed 3% of GDP and its public debt must not exceed 60% of GDP. However, many larger members have consistently run deficits substantially in excess of 3%, and the eurozone as a whole has a debt percentage exceeding 60% (see below).

With the exception of Greece and Portugal, all countries with below average GNI per capita are those which joined the EU in May 2004 and all countries with above average GNI per capita come from the existing (pre-2004) member states.

The following table shows information relating to the member states of the European Union, ordered according to the 'Size' of their economies. (NB: Were the table ordered according to 'GDP per capita' this would perhaps better reflect the strength of an individual economy. But this is not how such tables are commonly structured).

The colours denote how a member state is performing relative to the rest of the European Union, above average (green) or below average (red). The smallest and greatest values in each column are emphasised. The 2007 data are IMF estimates made in April 2007.

Member State sorted by GDP	GDP in billions of US \$ (2007)	GDP % of EU (2007)	Annual change % of GDP	GDP per capita in PPP US \$ (2007)	Public Debt % of GDP (2006)	Deficit % of GDP (2006)	Inflation % Annual (2007)	Unemp. % (2006)
 European Union	15,183.4	100.0%	2.8	29 342	63.8	-2.6	2.2	7.5
 Germany	3,080.6	19.4%	1.8	32,179	66.0	-3.7	2.0	7.8
 United Kingdom	2,660.7	16.8%	2.9	36,568	41.6	-3.2	2.3	5.3
 France	2,401.4	15.2%	2.0	31,873	65.6	-3.7	1.7	8.3
 Italy	1,993.7	12.6%	1.8	31,694	105.8	-3.0	2.1	6.8
 Spain	1,359.1	8.6%	3.8	28,445	48.9	-0.3	2.6	7.8
 Netherlands	720.9	4.5%	2.9	36,240	55.7	-2.5	1.8	3.2
 Sweden	423.6	2.7%	3.3	35,729	51.2	-1.4	1.8	5.5
 Belgium	423.5	2.7%	2.2	35,693	95.6	-0.1	1.9	7.8
 Poland	364.8	2.3%	5.8	15,894	43.6	-3.0	2.2	10.5
 Austria	348.7	2.2%	2.8	37,536	65.2	-1.3	1.6	4.5
 Greece	341.8	2.2%	3.8	27,360	106.5	-2.8	3.2	8.3
 Denmark	302.6	1.9%	2.5	38,072	42.7	-2.8	2.0	4.7
 Ireland	250.2	1.6%	5.0	46,786	29.9	-1.3	2.4	4.5
 Finland	225.4	1.4%	3.1	36,324	43.6	-2.1	1.5	7.5
 Portugal	211.7	1.3%	1.8	23,464	61.9	-2.9	2.5	7.4
 Czech Republic	160.4	1.0%	4.8	24,679	37.4	-3.0	2.9	6.6
 Romania	157.6	1.0%	6.5	10,661	21.2	-4.0	4.5	4.5
 Hungary	125.0	1.0%	2.8	20,700	57.6	-4.5	6.4	7.9
 Slovakia	69.3	0.8%	8.2	19,172	36.9	-2.9	2.4	10.8
 Luxembourg	45.8	0.3%	4.6	84,507	7.5	-1.1	2.1	4.6
 Slovenia	41.1	0.3%	4.5	25,266	29.4	-1.9	2.7	6.4
 Bulgaria	35.8	0.2%	6.0	10,677	24.8	-4.0	5.3	7.8
 Lithuania	35.4	0.2%	7.0	16,863	19.7	-2.5	3.5	6.1
 Latvia	24.1	0.2%	10.5	17,364	14.4	-0.8	7.3	6.3






 Cyprus	19.9	0.1%	3.9	31,053	62.3	-3.5	2.1	4.8
 Estonia	19.6	0.2%	9.9	20,114	4.9	-1.8	4.8	4.2
 Malta	6.2	0.1%	2.3	21,061	75.0	-5.2	2.4	6.8

Economic growth












The EU's share of Gross world product (GWP) is stable at around one fifth . GDP growth, though strong in the new member states, is being affected by sluggish growth in France, Italy and Portugal.

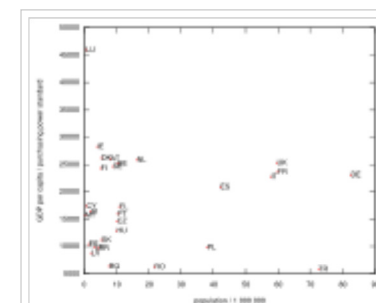
Estonia and Latvia, also referred to as the Baltic Tigers, have the highest GDP growth rates in the union and one of the highest in the world.

EU15 GDP growth rates

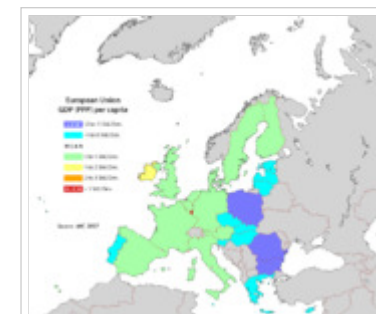
Member State	% GDP Growth			
	2005	2006	2007	2008
 Austria	2.0	3.3	3.3	2.5
 Belgium	1.4	3.0	2.6	1.9
 Denmark	3.1	3.5	1.9	1.5
 Finland	2.9	5.0	4.3	3.0
 France	1.7	2.0	1.9	2.0
 Germany	0.8	2.9	2.4	2.0
 Greece	3.7	4.3	3.9	3.6
 Ireland	5.9	5.7	4.6	3.0
 Italy	0.1	1.9	1.7	1.3
 Luxembourg	4.0	6.2	5.4	4.2
 Netherlands	1.5	3.0	2.6	2.5
 Portugal	0.5	1.3	1.8	1.8
 Spain	3.6	3.9	3.7	2.7
 Sweden	2.9	4.2	3.6	2.8
 United Kingdom	1.8	2.8	3.1	2.3

New member GDP growth rates

Member State	% GDP Growth			
	2004	2005	2006	2007
 Bulgaria	5.7	5.5	5.6	6.1
 Cyprus	3.9	3.7	3.5	3.8
 Czech Republic	4.2	6.1	6.0	4.9
 Estonia	7.8	9.8	9.5	8.7
 Hungary	5.2	4.1	4.5	2.4
 Latvia	8.6	10.2	11.0	9.6
 Lithuania	7.0	7.5	6.8	7.3
 Malta	-1.5	2.5	1.6	3.0
 Poland	5.3	3.4	6.1	6.5
 Romania	4.1	8.5	7.7	6.7
 Slovakia	5.4	6.1	6.5	8.5
 Slovenia	4.2	4.0	5.2	4.3
 European Union	2.4	1.8	2.8	2.4
Eurozone	2.1	1.3	2.4	2.0



Population and GDP per capita of EU member states and some candidates.



GDP (PPP) per capita 2007 showing countries above and below EU-27 average

The ten new member states of Eastern and North Europe have enjoyed a higher average percentage growth rate than their Western European counterparts. Notably the Baltic states have achieved massive GDP growth, with Latvia topping 11%, close to China, the world leader at 9% on average for the past 25 years. Reasons for this massive growth include government commitments to stable monetary policy, export-oriented trade policies, low flat-tax rates and the utilisation of relatively cheap labour.

The current map of EU growth is one of huge regional variation, with the larger economies suffering from stagnant growth and the new nations enjoying sustained, robust economic growth.

Although EU27 GDP is on the increase, the percentage of Gross world product is decreasing due to the emergence of economic powers such as China, India and Brazil. In the medium to long term, the EU will be looking to increase GDP growth in the central European economies such as France, Germany and Italy and stabilise growth in the new Eastern European states to ensure sustained economic prosperity.

Trade





























The European Union is the largest exporter in the world () and the second largest importer. Internal trade between the member states is aided by the removal of barriers to trade such as tariffs and border controls. In the eurozone, trade is helped by not having any currency differences to deal with amongst most members. The European Union Association Agreement does something similar for a much larger range of countries, partly as a so-called soft approach ('a carrot instead of a stick') to influence the politics in those countries.

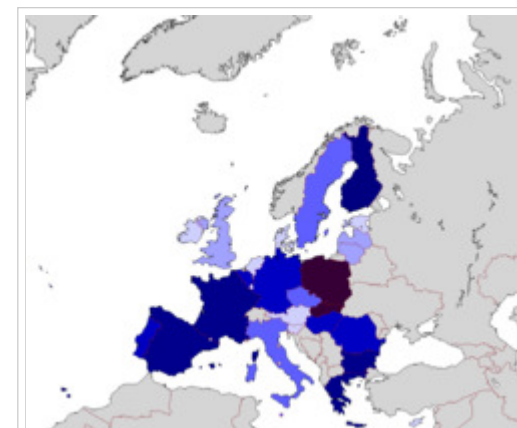
The European Union represents all its members at the World Trade Organization, and acts on behalf of member states in any disputes.

Unemployment

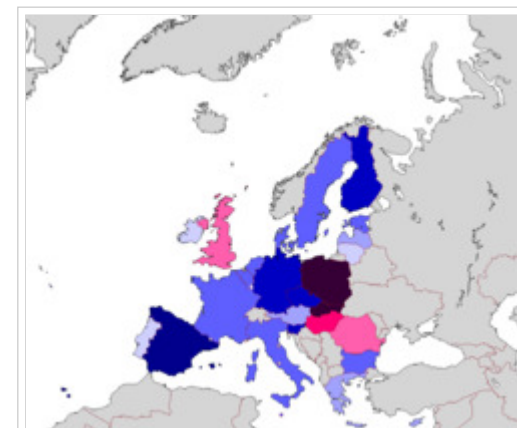
The seasonally adjusted unemployment rate in the European Union in June 2007 was 6.9% compared to 7.9% in all current 27 memberstates in June 2006. The rate varies widely by member state. In comparison the United States had an unemployment rate of 4.5% and Japan a rate of 3.8% measured by Eurostat.

The following table states the current unemployment rate of all Member States for June 2007 with comparisons to June 2006:

Member State	% Unemployment		Member State	% Unemployment Rate	
	June 2006	June 2007		June 2006	June 2007
 Austria	4.8	4.3	 Bulgaria	9.0	7.0
 Belgium	8.4	7.2	 Cyprus	4.8	3.9
 Denmark	4.2	3.5	 Czech Republic	7.1	5.7
 Finland	7.8	6.7	 Estonia	5.7	5.1
 France	9.5	8.6	 Hungary	7.3	7.7
 Germany	8.3	8.8	 Latvia	7.0	5.7
 Greece	9.0	8.6	 Lithuania	5.6	4.7
 Ireland	4.5	4.0	 Malta	7.4	6.4
 Italy	6.8	6.1	 Poland	13.9	10.2
 Luxembourg	4.6	4.9	 Romania	7.3	7.3
 Netherlands	3.9	3.3	 Slovakia	13.4	10.7
 Portugal	7.6	7.9	 Slovenia	6.1	5.1
 Spain	8.5	8.0	 European Union	7.9	6.9
 Sweden	7.2	5.3			
 United Kingdom	5.4	5.4			



Unemployment rate by country in the EU at February 2007



Changes in the unemployment rate from February 2006 until February 2007 in the EU (Red - increasing and Blue - decreasing)

Industries

The services sector is by far the most important sector in the European Union, making up 69.4% of GDP, compared to the manufacturing industry with 28.4% of GDP and agriculture with only 2.3% of GDP.

Agriculture

The agricultural sector is supported by subsidies from the European Union in the form of the Common Agricultural Policy (CAP). This currently represents 40-50% of the EU's total spending. It guarantees a minimum price for farmers in the EU. This is criticised as a form of protectionism, inhibiting trade, and damaging developing countries; one of the most vocal opponents is the UK, the second largest economy within the bloc, which has repeatedly refused to give up the annual UK Rebate unless the CAP undergoes significant reform; France, the biggest benefactor of the CAP and the bloc's third largest economy, is its most vocal proponent.

Tourism

The European Union is a major tourist destination, attracting visitors from outside of the Union and citizens travelling inside it. Internal tourism is made more convenient for the citizens of some EU member states by the Schengen treaty and the Euro. All citizens of the European Union are entitled to travel to any member state without the need of a visa. If the EU component states are considered separate entities, France is the world's number one tourist destination for international visitors, followed by Spain, Italy and the United Kingdom at 2nd, 5th and 6th spots respectively. If the EU is considered a single entity, the number of international visitors is less, as most visitors to EU nations are from other EU member states.

Companies

The European Union's member states are the birthplace of many of the world's largest leading multinational companies, and home to its global headquarters. Among these are distinguished companies ranked first in the world within their industry/sector, like Allianz, which is the largest financial service provider in the world by revenue; Airbus, which produces around half of the world's jet airliners; Air France-KLM, which is the largest airline company in the world in terms of total operating revenues; Amorim, which is the world's largest cork-processing and cork producer company; ArcelorMittal, which is the largest steel company in the world; Groupe Danone, which has the world leadership in the dairy products market; InBev, which is the largest beer company in the world; L'Oréal Group, which is the world's largest cosmetics and beauty company; LVMH, which is the world's largest luxury goods conglomerate; Nokia Corporation, which is the world's largest manufacturer of mobile telephones; Royal Dutch Shell, which is the largest energy corporation in the world; and Stora Enso, which is the world's largest pulp and paper manufacturer in terms of production capacity. Many other European companies rank among the world's largest companies in terms of turnover, profit, market share, number of employees or other major indicators. A considerable number of EU-based companies are ranked among the world's top-ten within their sector of activity.

Regional variation

Comparing the richest areas of the EU can be a difficult task. This is because the NUTS 1 & 2 regions are not homogenous, some of them being very large regions, such as NUTS-1 Hesse (21,100 km²) or NUTS-1 Île-de-France (12,011 km²), whilst other NUTS regions are much smaller, for example NUTS-1 Hamburg (755 km²) or NUTS-1 Greater London (1,580 km²). An extreme example is Finland, which is divided for historical reasons into mainland Finland with 5.3 million inhabitants and Åland, an island with a population of 26,700, or about the population of a small Finnish city.

One problem with this data is that in some areas, including Greater London, are subject to a large number of commuters coming into the area, thereby artificially











inflating the figures. It has the effect of raising GDP but not altering the number of people living in the area, inflating the GDP per capita figure. Similar problems can be produced by a large number of tourists visiting the area.

The data is used to define regions that are supported with financial aid in programs such as the European Regional Development Fund.













The decision to delineate a Nomenclature of Territorial Units for Statistics (NUTS) region is to a large extent arbitrary (i.e. not based on objective and uniform criteria across Europe), and is decided at European level (See also: Regions of the European Union).

Top 10: economically strongest NUTS-1 and NUTS-2 regions

The 10 NUTS-1 and NUTS-2 regions with the highest GDP per capita are all in the first fifteen member states: none are in the 12 new member states that joined in May 2004 and January 2007. The NUTS Regulation lays down a minimum population size of 3 million and a maximum size of 7 million for the average NUTS-1 region, whereas a minimum of 800.000 and a maximum of 3 million for NUTS-2 regions ¹. This definition, however, is not respected by Eurostat. E.g.: the *région* of Île-de-France, with 11.6 million inhabitants, is treated as a NUTS-2 region, while the state of Bremen, with only 664,000 inhabitants, is treated as a NUTS-1 region.


Rank	NUTS-1 region	2004 GDP (PPP) per capita in Euros
1 	Luxembourg	53,978
2 	Brussels-Capital, Belgium	53,381
3 	Hamburg, Germany	41,972
4 	Greater London, United Kingdom	40,542
5 	Île-de-France, France	37,526
6 	Bremen, Germany	33,508
7 	Åland, Finland	31,909
8 	Randstad, Netherlands	30,762
9 	Ireland	30,414
10 	Bavaria, Germany	29,646

Rank	NUTS-2 region	2004 GDP (PPP) per capita
------	---------------	---------------------------

		in Euros
Note that  Frankfurt (€68,751 per capita) and  Paris (€67,980 per capita) are treated as NUTS-3 by Eurostat and are thus not listed here.		
1	 Inner London, United Kingdom	65,138
2	 Luxembourg	53,978
3	 Brussels-Capital, Belgium	53,381
4	 Hamburg, Germany	41,972
5	 Vienna, Austria	38,632
6	 Île-de-France, France	37,526
7	 Berkshire, Buckinghamshire & Oxfordshire, United Kingdom	37,379
8	 Oberbayern (Upper Bavaria), Germany	36,408
9	 Stockholm, Sweden	35,621
10	 Utrecht, Netherlands	33,905

Economically weakest NUTS-2 regions







The fifteen lowest regions in the ranking in 2004 were all in Bulgaria, Poland and Romania, with the lowest figures recorded in Nord-Est in Romania (24% of the average), followed by Severozapaden, Yuzhen tsentralen and Severen tsentralen in Bulgaria (all 26%). Among the 70 regions below the 75% level, fifteen were in Poland, eight each in Greece and Romania, seven in the Czech Republic, six each in Bulgaria and Hungary, four each in France (all overseas departments), Italy and Portugal, three in Slovakia, one region in Spain, and Estonia, Latvia, Lithuania and Malta.














Rank	NUTS-2 region	2004 GDP (PPP) per capita in Euros	% of the average GDP of EU27 in 2004
1	 Nord-Est, Romania	5,070	24
2	 Severozapaden, Bulgaria	5,502	26
3	 Yuzhen tsentralen, Bulgaria	5,509	26
4	 Severen tsentralen, Bulgaria	5,681	26
5	 Sud, Romania	6,111	28










6	 Sud-Vest, Romania	6,183	29
7	 Severoiztochen, Bulgaria	6,299	29
8	 Yugoiztochen, Bulgaria	6,420	30
9	 Sud-Est, Romania	6,612	31
10	 Nord-Vest, Romania	7,093	33
11	 Lubelskie, Poland	7 568	35
12	 Podkarpackie, Poland	7 617	35
13	 Centru, Romania	7 629	35
14	 Podlaskie, Poland	8 148	38
15	 Vest, Romania	8 395	39

Richest & Poorest NUTS-2 Regions (GDP PPP 2004)

See also: List of all NUTS-2 regions with GDP 2004 data

Member State	Region	GDP per capita	
		in Euros	As % of EU-27 average
 European Union		21,503	100.0%
 Austria		27,666	128.7%
	Richest Vienna	38,632	179.7%
	Poorest Burgenland	19,305	89.8%
 Belgium		26,759	124.4%
	Richest Brussels-Capital	53,381	248.3%
	Poorest Hainaut	17,546	81.6%
 Bulgaria		7,134	33.2%
	Richest Yugozapaden	10,550	49.1%
	Poorest Severozapaden	5,502	25.6%
 Cyprus		19,648	91.4%
 Czech Republic		16,171	75,2%

Richest	Prague	33,784	157.1%
Poorest	Central Moravia	12,856	59.8%
 Denmark		26,772	124.5%
 France		24,146	112.3%
Richest	Ile-de-France	37,526	174.5%
Poorest	French Guiana	11,690	54.4%
 Germany		24,903	115.8%
Richest	Hamburg	41,972	195.2%
Poorest	Dessau	16,295	75.8%
 Estonia		11,978	55.7%
 Finland		24,834	115.5%
Richest	Åland	31,461	146.3%
Poorest	East Finland	18,336	85.3%
 Greece		18,245	84.8%
Richest	Athens	24,230	112.7%
Poorest	West Greece	11,714	54.5%
 Hungary		13,751	64.0%
Richest	Central Hungary	21,837	101.6%
Poorest	Northern Hungary	9,003	41.9%
 Ireland		30,414	141.4%
Richest	Southern and Eastern	33,653	156.5%
Poorest	Border, Midland and Western	21,518	100.1%
 Italy		23,095	107.4%
Richest	Lombardy	30,426	141.5%
Poorest	Sicily	14,447	67.3%
 Latvia		9,775	45.5%
 Lithuania		10,981	51.1%
 Luxembourg		53,978	251.0%
 Malta		15,988	74.4%

 Netherlands		27,946	130.0%
Richest	Utrecht	33,905	157.7%
Poorest	Flevoland	20,736	96.4%
 Poland		10,908	50.7%
Richest	Mazowieckie	16,523	76.8%
Poorest	Lubelskie	7,568	35.2%
 Portugal		16,086	74.8%
Richest	Lisbon	22,745	105.8%
Poorest	Norte	12,648	58.8%
 Romania		7,301	34.0%
Richest	Bucharest-Ilfov	13,862	64.5%
Poorest	North East Romania	5,070	23.6%
 Slovakia		12,196	56.7%
Richest	Bratislava region	27,802	129.3%
Poorest	Prešovský kraj & Košický kraj	9,102	42.3%
 Slovenia		17,920	83.3%
 Spain		21,658	100.7%
Richest	Madrid	28,416	132.1%
Poorest	Extremadura	14,419	67.1%
 Sweden		25,865	120.3%
Richest	Stockholm	35,621	165.7%
Poorest	East Middle Sweden	21,862	101.7%
 United Kingdom		26,455	123.0%
Richest	Inner London	65,138	302.9%
Poorest	Cornwall & Isles of Scilly	17,025	79.2%

Comparison with regional blocs

Most active regional blocs

(as of 2004, except as noted)

Regional bloc ¹	Area		Population	in millions (PPP)	GDP (\$US)			Member states ¹
	km ²	sq mi			in millions (nominal)	per capita (PPP)	per capita (nominal)	
AU	29,797,500	11,504,879	897,548,804	1,515,000	1,131,850	1,896	1,261	53
ASEAN (2007 est.)	4,497,493	1,736,000	566,500,000	3,115,480	1,173,000	5,541	2,041	10
CACM	422,614	163,172	37,816,598	159,536	84,792	4,219	2,242	5
CARICOM	462,344	178,512	14,565,083	64,219	24,020	4,409	1,649	(14+1) ³
CCASG / GCC	2,285,844	882,569	35,869,438	536,223	717,800	14,949	20,011	6
CEFTA	298,148	115,116	28,929,682	222,041	122,001	7,675	4,217	(7+1) ³
EU (2007 est.)	4,324,782	1,669,808	497,000,000	14,953,000	16,574,000	28,213	33,482	27
EurAsEC	20,789,100	8,026,720	208,067,618	1,689,137	1,125,528	8,118	5,409	6
EFTA (2007 est.)	529,600	204,480	12,660,623	567,500	743,300	44,828	60,000	4
GAFTA	9,421,946	3,637,834	280,727,416	1,341,298	N/A	4,778	N/A	(16+1) ³
GUAM	810,506	312,938	63,764,600	456,173	106,469	7,154	1,670	4
NAFTA (2007 est.)	21,783,850	8,410,792	445,000,000	15,857,000	15,723,000	35,491	35,564	3
PARTA	528,151	203,920	7,810,905	23,074	N/A	2,954	N/A	(12+2) ³
SAARC	5,136,740	1,983,306	1,467,255,669	4,074,031	N/A	2,777	N/A	8
Unasur / Unasul	17,339,153	6,694,684	370,158,470	2,868,430	N/A	7,749	N/A	12
UN and countries for reference ²	Area		Population	in millions (PPP)	GDP (\$US)			Units ⁴
	km ²	sq mi			in millions (nominal)	per capita (PPP)	per capita (nominal)	
UN	133,178,011	51,420,318	6,411,682,270	55,167,630	48,245,198	8,604	7,524	192
Brazil (2007 est.)	8,514,877	3,287,612	183,888,841	1,804,000	1,067,706	10,073	6,842	27
Canada (2007 est.)	9,984,670	3,855,103	33,000,000	1,274,000	1,406,000	38,200	42,738	13
India (2007 est.)	3,287,590	1,269,346	1,120,000,000	4,726,000	1,089,000	4,182	1,004	35
Japan (2007 est.)	377,873	145,898	127,433,494	4,346,000	4,346,000	33,800	38,341	47
PR China⁵ (2007 est.)	9,596,960	3,705,407	1,321,851,888	7,043,000	3,420,000	5,300	2,800	33
Russia (2007 est.)	17,075,200	6,592,772	142,500,000	2,076,000	1,286,000	14,600	9,056	83

Source: CIA World Factbook 2005, IMF WEO Database, IMF nominal figures for 2006.

Legend

smallest value among the blocs compared
largest value among the blocs compared

Footnotes

- ¹ Including data only for full and most active members.
- ² Including the largest five countries by area, population (not #4), GDP (PPP) (not #5), and GDP (nominal) (not #3 or #5).
- ³ Including non-sovereign autonomous areas of other states.
- ⁴ Members or administrative divisions.
- ⁵ Data for the People's Republic of China does not include Hong Kong, Macau, or the independent Republic of China (Taiwan) (over which PRC claims sovereignty).

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Economy of the United Kingdom

2008/9 Schools Wikipedia Selection. Related subjects: Economics

The United Kingdom has the fifth largest economy in the world in terms of market exchange rates and the sixth largest by purchasing power parity (PPP). It has the second largest economy in Europe after Germany. The United Kingdom is one of the world's most globalised countries, ranking fourth in one recent survey. The capital, London (see Economy of London), is one of the three major financial centres of the world, along with New York City and Tokyo.

The British economy is often described as an 'Anglo-Saxon economy'. It is made up (in descending order of size) of the economies of England, Scotland, Wales and Northern Ireland. The UK has been a member state of the European Union since 1973.

In the 1980s, under the Government of Margaret Thatcher, most state-owned enterprises in the industrial and service sectors, which since the 1940s had been nationalised, were privatised. The British Government now owns very few industries or businesses - Royal Mail is one example.

The British economy has in recent years seen the longest period of sustained economic growth for more than 150 years, having grown in every quarter since 1992. It is one of the strongest EU economies in terms of inflation, interest rates and unemployment, all of which remain relatively low. Consequently, the United Kingdom, according to the International Monetary Fund, now has the seventh highest level of GDP per capita in the European Union in terms of purchasing power parity, after Luxembourg, Ireland, the Netherlands, Denmark, Austria and Finland. However, in common with the economies of other English-speaking countries, it has higher levels of income inequality than many European countries. The UK also has the world's third largest current account deficit, despite significant oil revenues.

Although the UK's "labour productivity per person employed" has been progressing well over the last two decades and has overtaken productivity in Germany, it lags around 20% behind France's level, where workers have a 35-hour working week. The UK's "labour productivity per hour worked" is currently on a par with the average for the "old" EU (15 countries).

The United Kingdom currently ranks 16th on the Human Development Index.

Economy of the United Kingdom	
Currency	1 Pound Sterling (£) = 100 pence (p)
Fiscal year	6 April – 5 April
Trade organizations	EU, BCN, WTO and OECD
Statistics	
GDP (PPP) ranking (2006)	6th
GDP (PPP) per capita ranking (2006)	11th
GDP (PPP) (2006)	\$2.1 trillion
GDP growth rate (2007)	3.1%
GDP (PPP) per capita (2006)	\$35,000
GDP (PPP) per square kilometre (2006)	\$8,577,750
GDP per barrel (2005)	\$3,400
GDP by sector (2006)	agriculture (1%), industry (26%), services (73%)
Inflation rate on CPI (2006)	2.3% (2006)

Recent economic growth

The most recent official figure, from the ONS, for annual UK GDP growth is 3.3% (2006 Q4 - 2007 Q3).

According to official Treasury estimates, British GDP grew by 2¾% in 2006 and is expected to grow by 3% in 2007. Growth is expected to slow slightly in 2008 to between 2% and 2½%. The forecast for 2009 and 2010 is for the economy to return to trend growth of between 2½% and 3%.

In October 2007, the IMF forecast British GDP to grow by 3.1% in 2007 and 2.3% in 2008.

Macroeconomic trend

This is a chart of trend of gross domestic product of United Kingdom at market prices estimated by the International Monetary Fund with figures in millions of British Pounds Sterling.

Year	Gross domestic product	US dollar exchange	Inflation index (2000=100)
1925	4,466	£0.21	
1930	4,572	£0.21	
1935	4,676	£0.20	
1940	7,117	£0.26	
1945	9,816	£0.25	
1950	13,162	£0.36	
1955	19,264	£0.36	
1960	25,678	£0.36	
1965	35,781	£0.36	
1970	51,515	£0.42	
1975	105,773	£0.45	
1980	230,695	£0.42	43
1985	354,952	£0.77	60

Poverty rate (2002)	17%
Labour force (2006)	31m
Labour force by occupation (2006)	services (81%), industry (18%), agriculture (1%)
Unemployment rate (2007)	5.4%
Main industries	machine tools, industrial equipment, scientific equipment, shipbuilding, aircrafts, motor vehicles and parts, electronic machinery, computers, processed metals, chemical products, coal mining, oil production, paper, food processing, textiles, clothing, and other consumer goods

Trading Partners

Exports (2006)	\$470 billion
Main partners (2004)	USA 15%, Germany 11%, France 10%, Ireland 7%, Netherlands 6%, Belgium 6%, Spain 5%, Italy 4%
Imports (2006)	\$600 billion
Main partners (2004)	Germany 14%, USA 9%, France 8%, Netherlands 7%, Belgium 6%, Italy 5%, the People's Republic of China 4%, Ireland 4%

Public finances

1990	557,300	£0.56	76
1995	718,383	£0.63	92
2000	953,576	£0.65	100
2005	1,209,334	£0.54	107

For purchasing power parity comparisons, the US Dollar is exchanged at £0.66.

Industries

Agriculture, hunting, forestry, and fishing

Agriculture is intensive, highly mechanised, and efficient by European standards, producing about 60% of food needs with less than 2% of the labour force. It contributes around 2% of GDP. Around two-thirds of the production is devoted to livestock, one-third to arable crops. The main crops that are grown are wheat, barley, oats, oilseed rape, maize for animal feeds, potatoes and sugar beet. New crops are also emerging, such as linseed for oil and hemp for fibre production. The main livestock which are raised are cattle, chickens (the UK is the second largest poultry producer in Europe after France) and sheep. Agriculture is subsidised by the European Union's Common Agricultural Policy.

The UK retains a significant, although vastly reduced, fishing industry. Its fleets bring home fish ranging from sole to herring. Kingston upon Hull, Grimsby, Fleetwood, Great Yarmouth, Peterhead, Fraserburgh, and Lowestoft are among the coastal towns that have fishing industries.

The Blue Book 2006 reports that this sector added gross value of £10,323 million to the UK economy in 2004.

Production

Mining and quarrying

The Blue Book 2006 reports that this sector added gross value of £21,876 million to the UK economy in 2004.

Manufacturing

In 2003, the manufacturing industry accounted for 16% of national output in the UK and for 13% of employment, according to the Office for National Statistics. This is a continuation of the steady decline in the importance of this sector to the British economy since the 1960s, although

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :275 of 626.

Public debt / public sector net cash requirement (PSNCR) / public sector borrowing requirement (PSBR) (2006)	\$39 billion
Public debt (2007 est)	\$864 billion (36% of GDP) (2006)
Revenues (2006)	\$0.97 trillion
Expenses (2006)	\$1.04 trillion
Economic aid donor (2006)	\$8 billion



UK exports of goods in 2005

the sector is still important for overseas trade, accounting for 83% of exports in 2003. The regions with the highest proportion of employees in manufacturing were the East Midlands and West Midlands (at 19 and 18% respectively). London had the lowest at 6%.

Engineering and allied industries comprise the single largest sector, contributing 30.8% of total Gross Value Added in manufacturing in 2003. Within this sector, transport equipment was the largest contributor, with 8 global car manufacturers being present in the UK – BMW (MINI, Rolls-Royce), Ford (Premier Automotive Group), General Motors (Vauxhall Motors), Honda, Nissan, Toyota and Volkswagen (Bentley) with a number of smaller, specialist manufacturers (including Lotus and Morgan) and commercial vehicle manufacturers (including Leyland Trucks, LDV, Alexander Dennis, JCB, Manganese Bronze and Case-New Holland) also being present. A range of companies like Brush Traction manufacture railway locomotives and other related components. Associated with this sector are the aerospace and defence equipment industries. The UK manufactures a broad range of equipment, with the sector being dominated by BAE Systems, which manufactures civil and defence aerospace, land and marine equipment, VT Group, GKN and Rolls Royce who manufacture aerospace engines and power generation systems.

Another important component of Engineering and allied industries is electronics, audio and optical equipment, with the UK having a broad base of domestic firms like Amstrad, Alba, ARM, Dyson, Glen Dimplex, Invensys, and Linn, alongside a number of foreign firms manufacturing a wide range of TV, radio and communications products, scientific and optical instruments, electrical machinery and office machinery and computers.

Chemicals and chemical-based products are another important contributor to the UK's manufacturing base. Within this sector, the pharmaceutical industry is particularly successful, with the world's second and third largest pharmaceutical firms (GlaxoSmithKline and AstraZeneca respectively) being based in the UK and having major research and development and manufacturing facilities there.

Other important sectors of the manufacturing industry include food, drink, tobacco, paper, printing, publishing and textiles. The UK is also home to three of the world's biggest brewing companies: Diageo, Sabmiller and Scottish and Newcastle, other major manufacturing companies such as Unilever, Cadbury Schweppes, Tate & Lyle, British American Tobacco, Imperial Tobacco, EMAP, HarperCollins, Reed Elsevier, Ben Sherman, Burberry, French Connection, Reebok, Pentland Group and Umbro being amongst the largest present.

The Blue Book 2006 reports that this sector added gross value of £147,469 million to the UK economy in 2004.

Electricity, gas and water supply

The Blue Book 2006 reports that this sector added gross value of £17,103 million to the UK economy in 2004. Great Britain is expected to launch the building of new nuclear reactors to replace existing generators and to boost UK's energy reserves.

Construction

The Blue Book 2006 reports that this industry added gross value of £64,747 million to the UK economy in 2004.

Service industries

The service sector is the dominant sector of the UK economy, a feature normally associated with the economy of a developed country. This means that the Tertiary sector jobs outnumber the Secondary and Primary sector jobs.

Wholesale and retail trade

This sector includes the motor trade, auto repairs, personal and household goods industries. The Blue Book 2006 reports that this sector added gross value of £127,520 million to the UK economy in 2004.



UK exports of services in 2005

Hotels and restaurants

The Blue Book 2006 reports that this industry added gross value of £33,074 million to the UK economy in 2004.

Transport, storage and communication

The Blue Book 2006 reports that the transport and storage industry added gross value of £49,516 million to the UK economy in 2004 while the communication industry added a gross value of £29,762 million.

Real estate and lettings

The UK property market has been booming for the past seven years and in some areas property has trebled in value over that period. The increase in property prices has a number of causes — sustained economic growth, an expansion in household numbers (including high immigration into certain regions), low interest rates, the growth in property investment, and restriction in the supply of new housing (through planning restrictions).

The UK property market initially peaked in July 2004 and had been static or falling in the capital and some other areas until late 2005. This had led many to start worrying about the possibility of a house price crash, many predicting the end of a major British property bubble. However, the property market strengthened considerably in the first half of 2006, showing particular strength in the capital. This has led many analysts to revise previously negative assessments of the market, with most now predicting continued modest growth in prices in the mid-term.

A house price crash would be very damaging at the present time due to record levels of household debt. There are an increasing numbers of bankruptcies and home repossessions which has worried some economists. This has led many to propose that a correction in house prices would lead much of the country into a lengthy recession. In contrast however, first time buyers who currently have assets not consisting of residential property, but with no way of attaining residential property (in some cases at all, and in others without undertaking unsustainable debt amounting to on average up to 5 times their annual salary), would be better off, and able to enter the property market.

The rapid increase in Buy to Let speculators since 2000 of has created an artificial shortage of homes. The effect has been to price many first time buyers out of the market; they have declined from around 50% of sales to 25%, virtually equal to the expansion in Buy to Let. In London a survey in 2006 found that 67% of new properties were sold to Buy to Let speculators. This and planning restriction requiring builders to use brown field sites, has led to rapid growth in one and two bedroom apartments in cities such as Manchester, Leeds and Nottingham, creating an over supply of this type of property. Banks have relaxed their lending requirements for Buy to Let buyers from 75% of the value the of property in 2003 to 85%, effectively creating a highly gear investment that relies on rising prices. The perception of a housing shortage, despite there being little evidence of any shortage of property to rent (if not buy), means that most UK buyers believe property prices will always rise and any fall only be small and temporary.

This sector includes letting of dwellings and other related business support activities. The Blue Book 2006 reports that the lettings industry added gross value of £83,037 million to the UK economy in 2004 while other real estate and business support activities added gross value of £175,333 million.

Public administration and defence

The Blue Book 2006 reports that this sector added gross value of £55,280 million to the UK economy in 2004.

Education

The Blue Book 2006 reports that this sector added gross value of £61,786 million to the UK economy in 2004.

Health and social work

The Blue Book 2006 reports that this sector added gross value of £75,817 million to the UK economy in 2004.

Other social and personal services

This sector includes value added by private households with employees and extra-territorial organisations. The Blue Book 2006 reports that this sector added gross value of £55,543 million to the UK economy in 2004.

Currency

There is a debate over whether or not the UK should leave the Pound Sterling and join the Euro. The British Prime Minister, Gordon Brown, had pledged to hold a public referendum if membership meets the " five economic tests" he set as Chancellor of the Exchequer. The tests are:

1. Are business cycles and economic structures compatible with European interest rates on a permanent basis?
2. If problems emerge, is there sufficient flexibility to deal with them?

3. What impact would entry into the euro have on the UK's financial services industry?
4. Would joining the euro create better conditions for firms making long-term decisions to invest in Britain?
5. Would joining the euro promote higher economic growth, stability and a lasting increase in jobs?

When assessing the tests, Gordon Brown concluded that while the decision was close, the United Kingdom should not yet join the Euro. In particular, he cited fluctuations in house prices as a barrier to immediate entry. The tests will be reassessed in the future. Public opinion polls have shown that a majority of Britons have been opposed to joining the single currency for some considerable time. The main opposition party, the Conservative party, are opposed to membership.

Exchange rates

(average for whole of each year), in USD (US Dollar) and EUR (euro) per GBP; and inversely: GBP per USD and EUR. (Synthetic Euro XEU before 1999).
Caution: these averages conceal wide intra-year spreads. The Coefficient of variation gives an indication of this. It also shows the extent to which the pound tracks the euro or the dollar. Note the effect of Black Wednesday in late 1992 by comparing the averages for 1992 with the averages for 1993.

Year	£/USD	USD/£	C.Var	£/XEU	XEU/£	C.Var
1990	£0.5633	\$1.775		£0.7161	1.397	
1991	£0.5675	\$1.762		£0.7022	1.424	
1992	£0.5699	\$1.755		£0.7365	1.358	
1993	£0.6663	\$1.501		£0.7795	1.283	
1994	£0.6536	\$1.530		£0.7742	1.292	
1995	£0.6338	\$1.578		£0.8200	1.220	
1996	£0.6411	\$1.560		£0.8029	1.245	
1997	£0.6106	\$1.638		£0.6909	1.447	
1998	£0.6037	\$1.656		£0.6779	1.475	

Year	£/USD	USD/£	C.Var	£/EUR	EUR/£	C.Var
1999	£0.6185	\$1.617		£0.6595	€1.516	
2000	£0.6609	\$1.513		£0.6099	€1.640	
2001	£0.6943	\$1.440		£0.6223	€1.607	

2002	£0.6664	\$1.501		£0.6289	€1.590	
2003	£0.6123	\$1.633		£0.6924	€1.444	
2004	£0.5461	\$1.832	2.26%	£0.6787	€1.474	1.92%
2005	£0.5500	\$1.820	3.47%	£0.6842	€1.462	1.27%
2006	£0.5435	\$1.842	3.79%	£0.6821	€1.466	1.11%
2007	£0.4999	\$2.001	1.97%	£0.6848	€1.461	2.40%

Source: OANDA.COM

For consistency and comparison purposes, coefficient of variation is measured on both the "per pound" ratios, although it is conventional to show the forex rates as dollars per pound and pounds per euro.

Regional variation

The strength of the UK economy varies from region to region. GDP, and GDP per capita is highest in London. The following table shows the GDP (2004) per capita of the 12 NUTS:2 areas, with data supplied by Eurostat.

Rank	Place	GDP per capita in Euros
1	London, England	44 401
2	South East England	31 300
3	East of England	27 778
4	Scotland	27 669
5	South West England	27 348
6	East Midlands, England	26 863
7	West Midlands, England	25 931
8	North West England	25 396
9	Yorkshire and the Humber, England	25 300
10	Northern Ireland	23 319
11	North East England	22 886
12	Wales	22 567

Two of the richest 10 areas in the European Union are in the United Kingdom. Inner London is number 1 with a GDP per capita of €65 138, and Berkshire, Buckinghamshire and Oxfordshire is number 7 with a GDP per capita of €37 379.

Taxation and borrowing

Taxation in the United Kingdom may involve payments to at least two different levels of government: local government and central government (HM Revenue & Customs). Local government is financed by grants from central government funds, business rates, council tax and increasingly from fees and charges such as those from on-street parking. Central government revenues are mainly income tax, national insurance contributions, value added tax, corporation tax and fuel duty.

These data show the tax burden (personal and corporate) and national debt as a percentage of GDP. Samples are taken at 10 year intervals (snapshots, but the rolling averages are very close).

Year	Tax	Debt
1975/6	54%	43%
1985/6	44%	43%
1995/6	43%	38%
2005/6*	46%	40%

(Source: HM Treasury Public Finances Databank)

(* — Projected)

The money Gross Domestic Product (GDP) for the United Kingdom, at market prices, in 2005 was £1,211 billion (or \$2,431 billion) according to HM Treasury in March 2006.

GDP % GDP for selected years, 2002 — 2006 est.

Year	GDP in billions of USD PPP	1.9% (2005 est.) GDP Growth
2002	1575.906	2.0
2003	1640.829	2.5
2004	1736.377	3.2
2005	1825.837	1.9
2006	1910.818	2.2

Income distribution (1999)
lowest 10% 2.1%

<i>highest 10%</i>	28.5%
Consumer prices inflation	RPI: 3% (2004), CPI: 1.6% (2004)
Labour force composition	(2004)
<i>services</i>	46%
<i>government</i>	28%
<i>manufacturing/construction</i>	24%
<i>energy</i>	1%
<i>agriculture</i>	1%
Industrial growth	-0.3% (1999)
Electricity production	382.7 TWh (2004)
<i>exports</i>	0.77%
Electricity production composition	(2004)
<i>fossil fuel</i>	74.13%
<i>hydro</i>	1.1%
<i>nuclear</i>	19.26%
<i>renewables</i>	3.55%
<i>imports</i>	1.96%
Electricity consumption	337.4 TWh (2003)
Electricity exports	2.959 TWh (2003)
Electricity imports	5.119 TWh (2003)
Agriculture products	cereals, oilseed, potatoes, vegetables; cattle, sheep, poultry; fish
Exported commodities	manufactured goods, fuels, chemicals; food, beverages (notably Scotch whisky), tobacco
Imported commodities	manufactured goods, machinery, fuels; foodstuffs

Other statistics

Average total income of Indians is higher than that of any other ethnic group in the UK at per £30,211 annum. Reasons for such high income among Indians is that one in 20 Hindu men in the UK are doctors compared to 1 in 200 Christian men. Besides, Hindus along with Jews and Buddhists are more likely to do high end jobs (managerial or professional occupations) whereas Jews are most likely to be selfemployed. Besides, there's a large Indian business community in the UK, including UK's richest man, Lakshmi Mittal. Together, that pulls the average of Indians higher. However, the unemployment rate for Indian men (7 per cent) was similar to those for White British or White Irish men. Whites, in general, have much lower unemployment rate than the non whites.

Bangladeshis and Pakistanis are the least economically affluent with their male unemployment rates being 20% and 16% respectively. One in seven Pakistani

men in employment was a taxi driver, cab driver or chauffeur, compared with 1 in 100 White British men. Over a quarter of Bangladeshi men were chefs, cooks or waiters compared with 1 in 100 White British men. .

Rank	Average total income by ethnic group	
1	Indian	£30,211
2	Chinese	£25,964
3	White	£24,756
4	National average	£24,568
5	Any other ethnic group	£23,350
6	Black African	£23,109
7	Black Caribbean	£22,902
8	Bangladeshi	£18,407
9	Pakistani	£18,209

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Economy of the United States

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The **economy of the United States** has the world's largest gross domestic product (GDP), \$13.21 trillion in 2006. It is a mixed economy where corporations and other private firms make the majority of microeconomic decisions while being regulated by the government. The US economy also maintains a high level of productivity (GDP per capita), although it is not the world's highest. The U.S. economy has maintained a reasonably high overall GDP growth rate, a low unemployment rate, and high levels of research and capital investment. Major economic concerns in the United States include national debt, external debt, entitlement liabilities for retiring baby boomers who have already begun entering the Social Security system, consumer debt, a low savings rate, and a large current account deficit.

As at June 30, 2007, the gross U.S. external debt was \$12 trillion or 88% of the overall size of the U.S. economy, (see List of countries by external debt). The gross public debt is 65% of GDP (also known as national debt and refers to what is owed by the combined public sector to both domestic and foreign creditors; see List of countries by public debt and global debt). The national debt includes the amount of the cumulative government deficits and interest.

History



U.S. unemployment rates.

With President Warren G. Harding's post–World War I "Return to Normalcy", the United States enjoyed a period of great prosperity during the 1920s. The stock market grew by leaps and bounds, fueled by easier access to stocks. However, the Great Depression ended that period. President Franklin D. Roosevelt introduced an array of social programs and Public works, known collectively as the New Deal. The New Deal included a new social safety net involving relief programs like the Works Progress Administration (WPA) and the Social Security system. In 1941, the U.S. entered World War II. The homefront saw enormous prosperity, as labor shortages brought millions of housewives, students, farmers and African Americans into the labor force. Millions moved to industrial centers in the North and West. Military spending accounted for over 40% of GDP at the peak, driving debt up to record levels.

The post–World War II years were a time of great prosperity in the United States. The economy remained stable until the 1970s, when the U.S. suffered stagflation. Richard Nixon took the United States off the Bretton Woods system, and further government attempts to revive the economy failed. As the decade progressed, the situation worsened. In November 1980, Robert G. Anderson wrote, "the death knell is finally sounding for the Keynesian Revolution." Ronald Reagan was elected President in 1980, and was of the opinion that "government is not the solution to our problem, government *is* the problem." Reagan advocated a program of 'supply-side economics', and in 1981 Congress cut taxes and spending, and reduced regulations. Unfortunately as one might expect, cutting spending proved more difficult than cutting taxes, so there was a substantial increase of public debt. Although the Gross Domestic Product (GDP)

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :284 of 626.

declined by 2% in 1982, it proceeded to rebound, and by 1988 had enjoyed a total of 31% growth since Reagan's election. But economic policy did not correspond readily with any particular theory. The massive fiscal deficits of the Reagan era, like those of the later presidency of George W. Bush, had a predictable "Keynesian stimulus." On the other hand, in Reagan's first term, the Federal Reserve, trying to contain the stagflation of the 1970s that was linked in part to increases in the price of oil, raised interest rates to record levels, leading to a brief spike of the worst unemployment since the Great Depression.

In spite of the monetarist trend at the Federal Reserve, Keynesian income stabilization and redistribution programs, such as unemployment insurance and social security, have remained in effect, even though two decades of only partial minimum wage increases, adjusting for inflation, have left the lowest paid sector of the work force struggling to keep up. In sum, monetarists have been unable to dislodge the great "Keynesian institutions" of social security, unemployment insurance, Medicaid, and welfare payments, even though efforts have been made to curtail all of these programs (most notably welfare). These programs greatly exceed even military spending in the overall impact on the economy, a situation very different from the concluding years of World War II and into the 1950s, when Keynesian deficits were seen by some left-wing critics (e.g., Baran, Sweezy) as the economic policy of a nation that desperately needed military expenditure to keep unemployment down.

Notwithstanding the normative monetarist and "anti-big-government" themes associated with his Republican Party, President George W. Bush and both houses of the Republican-controlled Congress pushed through a massive expansion of the Medicaid entitlement program by extending coverage to prescription drugs. However the bulk of income redistribution and stabilization programs date from the New Deal of President Franklin Roosevelt and the Great Society of President Lyndon Johnson. Under Bill Clinton's eight years of presidency, the GDP expanded by 38%. By the end of his tenure the United States had a Gross National Income (GNI) of \$9.7 trillion, and the lowest unemployment rates in 30 years. A recession began during 2001 in connection to the end of the dot-com bubble. Throughout, housing starts and purchases remained high, and the economy as of 2005 is considered by many to be strong in general.

Fundamental elements of the U.S. economy

A central feature of the U.S. economy is a reliance on private decision-making ("economic freedom") in economic decision-making. This is enhanced by relatively low levels of regulation, taxation, and government involvement, as well as a court system that generally protects property rights and enforces contracts. A large population, a large land area, numerous natural resources, a stable government and a highly developed system of post-secondary education are almost universally regarded as substantial contributors to U.S. economic performance.

The United States is rich in mineral resources and fertile farm soil, and it is fortunate to have a moderate climate. It also has extensive coastlines on both the Atlantic and Pacific Oceans, as well as on the Gulf of Mexico. Rivers flow from far within the continent, and the Great Lakes—five large, inland lakes along the U.S. border with Canada—provide additional shipping access. These extensive waterways have helped shape the country's economic growth over the years and helped bind America's 50 individual states together in a single economic unit.

The number of available workers and, more importantly, their productivity help determine the health of the U.S. economy. Throughout its history, the United States has experienced steady growth in the labor force, a phenomenon both cause and effect of almost constant economic expansion. Until shortly after World War I, most workers were immigrants from Europe, their immediate descendants, or African Americans who were mostly slaves taken from Africa, or slave descendants. Beginning in the early 20th century, many Latin Americans immigrated; followed by large numbers of Asians following removal of nation-origin

based immigration quotas. The promise of high wages brings many highly skilled workers from around the world to the United States.

Labor mobility has also been important to the capacity of the American economy to adapt to changing conditions. When immigrants flooded labor markets on the East Coast, many workers moved inland, often to farmland waiting to be tilled. Similarly, economic opportunities in industrial, northern cities attracted black Americans from southern farms in the first half of the 20th century.

In the United States, the corporation has emerged as an association of owners, known as stockholders, who form a business enterprise governed by a complex set of rules and customs. Brought on by the process of mass production, corporations such as General Electric have been instrumental in shaping the United States. Through the stock market, American banks and investors have grown their economy by investing and withdrawing capital from profitable corporations. Today in the era of globalization American investors and corporations have influence all over the world. The American government has also been instrumental in investing in the economy, in areas such as providing cheap electricity (such as from the Hoover Dam), and military contracts in times of war.

While consumers and producers make most decisions that mold the economy, government activities have a powerful effect on the U.S. economy in at least four areas. Strong government regulation in the U.S. economy started in the early 1900s with the rise of the Progressive Movement; prior to this the government promoted economic growth through protective tariffs and subsidies to industry, built infrastructure, and established banking policies, including the gold standard, to encourage savings and investment in productive enterprises.

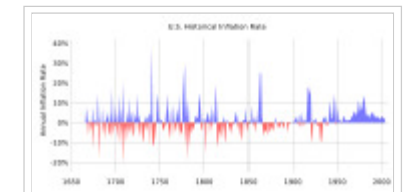
Monetary policy

us economics

A relatively independent central bank, known as the Federal Reserve, was formed in 1913 to provide a stable currency and monetary policy. The U.S. dollar has been regarded as the most stable currency in the world and many nations back their own currency with U.S. dollar reserves. During the last few years, the U.S. dollar has gradually depreciated in value and its reserve currency status is no longer as rock solid as previously.

The dollar has used gold standard and/or silver standard from 1785 until 1975, when it became a fiat currency.

Measuring the money supply



United States historical
inflation rate 1666-2004

The most common measures are named M0 (narrowest), M1, M2, and M3. In the United States they are defined by the Federal Reserve as follows:

- **M0**: The total of all physical currency, plus accounts at the central bank that can be exchanged for physical currency.
- **M1**: M0 - those portions of M0 held as reserves or vault cash + the amount in demand accounts ("checking" or "current" accounts).
- **M2**: M1 + most savings accounts, money market accounts, and small denomination time deposits (certificates of deposit of under \$100,000).
- **M3**: M2 + all other CDs, deposits of eurodollars and repurchase agreements.

The Federal Reserve ceased publishing M3 statistics in March 2006, explaining that it costs a lot to collect the data but doesn't provide significantly useful information. The other three money supply measures continue to be provided in detail.

Inflation

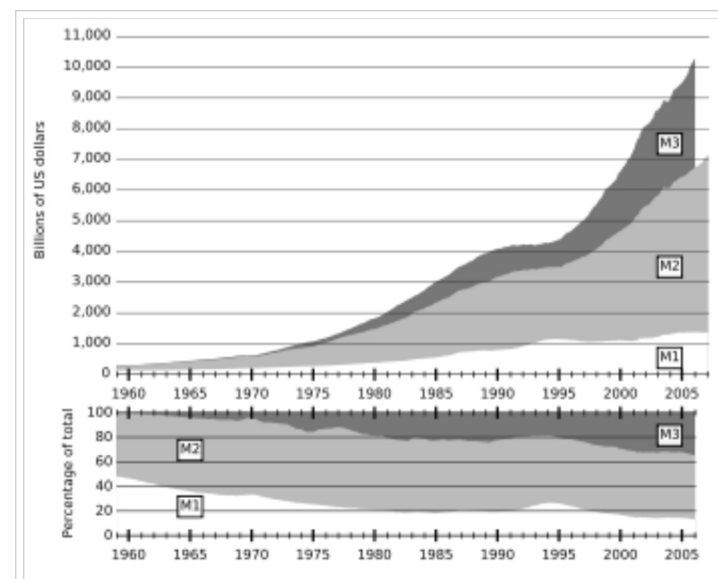
The Federal Reserve tries to have a steady inflation rate of between two and three percent annually in order to prevent hoarding of dollars because, it is argued, currency hoarding can lead to an economic slowdown.

Stabilization and growth

The federal government attempts to use both monetary policy (control of the money supply through mechanisms such as changes in interest rates) and fiscal policy (taxes and spending) to maintain low inflation, high economic growth, and low unemployment.

For many years following the Great Depression of the 1930s, recessions—periods of slow economic growth and high unemployment—were viewed as the greatest of economic threats. When the danger of recession appeared most serious, government sought to strengthen the economy by spending heavily itself or cutting taxes so that consumers would spend more, and by fostering rapid growth in the money supply, which also encouraged more spending. In the 1970s, major price increases, particularly for energy, created a strong fear of inflation. As a result, government leaders came to concentrate more on controlling inflation than on combating recession by limiting spending, resisting tax cuts, and reining in growth in the money supply.

Ideas about the best tools for stabilizing the economy changed substantially between the 1960s and the 1990s. In the 1960s, government had great faith in fiscal policy—manipulation of government revenues to influence the economy. Since spending and taxes are controlled by the president and the U.S. Congress, these elected officials played a leading role in directing the economy. A period of high inflation, high unemployment, and huge government deficits weakened



Components of US money supply (M1, M2, and M3) since 1959



Annual rate of inflation of the US dollar 1913-2006

confidence in fiscal policy as a tool for regulating the overall pace of economic activity. Instead, monetary policy assumed growing prominence a piece.

Since the stagflation of the 1970s, the U.S. economy has been characterized by somewhat slower inflation. In 1985, the U.S. began its growing trade deficit with China.

In recent years, the primary economic concerns have centered around: high national debt (\$9 trillion), high corporate debt (\$9 trillion), high mortgage debt (over \$10 trillion as of 2005 year-end), high unfunded Medicare liability (\$30 trillion), high unfunded Social Security liability (\$12 trillion), and high external debt (amount owed to foreign lenders), high trade deficits. In 2006, the U.S economy had its lowest saving rate since 1933. These issues have raised concerns among economists and unfunded liabilities and national politicians.

The U.S. economy maintains a relatively high GDP, a reasonably high GDP growth rate, and a low unemployment rate, making it attractive to immigrants worldwide.

Regulation and control

The U.S. federal government regulates private enterprise in numerous ways. Regulation falls into two general categories.

Economic regulation

Some efforts seek, either directly or indirectly, to control prices. Traditionally, the government has sought to prevent monopolies such as electric utilities from raising prices beyond the level that would ensure them reasonable profits. At times, the government has extended economic control to other kinds of industries as well. In the years following the Great Depression, it devised a complex system to stabilize prices for agricultural goods, which tend to fluctuate wildly in response to rapidly changing supply and demand. A number of other industries—trucking and, later, airlines—successfully sought regulation themselves to limit what they considered as harmful price cutting.

Another form of economic regulation, antitrust law, seeks to strengthen market forces so that direct regulation is unnecessary. The government—and, sometimes, private parties—have used antitrust law to prohibit practices or mergers that would unduly limit competition.

In 1933, Congress created the Federal Deposit Insurance Corporation (FDIC) which presently guarantees checking and savings deposits in member banks up to \$100,000 per depositor to prevent bank failures. This was in response to the widespread bank runs of the early 1930s during the Great Depression.

Social regulations

Since the 1970s, government has also exercised control over private companies to achieve social goals, such as improving the public's health and safety or maintaining a healthy environment. For example, the Occupational Safety's and Health's Administration's provides and enforces standards for workplace safety, and in the case of the United States Environmental Protection Agency provides standards and regulations to maintain air, water, and land resources. The U.S.

Food and Drug Administration regulates what drugs may reach the market, and also provides standards of disclosure for food products.

American attitudes about regulation changed substantially during the final three decades of the 20th century. Beginning in the 1970s, policy makers grew increasingly concerned that economic regulation protected inefficient companies at the expense of consumers in industries such as airlines and trucking. At the same time, technological changes spawned new competitors in some industries, such as telecommunications, that once were considered natural monopolies. Both developments led to a succession of laws easing regulation.

While leaders of America's two most influential political parties generally favored economic deregulation during the 1970s, 1980s, and 1990s, there was less agreement concerning regulations designed to achieve social goals. Social regulation had assumed growing importance in the years following the Depression and World War II, and again in the 1960s and 1970s. During the 1980s, the government relaxed labor, consumer and environmental rules based on the idea that such regulation interfered with free enterprise, increased the costs of doing business, and thus contributed to inflation. The response to such changes is mixed; many Americans continued to voice concerns about specific events or trends, prompting the government to issue new regulations in some areas, including environmental protection. As of March 2005, it is estimated that compliance with government regulation costs the U.S. economy \$5.69 trillion a year.

Where legislative channels have been unresponsive, some citizens have turned to the courts to address social issues more quickly. For instance, in the 1990s, individuals, and eventually the government itself, sued tobacco companies over the health risks of cigarette smoking. The 1998 Tobacco Master Settlement Agreement provided states with long-term payments to cover medical costs to treat smoking-related illnesses.

Direct services

Each level of government provides many direct services. The federal government, for example, is responsible for national defense, backs research that often leads to the development of new products, conducts space exploration, and runs numerous programs designed to help workers develop workplace skills and find jobs (including higher education). Government spending has a significant effect on local and regional economies—and even on the overall pace of economic activity.

State governments, meanwhile, are responsible for the construction and maintenance of most highways. State, county, or city governments play the leading role in financing and operating public schools. Local governments are primarily responsible for police and fire protection.

Overall, federal, state, and local spending accounted for almost 28% of gross domestic product in 1998.

Direct assistance

Government also provides many kinds of help to businesses and individuals. It offers low-interest loans and technical assistance to small businesses, and it provides loans to help students attend college. Government-sponsored enterprises buy home mortgages from lenders and turn them into securities that can be bought and sold by investors, thereby encouraging home lending. Government also actively promotes exports and seeks to prevent foreign countries from maintaining trade barriers that restrict imports.

Government supports individuals who cannot or will not adequately care for themselves. Social Security, which is financed by a tax on employers and employees, accounts for the largest portion of Americans' retirement income. The Medicare program pays for many of the medical costs of the elderly. The Medicaid program finances medical care for low-income families. In many states, government maintains institutions for the mentally ill or people with severe disabilities. The federal government provides food stamps to help poor families obtain food, and the federal and state governments jointly provide welfare grants to support low-income parents with children.

Many of these programs, including Social Security, trace their roots to the New Deal programs of Franklin D. Roosevelt, who served as the U.S. president from 1933 to 1945.

Many other assistance programs for individuals and families, including Medicare and Medicaid, were begun in the 1960s during President Lyndon Johnson's (1963–1969) War on Poverty. Although some of these programs encountered financial difficulties in the 1990s and various reforms were proposed, they continued to have strong support from both of the United States' major political parties. Critics argued, however, that providing welfare to unemployed but healthy individuals actually created dependency rather than solving problems. Welfare reform legislation (the Personal Responsibility and Work Opportunity Act) passed in 1996 under President Bill Clinton (1993–2001) and a Republican Congress requires people to work, job search, enter training, or receive education as a condition of receiving benefits and imposes federal limits on how long individuals may receive payments (states may adopt stronger limits).

National debt

The national debt, also known as the U.S. public debt (part of which is the gross federal debt), is the overall collective sum of yearly budget deficit owed by all branches of the United States government, plus interest. The economic significance of this debt and its potential ramifications for future generations of Americans are controversial issues in the United States.

The borrowing cap debt ceiling as of 2005 stood at \$8.18 trillion. . In March 2006, Congress raised that ceiling an additional \$0.79 trillion to \$8.97 trillion, which is approximately 68% of GDP. Congress has used this method to deal with an encroaching debt ceiling in previous years, as the federal borrowing limit was raised in 2002 and 2003.

While the U.S. national debt is the world's largest in absolute size, a more accurate measure is that of its size relative to the nation's GDP. When the national debt is put into this perspective it appears considerably less today than in past years, particularly during World War II. By this measure, it is also considerably less than those of other industrialized nations such as Japan and roughly equivalent to those of several Western European nations.

External debt: Liabilities to foreigners

Gross U.S. liabilities to foreigners are \$16.3 trillion as at end 2006.(over 100% of GDP). The U.S. *Net International Investment Position (NIIP)* deteriorated to a negative \$2.5 trillion at the end of 2006, or about minus 19% of GDP.

This figure rises as long as the US maintains an imbalance in trade, specifically, when the value of imports substantially outweighs the value of exports. It should

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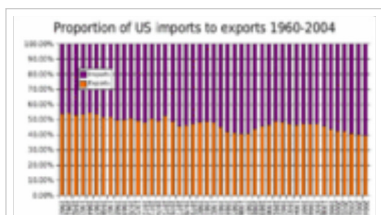
be noted that this external debt does not, for the most part, represent lending to Americans or the American government, nor is it consumer debt owed to non-US creditors. Rather, the external debt is an accounting entry that largely represents US domestic assets purchased with trade dollars and owned overseas, largely by US trading partners. However, this is not the whole picture, as foreign holdings of government debt currently amount to about 27% of the total, or some 2 trillion dollars.

For countries like the United States, a large net external debt is created when the value of foreign assets (debt and equity) held by domestic residents is less than the value of domestic assets held by foreigners. In simple terms, as foreigners buy property in the US, this adds to the external debt. When this occurs in greater amounts than Americans buying property overseas, nations like the United States are said to be *debtor nations*, but this is not conventional debt like a loan obtained from a bank. However, foreigners also purchase U.S. debt instruments, such as government bonds, which are forms of conventional debt.

If the external debt represents foreign ownership of domestic assets, the result is that rental income, stock dividends, capital gains and other investment income is received by foreign investors, rather than by US residents. On the other hand, when US debt is held by overseas investors, they receive interest and principal repayments. As the trade imbalance puts extra dollars in hands outside of the US, these dollars may be used to invest in new assets (foreign direct investment, such as new plants) or be used to buy existing US assets such as stocks, real estate and bonds. With a mounting trade deficit, the income from these assets increasingly transfers overseas.

Of major concern is the fact that the magnitude of the NIIP (or net external debt) is quite a bit larger than most national economies. Fueled by the sizable trade deficit, the external debt is so large that many wonder if the trade situation can be sustained in the long term. Complicating the matter is that many of America's trading partners, such as China, depend for much of their entire economy on exports, and especially exports to America. Many controversies exist about the current trade and external debt situation, and it is arguable whether anyone understands how these dynamics will play out in an historically unprecedented floating exchange rate system. While various aspects of the U.S. economic profile have precedents in the situations of other countries (notably government debt as a percentage of GDP), the sheer size of the US, and the integral role of the US economy in the overall global economic environment, create considerable uncertainty about the future.

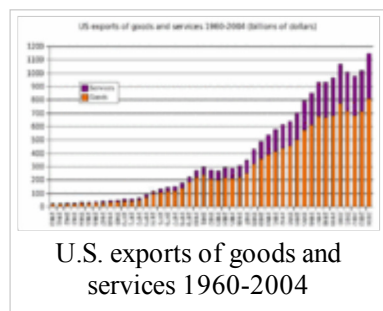
International trade



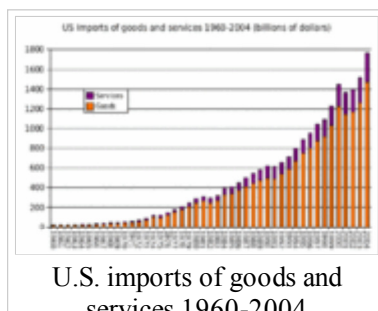
Proportion of US exports to imports 1960-2004

The United States is the most significant nation in the world when it comes to international trade. For decades, it has led the world in imports while simultaneously remaining as one of the top three exporters of the world.

As the major epicenter of world trade, the United States enjoys leverage that many other nations do not. For one, since it is the world's leading consumer, it is the number one customer of companies all around the world.



U.S. exports of goods and services 1960-2004



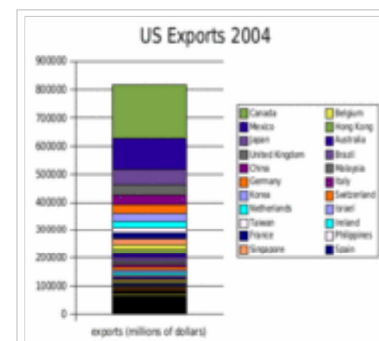
U.S. imports of goods and services 1960-2004

Many businesses compete for a share of the United States market. In addition, the United States occasionally uses its economic leverage to impose economic sanctions in different regions of the world. USA is the top export market for almost 60



US exports in 2006

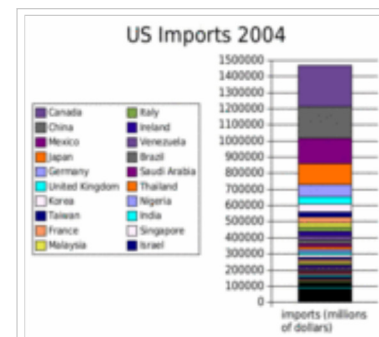
trading nations worldwide.



US exports of goods by country in 2004 (does not include exports of services)

The U.S. is a member of several international trade organizations. The purpose of joining these organizations is to come to agreement with other nations on trade issues, although there is some disagreement among U.S. citizens as to whether or not the U.S. government should be making these trade agreements in the first place.

Since it is the world's leading importer, there are many U.S. dollars in circulation all around the planet. The stable U.S. economy and fairly sound monetary policy has led to faith in the U.S. dollar as the world's most stable currency, although that may be changing in recent times.



US imports of goods by country in 2004 (does not include imports of services)

In order to fund the national debt (also known as public debt), the United States relies on selling U.S. treasury bonds to people both inside and outside the country, and in recent times the latter have become increasingly important. Much of the money generated for the treasury bonds came from U.S. dollars which were used to purchase imports in the United States.



US Free Trade Agreements

US exports of goods in 2004 by country

US exports of goods by country (does not include exports of services)

Nation	millions of dollars	percentage	cumulative percentage
Canada	189101	23.1192%	23.1192%
Mexico	110775	13.5432%	36.6624%
Japan	54400	6.6509%	43.3133%
United Kingdom	35960	4.3964%	47.7097%
China	34721	4.2449%	51.9546%
Germany	31381	3.8366%	55.7912%
Korea	26333	3.2194%	59.0106%
Netherlands	24286	2.9692%	61.9798%
Taiwan	21731	2.6568%	64.6366%
France	21240	2.5968%	67.2334%
Singapore	19601	2.3964%	69.6298%
Belgium	16877	2.0634%	71.6931%
Hong Kong	15809	1.9328%	73.6259%
Australia	14271	1.7448%	75.3707%
Brazil	13863	1.6949%	77.0655%
Malaysia	10897	1.3323%	78.3978%
Italy	10711	1.3095%	79.7073%
Switzerland	9268	1.1331%	80.8404%
Israel	9198	1.1245%	81.9649%
Ireland	8166	0.9984%	82.9633%
Philippines	7072	0.8646%	83.8279%
Spain	6641	0.8119%	84.6398%
Thailand	6363	0.7779%	85.4177%
India	6095	0.7452%	86.1629%

Saudi Arabia	5245	0.6412%	86.8042%
Venezuela	4782	0.5846%	87.3888%
Colombia	4504	0.5507%	87.9394%
Dominican Republic	4343	0.5310%	88.4704%
United Arab Emirates	4064	0.4969%	88.9673%
Chile	3625	0.4432%	89.4105%
Argentina	3386	0.4140%	89.8244%
Turkey	3361	0.4109%	90.2353%
Costa Rica	3304	0.4039%	90.6393%
Sweden	3265	0.3992%	91.0385%
South Africa	3172	0.3878%	91.4263%
Egypt	3105	0.3796%	91.8059%
Others	67023	8.19%	100%
Total Exports of Goods:	817,939		

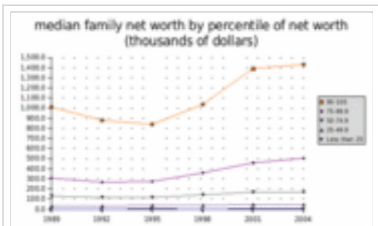
US imports of goods in 2004 by country

US imports of goods by country (does not include imports of services)

Country	Millions of dollars	Percentage	Cumulative Percentage
Canada	255928	17.41401%	17.41401%
China	196699	13.38392%	30.79793%
Mexico	155843	10.60397%	41.40190%
Japan	129595	8.81798%	50.21988%
Germany	77236	5.25534%	55.47522%
United Kingdom	46402	3.15731%	58.63253%
Korea	46163	3.14105%	61.77359%
Taiwan, ROC	34617	2.35543%	64.12902%
France	31814	2.16471%	66.29373%
Malaysia	28185	1.91778%	68.21151%
Italy	28089	1.91125%	70.12276%
Ireland	27442	1.86723%	71.98998%
Venezuela	24962	1.69848%	73.68846%
Brazil	21157	1.43958%	75.12804%
Saudi Arabia	20924	1.42372%	76.55176%
Thailand	17577	1.19599%	77.74775%
Nigeria	16246	1.10542%	78.85317%
India	15562	1.05888%	79.91205%
Singapore	15306	1.04146%	80.95351%
Israel	14527	0.98846%	81.94196%
Sweden	12687	0.86326%	82.80522%
Netherlands	12605	0.85768%	83.66290%
Belgium	12448	0.84699%	84.50989%
Russia	11847	0.80610%	85.31599%

Switzerland	11643	0.79222%	86.10821%
Indonesia	10811	0.73561%	86.84382%
Hong Kong	9314	0.63375%	87.47757%
Philippines	9144	0.62218%	88.09975%
Iraq	8514	0.57931%	88.67907%
Australia	7544	0.51331%	89.19238%
Spain	7476	0.50869%	89.70107%
Algeria	7409	0.50413%	90.20520%
Colombia	7290	0.49603%	90.70123%
others	136,661	9.29877%	100%
Total Imports:	1,469,667		

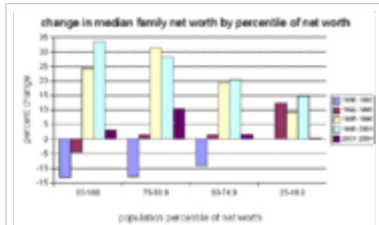
Distribution of wealth



U.S. median family net worth by percentile of net worth (1989-2004)



U.S. mean family net worth by percentile of net worth (1989-2004)



Percent change in median net worth (1989-2004)



Percent change in mean net worth (1989-2004)

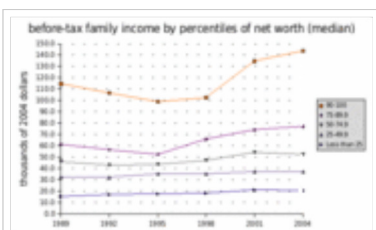
The total value of all U.S. household wealth in 2000 was approximately \$44 trillion.

Family net worth, by selected characteristics of families, 1989-2004 surveys												
Thousands of 2004 dollars												
Family characteristic	1989		1992		1995		1998		2001		2004	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean
All Families	68.8	272.6	65.2	245.7	70.8	260.8	83.1	327.5	92.2	422.9	93.1	448.2
<i>Percentiles of income</i>												
Less than 20	2.6	36.2	5.2	43.4	7.4	54.7	6.8	55.4	8.4	56.2	7.5	72.6
20-39.9	35.3	96.4	36.6	84.6	41.3	97.4	38.4	111.4	39.9	122.7	33.7	121.5
40-59.9	61.1	148.5	52.1	133.3	57.1	126.0	61.9	146.6	67.8	173.3	72.0	194.6
60-79.9	97.5	199.3	99.3	185.4	93.6	198.5	130.2	238.3	152.6	313.2	160.0	340.8
80-89.9	193.5	326.1	151.8	297.1	157.7	316.8	218.5	377.1	280.3	487.0	313.3	487.4
90-100	569.5	1,438.5	479.3	1,266.0	436.9	1,338.0	524.4	1,793.9	887.9	2,410.9	924.1	2,534.6
<i>Age of head (years)</i>												
Less than 35	11.4	68.7	12.0	59.7	14.8	53.2	10.6	74.0	12.5	96.6	14.2	73.5

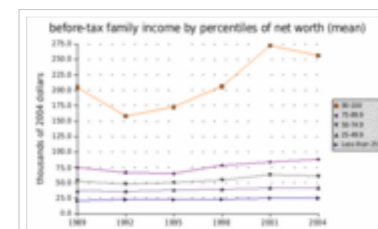
35-44	82.7	216.4	58.7	175.5	64.2	176.8	73.5	227.6	82.6	276.6	69.4	299.2
45-54	144.8	405.1	103.1	353.3	116.8	364.8	122.5	420.2	141.6	517.6	144.7	542.7
55-64	143.5	451.2	150.2	445.4	141.9	471.0	148.2	617.0	197.4	779.5	248.7	843.8
65-74	112.4	410.2	130.0	377.6	136.6	429.3	169.8	541.1	189.4	722.6	190.1	690.9
75 or more	106.2	354.2	114.5	282.3	114.5	317.9	145.6	360.3	165.4	499.6	163.1	528.1
<i>Education of head</i>												
No high school diploma	35.3	121.8	24.6	92.4	27.9	103.7	24.5	91.4	27.2	110.8	20.6	136.5
High school diploma	54.0	163.3	50.7	147.1	63.9	163.7	62.7	182.9	61.8	193.0	68.7	196.8
Some college	67.4	273.3	76.0	226.0	57.6	232.3	85.6	275.5	77.5	305.7	69.3	308.6
College degree	162.8	530.2	129.4	447.5	128.6	473.6	169.7	612.3	227.2	848.0	226.1	851.3
<i>Race or ethnicity of respondent</i>												
White non-Hispanic	104.2	333.4	91.9	292.9	94.3	308.7	111.0	391.1	130.2	520.2	140.7	561.8
Nonwhite or Hispanic	9.8	92.1	15.8	102.0	19.5	94.9	19.3	116.5	19.1	125.1	24.8	153.1
<i>Current work status of head</i>												
Working for someone else	55.7	166.7	51.6	161.0	60.3	168.4	61.2	194.8	69.3	240.3	67.2	268.5
Self-employed	248.7	955.2	190.2	790.6	191.8	862.7	288.0	1,071.3	375.2	1,342.9	335.6	1,423.2
Retired	96.9	267.9	92.9	250.1	99.9	277.2	131.0	356.5	123.1	483.6	139.8	469.0
Other not working	1.2	57.6	4.3	70.0	4.5	70.1	4.1	85.8	9.5	192.3	11.8	162.3
<i>Region</i>												

Northeast	128.1	316.1	84.5	277.2	102.0	308.9	109.3	351.3	99.3	483.2	161.7	569.1
Midwest	77.0	274.8	75.1	228.1	80.8	244.7	93.1	288.5	113.3	363.3	115.0	436.1
South	51.7	192.8	45.5	185.5	54.2	229.5	71.0	309.6	78.6	400.6	63.8	348.0
West	67.2	360.0	94.2	335.4	67.4	286.1	71.1	379.1	93.4	470.4	94.8	523.7
<i>Housing status</i>												
Owner	147.1	394.8	130.2	355.7	128.1	373.7	153.2	468.7	183.8	596.9	184.4	624.9
Renter or other	2.9	56.3	4.2	50.9	6.0	53.8	4.9	50.4	5.1	58.6	4.0	54.1
<i>Percentiles of net worth</i>												
Less than 25	0.3	-0.9	0.6	-0.8	1.2	-0.2	0.6	-2.1	1.2	†	1.7	-1.4
25-49.9	30.9	33.7	30.9	33.4	34.7	37.6	37.9	41.6	43.5	47.2	43.6	47.1
50-74.9	127.0	130.4	115.4	119.2	117.1	122.6	139.7	149.1	168.2	177.9	170.7	185.4
75-89.9	308.2	331.2	268.5	287.4	272.3	293.6	357.7	372.7	458.8	480.7	506.8	526.7
90-100	1,009.5	1,820.7	876.2	1,645.8	836.7	1,766.7	1,039.1	2,244.2	1,388.5	2,944.3	1,430.1	3,114.2
Note: See note to table 1. † Less than 0.05 (\$50).												

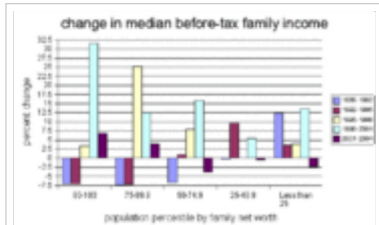
Distribution of income



Before-tax U.S. family income distribution 1989-2004 (median)



Before-tax U.S. family income distribution 1989-2004 (mean)

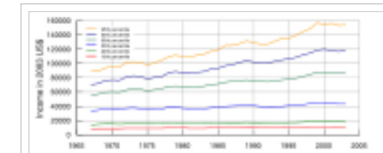


Change in median before-tax U.S. family income (1989-2004)



Change in mean before-tax U.S. family income (1989-2004)

Before-Tax Family Income in the U.S. from 1989-2004						
(thousands of 2004 dollars)						
before tax family income (mean)						
<i>Percentiles of net worth</i>	1989	1992	1995	1998	2001	2004
90-100	205.1	158.5	172.8	206.3	272.7	256.2
75-89.9	74.6	67.0	65.0	78.3	83.7	87.9
50-74.9	52.9	48.1	50.1	54.3	62.7	60.6
25-49.9	36.9	36.4	38.6	39.3	42.1	42.2
Less than 25	21.5	22.9	22.9	23.6	25.6	25.1
before tax family income (median)						
<i>Percentiles of net worth</i>	1989	1992	1995	1998	2001	2004
90-100	114.7	106.6	99.1	102.4	134.7	143.8
75-89.9	61.2	56.7	52.6	65.8	74.1	77.0
50-74.9	46.3	43.2	43.6	47.0	54.4	52.4
25-49.9	32.3	32.2	35.3	35.3	37.2	37.0
Less than 25	15.3	17.2	17.8	18.5	21.0	20.5



U.S. income distribution 1967-2003

Private income

Median income levels									
Households			Persons, age 25 or older with earnings			Household income by race			
All households	Dual earner households	Per household member	Males	Females	Both sexes	Asian	White, non-hispanic	Hispanic	Black
\$46,326	\$67,348	\$23,535	\$39,403	\$26,507	\$32,140	\$57,518	\$48,977	\$34,241	\$30,134
Median personal income by educational attainment									
Measure	Some High School	High school graduate	Some college	Associate degree	Bachelor's degree or higher	Bachelor's degree	Master's degree	Professional degree	Doctorate degree
Persons, age 25+ w/ earnings	\$20,321	\$26,505	\$31,054	\$35,009	\$49,303	\$43,143	\$52,390	\$82,473	\$70,853
Male, age 25+ w/ earnings	\$24,192	\$32,085	\$39,150	\$42,382	\$60,493	\$52,265	\$67,123	\$100,000	\$78,324
Female, age 25+ w/ earnings	\$15,073	\$21,117	\$25,185	\$29,510	\$40,483	\$36,532	\$45,730	\$66,055	\$54,666
Persons, age 25+, employed full-time	\$25,039	\$31,539	\$37,135	\$40,588	\$56,078	\$50,944	\$61,273	\$100,000	\$79,401
Household	\$22,718	\$36,835	\$45,854	\$51,970	\$73,446	\$68,728	\$78,541	\$100,000	\$96,830
Household income distribution									
Bottom 10%	Bottom 20%	Bottom 25%	Middle 33%	Middle 20%	Top 25%	Top 20%	Top 5%	Top 1.5%	Top 1%
\$0 to \$10,500	\$0 to \$18,500	\$0 to \$22,500	\$30,000 to \$62,500	\$35,000 to \$55,000	\$77,500 and up	\$92,000 and up	\$167,000 and up	\$250,000 and up	\$350,000 and up
SOURCE: US Census Bureau, 2006; income statistics for the year 2005									

International comparison

Country	Median household income national currency units	Year	PPP rate (OECD)	Median household income (PPP)
Switzerland	95,184 CHF	2005	1.74	\$55,000
<i>California, US</i>	US State			<i>\$54,000</i>
United States	\$48,000 USD	2006	1.00	\$48,000
Canada	\$53,634 CAD	2005	1.21	\$44,000
New Zealand	\$62,556 NZD	2007	1.54	\$41,000
United Kingdom	£24,700 GBP	2004	0.632	\$39,000
Australia	\$53,404 AUD	2006	1.41	\$38,000
Israel	₪107,820 ILS	2006	2.90	\$37,000
Ireland	€35,410 EUR	2005	1.02	\$35,000
Scotland, United Kingdom	£21,892 GBP	2005	0.649	\$34,000
<i>West Virginia, US</i>	US state			<i>\$33,000</i>
Hong Kong	\$186,000 HKD	2005	5.96	\$31,000
Singapore	\$45,960 SGD	2005	1.55	\$30,000

Poverty

There is significant disagreement about poverty in the United States, particularly over how poverty ought to be defined. Using radically different definitions, two major groups of advocates have claimed variously that (a) the United States has eliminated poverty over the last century; or (b) it has such a severe poverty crisis that it ought to devote significantly more resources to the problem. The debate includes how poverty should be defined.

Measures of poverty can be either absolute or relative. Absolute poverty is defined in real dollar values, whereas relative poverty is a comparison of the highest to the lowest standard of living at a particular time period.

Income inequality

The United Nations Development Programme Report 2006 on income equality ranks the United States as tied for 73rd out of 126 countries, as measured by the Gini coefficient. The richest 10% make 15.9 times as much as the poorest 10%, and the richest 20% make 8.4 times as much as the poorest 20%. Among the world's industrialized countries, the U.S. has a very high degree of inequality. In particular it is higher than that of the other major industrialized economies such as Japan, the UK, Germany, France, and Italy. (See List of countries by income equality.)

Unemployment

Other statistics

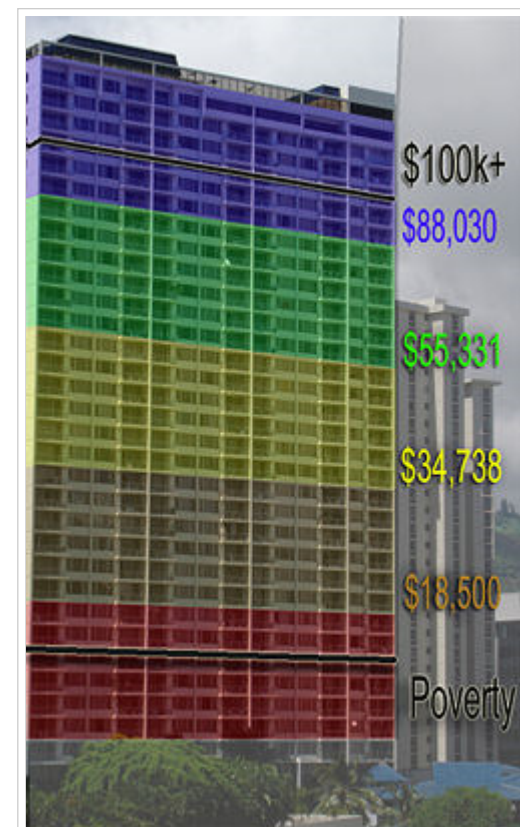
Industrial production growth rate: 3.2% (2005 est.)

Electricity:

- *production:* 3.979 trillion kWh (2004)
- *consumption:* 3.717 trillion kWh (2004)
- *exports:* 22.9 billion kWh (2004)
- *imports:* 34.21 billion kWh (2004)

Electricity - production by source:

- *fossil fuel:* 71.6%



This graphic shows the distribution of gross annual household income. The building's thirty exposed floors are easily divided into quintiles, each income quintile is thereby represented by six floors. Each floor represents the tenth of a third (3.33%) of households in the US and each section of ten floors represent roughly one third of American society. The floors above the top black line represent those households with incomes of or exceeding \$100,000. The floors below the bottom black line, however, represent those households who fell below the poverty threshold. In order to live on the top floor of the American income strata, a household's annual gross income must exceed \$200,000.

- *hydro*: 5.6%
- *nuclear*: 20.6%
- *other*: 2.3% (2001)

Oil:

- *production*: 7.61 million barrel/day (2005 est.)
- *consumption*: 20.03 million barrel/day (2003 est.)
- *exports*: 1.048 million barrel/day (2004 est.)
- *imports*: 13.15 million barrel/day (2004 est.)
- *net imports*: 12.097 million barrel/day (2004 est.)
- *proved reserves*: 22.45 billion barrel (1 January 2002)

Natural gas:

- *production*: 531.1 billion cu m (2004 est.)
- *consumption*: 635.1 billion cu m (2004 est.)
- *exports*: 24.18 billion cu m (2004 est.)
- *imports*: 120.6 billion cu m (2004 est.)
- *proved reserves*: 5.451 trillion cu m (1 January 2005 est.)

Agriculture - products: wheat, corn, other grains, fruits, vegetables, cotton; beef, pork, poultry, dairy products; forest products; fish

Exports - commodities: capital goods, automobiles, industrial supplies and raw materials, consumer goods, agricultural products

Imports - commodities: crude oil and refined petroleum products, machinery, automobiles, consumer goods, industrial raw materials, food and beverages

Historic exchange rates:

	Jan 2007	Jan 2006	Jan 2005	Jan 2004	Jan 2003	Jan 2002	2001*	2000*	1999*	1998	1997
Canadian dollars per U.S. dollar	1.165	1.164	1.204	1.293	1.576	1.600	1.548	1.485	1.485	1.483	1.384
Japanese yen per U.S. dollar	119.0	118.1	102.5	107.2	118.7	132.6	121.5	107.7	113.9	130.9	120.9
Euros per US dollar	.7577	.8444	.7387	.7939	.9534	1.128	1.062	.9947	.8557	-	-

British pounds per U.S. dollar	0.5104	0.5812	0.5209	0.5600	0.6212	0.6981	0.6944	0.6596	0.6180	0.6037	0.6106
French francs per U.S. dollar	-	-	-	-	-	-	-	-	5.65	5.899	5.836
Italian lire per U.S. dollar	-	-	-	-	-	-	-	-	1,668.7	1,763.2	1,703.1
German deutschmarks per U.S. dollar	-	-	-	-	-	-	-	-	1.69	1.969	1.734

Note: financial institutions in France, Italy, Germany, and eight other European countries started using the euro on 1 January 1999, with the euro replacing the local currency for all transactions in 2002. Their 1999 figures are for January.

*January 1 exchange rates

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Economy of Wales

2008/9 Schools Wikipedia Selection. Related subjects: Economics

The **Economy of Wales**. In 2004, according to ONS provisional data, headline Gross Value Added in Wales was £39,243m, making the Welsh economy the tenth largest of the UK's twelve 'regions' (counting Wales, Scotland and Northern Ireland alongside the nine English Government Office Regions). It is also ranks as the 43rd largest economy in the world. The modern Welsh economy is dominated by the service sector. In 2000, services contributed 66% to GVA. The manufacturing sector contributed 32%, whilst agriculture, forestry and fishing contributed 1.5%.

Economic output per head has been lower in Wales than in other parts of the UK (and most other parts of Western Europe) for a very long time - in 2002 it stood at 90% of the EU25 average and around 80% of the UK average. However, care is needed in interpreting these data, since regional GDP/GVA per head data in the UK does not take account of regional differences in the cost of living, which in Wales is estimated to be 93-94% of the UK average. Thus the gap in real living standards between Wales and more prosperous parts of the UK is not pronounced.

Economic sectors

Services

In recent years, the service sector in Wales has seen above average growth compared with the rest of the UK. Cardiff and to a lesser extent Swansea and Newport are centres for retail, hotels and restaurants, financial and business services, with Cardiff enjoying significant growth in recent years.

However, Wales does not have a favourable occupational structure. A relatively high proportion of service sector jobs in Wales are in the non-productive public sector: public administration, health and education. Compared to more prosperous parts of the UK, Wales lacks high-value added service sector employment in sectors such as finance, business services and research and development. This is attributable in part to a comparative lack of economic mass (i.e. population) and the absence of a really large city - judged by its wider urban area Cardiff is a non-metropolitan city significantly smaller than other major British regional cities like Leeds, Manchester or Bristol, or prime cities in smaller countries such as Dublin, Copenhagen or Helsinki.

With its mountainous landscape and numerous sandy beaches, Wales has always attracted much tourism. In 2002, nearly 13 million trips of one night or more were made in Wales, generating expenditure of £1.8 billion. 11.9 million of these trips were made by UK residents with 0.9 million coming from overseas.

Manufacturing

Wales has a diverse manufacturing sector. Heavy industry, once a mainstay of the Welsh economy has largely been in decline over the past century but is still very apparent. Metal ore refining is a long established industry in Wales. As of 2007, Corus has manufacturing facilities at Port Talbot, Llanwern, Newport,

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Trostre, Shotton, Ammanford, Pontardulais, Tafarnaubach and Caerphilly, although only the Port Talbot Steelworks remains as a major integrated steelmaking plant. Nearly all the tinsplate and much of the aluminium of sheet steel products in the UK are produced in Welsh plants. Much of the ore is imported and some of the metal produced is re-exported.

Milford Haven has two oil refineries which represent around a fifth of United Kingdom capacity.

Wales is an important producer of automotive components: Ford has a major engine plant at Bridgend; Borg Warner has a major components plant in Kenfig, South Wales; and Visteon (previously Ford) has a large transmission components plant at Jersey Marine near Swansea.

During the 1980s and 1990s, a major growth sector in manufacturing is the electronics industry with over 130 North American and 35 Japanese companies having operations in Wales. Welsh manufacturing is noted for its high productivity. However, research and development activity in this sector is relatively scarce and is generally undertaken elsewhere - a characteristic of a 'branch factory' economy where routine production is located in one region while higher skill activities are located in another.

Agriculture, forestry and fishing

Approximately 80% of the land in Wales is used for agriculture. With its grassy and hilly terrain, livestock farming is more common than crop cultivation. Wales is famous for its sheep, of which there is a population of more than 10 million, outnumbering the human population of more than three to one. Cattle farming for beef and dairy products is also common. About 13% of the land is covered by forestry and woodland. Wales's fishing industry is concentrated mainly along the Bristol Channel. In total, agriculture, forestry and fishing only contributes 1.5 % of the Welsh economy.

Regional variations

Over recent years, Cardiff, the northern and southern coastal belts, and some rural parts of Wales have experienced the biggest increase in employment, while the 'losers' have been the South Wales Valleys and other declining industrial towns. This pattern probably reflects a combination of: the increasing importance of quality of life factors in location decisions (a key factor behind Counter urbanisation); the greater role played by the largest conurbations as centres of service sector businesses (Cardiff in the Welsh context, even though the city itself is relatively small); and the effects of skill-biased technical change on the demand for labour, disadvantaging 'skill poor' declining industrial districts.

Average earnings and employment vary considerably across Wales. Employment and earnings are generally higher in east Wales, especially in urban areas. In south west Wales and the Valleys, both employment and wages are generally lower, although earnings in Bridgend and Neath Port Talbot, which are still centres of skilled manufacturing employment, are relatively good. In north and north west Wales earnings are low but the employment rates are above the Welsh average.

A significant part of the earnings (and value-added per job) variations within Wales are due to structural factors such as economic mass and occupational mix rather than like-for-like lower pay or productivity. Cardiff, with 319,000 people, benefits from its capital status, a hinterland in south east Wales and good

connections to London and southern England. The city is the primary location for service sector activities in Wales, with 26 per cent of Welsh service sector output and 22 per cent of Welsh service sector employment, compared to 19 per cent of all employment in Wales. North east Wales benefits from proximity to Cheshire, Greater Manchester and Merseyside, and there is significant cross-border commuting. The Valleys and the western areas of Wales have less economic mass and are more distant from major economic centres in England. These are some of the poorest regions in Europe and qualify for Objective One funding.

Many parts of Wales suffered from the continuous decline in heavy industry over the 20th Century - culminating in the virtual disappearance of coal-mining in the 1980s. The demise of 'smokestack' industries left a legacy of relatively high unemployment. Although unemployment has declined in recent years, rates in West Wales and the Valleys still tend to be higher than the Welsh average, and economic inactivity (a form of hidden unemployment) continues to be a major problem in these areas. Merthyr Tydfil and Neath Port Talbot have some of the largest proportions of people in the UK not working due to long-term illness or disability, though in practice many individuals classified as "unable to work" through sickness are often actually low skilled workers incentivised to exit the labour market because of declining demand and the operation of the benefits system.

Property

The Halifax bank reported in the 3rd quarter of 2005, that the average house price in Wales is £149,464 compared with a UK average of £166,074. Wales saw an annual house inflation figure of 5.3% compared with 3.0% for the rest of the UK. Over the last ten years, house prices have risen by 201% in Wales. In Q3 2002, Greater London prices were 2.7 times higher than in Wales; now they are just 1.7 times higher. The fastest price rises occurred in Port Talbot where a 35% increase was reported.

Infrastructure

Transport

In 2003, Wales has 83 miles (133 kilometres) of motorways. The M4 motorway, which terminates near Pontarddulais, serves major southern Welsh towns and cities like Swansea, Neath, Port Talbot, Bridgend, Cardiff and Newport. The M4 connects Wales with England at the Second Severn Crossing; the original motorway link was re-numbered the M48 Severn Bridge following completion of the new structure. The M4 links to the M5 and M25 and passes Bristol, Swindon, Reading, Slough, and Heathrow Airport, starting at the A4 in West London. North Wales is served by the A55 'expressway' trunk road, which runs from a junction with the M53 motorway near Chester to Holyhead. The A465 road, currently being upgraded to dual carriageway, provides a link between the M4 near Neath across the Heads of the Valleys to Monmouth and the English Midlands via the A40 and M50 motorway.

There are only 2 railway lines with intercity express trains, following the north coast and south coast respectively. The Great Western Line serving south Wales crosses the Severn via the Severn Tunnel.

Due to the mountainous terrain of mid Wales, north-south transport is difficult. There are only a few trunk roads (the A483 and A470 are the main north-south roads in central Wales), few rail services, and many travellers find it easier to travel north-south via routes through Shropshire and Herefordshire. Generally

traffic between north and south Wales is modest. The main north-south railway line in central Wales is the Heart of Wales Line, though this does not provide a direct connection to North Wales.

Milford Haven has the largest port in Wales. It is also the fifth largest in the United Kingdom and contains a significant oil and natural gas terminal. Major liquid natural gas facilities are under construction here. The other major Welsh ports are Swansea, Port Talbot, Barry, Cardiff, Newport and Holyhead. Cargo handled at these includes coal, iron ore, timber, scrap metal and other dry bulk industrial material. There are regular ferry services to Ireland from Fishguard, Pembroke Dock, Holyhead and Swansea. As of January 2007, the future of ferry services from Swansea is in doubt.

As of 2005, Cardiff International Airport is the only airport offering scheduled flights in Wales. It handled around 2 million passengers in 2005.

Telecommunications

On 28 November 2006, a trial of a new telecommunications network technology was rolled out in the village of Wick in the Vale of Glamorgan. The new network BT 21CN, will offer data transfer speeds of up to 24Mbit/s, offering Welsh broadband customers a wider range of services, including high-speed video telephony, video on demand, WiFi access and corporate VPN access. With the success of this trial and the subsequent roll out across Wales and with the backing of the Welsh Assembly Government on this project, the Welsh economy is set to benefit from the most advanced telecommunications network in the World.

Utilities

The average annual production of electricity in Wales is some 3,800 MW. Average annual electricity consumption is just over half of the annual production making Wales a net exporter of electricity. Electricity generation encompasses a broad mix of technologies including Nuclear (e.g. Wylfa), Coal (e.g. Aberthaw), Gas (e.g. Baglan Bay), Wind (Cefn Croes) and hydro-electricity.

The role of the public sector

According to the Welsh Assembly Government's economic development strategy, the role of the public sector in the economy is to help create a stable and favourable business environment, promote skills and innovation, address market failures and invest in economic infrastructure including transport and information technology. Fiscal and economic policy, energy policy, employment law, social security and various other aspects of market regulation are reserved matters determined at Westminster.

The public sector is also an important employer in Wales. In 2004, 30% of jobs in Wales were in public administration, education and health, compared to 24% in the UK as a whole. West Wales and the Valleys had a higher proportion of jobs in these sectors than East Wales. Between 2001 and 2004, the number of jobs in public administration, education and health in Wales grew by 12%, 10% and 7% respectively. At the same time manufacturing and extractive industries

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continued to contract, and the rest of the service sector expanded at a generally slower rate.

It should be noted that not all employment in public administration, education and health is in the public sector. There is significant private and voluntary sector provision of health, education and social care, and some government departments and agencies outsource administrative functions to private companies.

Controversies in economic policy

The decline in Welsh GDP per person (relative to the UK average) over recent years has prompted policy debate. There have been suggestions - for example, by Plaid Cymru - that Wales should attempt to emulate the Irish 'Celtic Tiger' model, particularly its low corporation tax rates, in order to stimulate investment and growth. However, economists including Nicholas Crafts and John Bradley have argued that the low Irish corporation tax rate was only effective in the very specific demographic and historical circumstances of Ireland in the late 1980s and 1990s, and that adopting such a policy in a very different economic context would not only require political independence, but could be relatively ineffective and/or create difficult policy choices between higher personal taxes and lower public spending.

In a report for the Institute of Welsh Affairs in 2003, Phil Cooke argued that the Assembly Government had responded to the loss of productive employment in manufacturing by substituting new jobs in the public sector, making Wales increasingly dependent on fiscal transfers from Whitehall. Cooke alleged that a relatively 'weak' devolution settlement had prevented the Assembly from developing innovative economic policies, especially when compared to Scotland. However, critics including Ron Davies and John Lovering claimed that Cooke's argument (that a more powerful Assembly was the necessary precondition to more effective economic policies) was a non-sequitur.

Economic history

Until the middle of the 18th century economic development in Wales was restricted by its peripheral location, predominantly upland topography, poor communications and sparse population. Commerce was most advanced in the small coastal ports that had regular exchange with Bristol or Liverpool; the other major sources of external trading contact were the drovers, who drove cattle from Wales for sale and slaughter in the English Midlands and London from the 14th century onwards. The drovers were instrumental in establishing the first banks in Wales, such as "Banc Y Ddafad Ddu" in Aberystwyth.

Industrial development from the mid 18th century was stimulated by the potential of Wales' rich mineral deposits, the arrival of English entrepreneurs and financiers, and changes in technology. The development of iron smelting by coke made the valleys of south Wales a natural industrial location, and from the mid 18th century, increased demand for metals and coal was generated first by war, and later by the advent of steamships and railways.

The northern rim of the South Wales Coalfield, focused on Merthyr, became Britain's foremost iron-producing district in the second half of the century, while the south-western part of the coalfield, around Swansea, emerged as an important centre of non-ferrous metal smelting and later tinsplate production. Metallurgical industries required ever increasing quantities of coal, which was initially largely mined for this purpose. However, sale-coal mining developed in



Port Talbot Steelworks, one of the last remaining heavy industrial plants in south Wales

earnest from the mid 19th century and this was to become the signature industry of the region, transforming the economic and social landscape of the South Wales Valleys.

With limited indigenous capital and labour, from the 1850s industrialisation in Wales attracted an increasing flow of immigration from England, and to a lesser extent, further afield. By the first decade of the 20th century Glamorganshire and Monmouthshire were experiencing large scale net migration, contributing to cultural and linguistic change in south east Wales, although the region would retain a Nonconformist majority and sense of distinctive Welsh cultural identity.

Despite explosive growth in the early 1900s, by the 1920s it was apparent that Wales was facing economic difficulties, largely because of its reliance on older heavy industry rather the newer, growing light industry sectors that were becoming established in the more prosperous parts of England. From the 1970s, Wales' traditional heavy industries began to disappear, being replaced by new jobs in light manufacturing and services. Wales attracted an above average share of the foreign direct investment (FDI) into the UK over this period, but many of the new plants established by foreign firms were essentially 'branch factory' operations offering low wage, low skill employment opportunities.

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Federal Reserve System

2008/9 Schools Wikipedia Selection. Related subjects: Economics

The **Federal Reserve System** (also the **Federal Reserve**; informally **The Fed**) is the central banking system of the United States. Created in 1913 by the enactment of the Federal Reserve Act, it is a quasi-public (government entity with private components) banking system composed of (1) the presidentially appointed Board of Governors of the Federal Reserve System in Washington, D.C.; (2) the Federal Open Market Committee; (3) 12 regional **Federal Reserve Banks** located in major cities throughout the nation acting as fiscal agents for the U.S. Treasury, each with its own nine-member board of directors; (4) numerous private U.S. member banks, which subscribe to required amounts of non-transferable stock in their regional Federal Reserve Banks; and (5) various advisory councils. As of 2008, Ben Bernanke serves as the Chairman of the Board of Governors of the Federal Reserve System.

History

In 1863, in order to help finance the Civil War, a system of national banks was instituted by the National Currency Act. The banks each had the power to issue standardized national bank notes based on United States bonds held by the bank. The early national banking system had two main weaknesses: an "inelastic" currency; and a lack of liquidity. During the last quarter of the 19th century and the beginning of the 20th century the United States economy went through a series of financial panics. A particularly severe panic in 1907 provided the motivation for renewed demands for banking and currency reform. The following year Congress enacted the Aldrich-Vreeland Act which provided for an emergency currency and established the National Monetary Commission to study banking and currency reform.

The Federal Reserve Act

Federal Reserve System



Seal



The Federal Reserve System Eccles Building (Headquarters)

Headquarters	Washington, D.C.
Chairman	Ben Bernanke
Central Bank of	United States
Currency ISO 4217 Code	U.S. dollar USD
Base borrowing rate	2%
Base deposit rate	3.5%
Website	federalreserve.gov

The chief of the bipartisan National Monetary Commission was financial expert and Senate Republican leader Nelson Aldrich. Aldrich set up two commissions — one to study the American monetary system in depth and the other, headed by Aldrich himself, to study the European central-banking systems and report on them. Aldrich went to Europe opposed to centralized banking, but after viewing Germany's banking system came away believing that a centralized bank was better than the government-issued bond system that he had previously supported. Centralized banking was met with much opposition from politicians, who were suspicious of a central bank and who charged that Aldrich was biased due to his close ties to wealthy bankers such as J.P. Morgan and his daughter's marriage to John D. Rockefeller, Jr.

Aldrich fought for a private bank with little government influence, but conceded that the government should be represented on the Board of Directors. Most Republicans favored the Aldrich Plan, but it lacked enough support in the bipartisan Congress to pass. Progressive Democrats instead favored a reserve system owned and operated by the government and out of control of the "money trust", ending Wall Street's control of American currency supply. Conservative Democrats fought for a privately owned, yet decentralized, reserve system, which would still be free of Wall Street's control. The Federal Reserve Act passed Congress in late 1913 on a mostly partisan basis, with most Democrats in support and most Republicans against it.

Post Bretton Woods era

In July 1979, Paul Volcker was nominated, by President Carter, as Chairman of the Federal Reserve Board amid roaring inflation. He tightened the money supply, and by 1986 inflation had fallen sharply. In October 1979 the Federal Reserve announced a policy of "targeting" money aggregates and bank reserves in its struggle with double-digit inflation.

In January 1987, with retail inflation at only 1%, the Federal Reserve announced it was no longer going to use money-supply aggregates, such as M2, as guidelines for controlling inflation, even though this method had been in use from 1979, apparently with great success. Before 1980, interest rates were used as guidelines; inflation was severe. The Fed complained that the aggregates were confusing. Volcker was chairman until August 1987, whereupon Alan Greenspan assumed the mantle, seven months after monetary aggregate policy had changed.

Purpose

The purpose of the Federal Reserve System is formally stated in the **Federal Reserve Act**:



To provide for the establishment of Federal reserve banks, to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking in the United States, and for other purposes.

The primary motivation for creating the Federal Reserve was to address banking panics. The Federal Reserve briefly describes the circumstances that led to its creation, the purpose for creating it, and functions of the system in *The Federal Reserve in Plain English*:

Just before the founding of the Federal Reserve, the nation was plagued with financial crises. At times, these crises led to “panics,” in which people raced to their banks to withdraw their deposits. A particularly severe panic in 1907 resulted in bank runs that wreaked havoc on the fragile banking system and ultimately led Congress in 1913 to write the Federal Reserve Act. Initially created to address these banking panics, the Federal Reserve is now charged with a number of broader responsibilities, including fostering a sound banking system and a healthy economy.

The purpose and functions of the Federal Reserve System include:

1. To address banking panics
2. To serve as the central bank for the United States
3. To strike a balance between private interests of banks and the centralized responsibility of government
 - supervising and regulating banking institutions
 - protect the credit rights of consumers
4. To manage the nation's money supply through monetary policy
 - maximum employment
 - stable prices
 - moderate long-term interest rates
5. Maintain the stability of the financial system and containing systemic risk in financial markets
6. Providing financial services to depository institutions, the U.S. government, and foreign official institutions, including playing a major role in operating the nation's payments system
 - facilitate the exchange of payments among regions
 - to be responsive to local liquidity needs
7. Strengthen U.S. standing in the world economy

Addressing the problem of bank panics

Bank runs occur because banking systems are usually fractional reserve lending institutions and do not have enough cash in reserves to give to all of their depositors simultaneously. Bank runs can lead to a multitude of social and economic problems. The Federal Reserve was designed as an attempt to prevent this from occurring.

Elastic currency

One way to prevent bank runs is to have a money supply that can expand when money is needed. The term "elastic currency" in the Federal Reserve Act doesn't just mean the ability to expand the money supply, but also to contract it. Some economic theories have been developed that support the idea of expanding or shrinking a money supply as economic conditions warrant. **Elastic currency** is defined by the Federal Reserve as:

Currency that can, by the actions of the central monetary authority, expand or contract in amount warranted by economic conditions.

Monetary policy of the Federal Reserve System is based partially on the theory that it is best overall to expand or contract the money supply as economic conditions change.

Check clearing system

Because some banks refused to clear checks from certain other banks during times of economic uncertainty, which increased financial problems, a check-clearing system was created in the Federal Reserve System. It is briefly described in *The Federal Reserve System - Purposes and Functions*:

By creating the Federal Reserve System, Congress intended to eliminate the severe financial crises that had periodically swept the nation, especially the sort of financial panic that occurred in 1907. During that episode, payments were disrupted throughout the country because many banks and clearinghouses refused to clear checks drawn on certain other banks, a practice that contributed to the failure of otherwise solvent banks. To address these problems, Congress gave the Federal Reserve System the authority to establish a nationwide check-clearing system. The System, then, was to provide not only an elastic currency—that is, a currency that would expand or shrink in amount as economic conditions warranted—but also an efficient and equitable check-collection system.

Lender of last resort

The Federal Reserve has the authority and financial resources to act as “lender of last resort” by extending credit to depository institutions or to other entities in unusual circumstances involving a national or regional emergency, where failure to obtain credit would have a severe adverse impact on the economy.

Through its discount and credit operations, Reserve Banks provide liquidity to banks to meet short-term needs stemming from seasonal fluctuations in deposits or unexpected withdrawals. Longer term liquidity may also be provided in exceptional circumstances. The rate the Fed charges banks for these loans is the discount rate (officially the primary credit rate).

In making these loans, the Fed serves as a buffer against unexpected day-to-day fluctuations in reserve demand and supply. This contributes to the effective functioning of the banking system, alleviates pressure in the reserves market and reduces the extent of unexpected movements in the interest rates.

Central bank

In its role as the central bank of the United States, the Fed serves as a *'banker's bank'* and as the **government's bank**. As the banker's bank, it helps to assure the safety and efficiency of the payments system. As the government's bank, or fiscal agent, the Fed processes a variety of financial transactions involving trillions of dollars. Just as an individual might keep an account at a bank, the U.S. Treasury keeps a checking account with the Federal Reserve through which incoming federal tax deposits and outgoing government payments are handled. As part of this service relationship, the Fed sells and redeems U.S. government securities such as savings bonds and Treasury bills, notes and bonds. It also issues the nation's coin and paper currency. The U.S. Treasury, through its Bureau of the Mint and Bureau of Engraving and Printing, actually produces the nation's cash supply; the Fed Banks then distribute it to financial institutions.

Federal funds

Federal funds are the reserve balances that private banks keep at their local Federal Reserve Bank. These reserve balances are the "reserves" in "federal reserve", hence the name of the system. The purpose of keeping funds at a Federal Reserve Bank is to have a mechanism through which private banks can lend funds to one another. This market for funds plays an important role in the Federal Reserve System as it is what inspired the name of the system and it is what is used as the basis for monetary policy. Monetary policy works by influencing how much money the private banks charge each other for the lending of these funds.

Balance between private banks and responsibility of government

The system was designed out of a compromise between the competing philosophies of privatization and government regulation. While planning the design of the system, some people wanted the system to have generally private aspects whereas others wanted more government involvement. The system that resulted ended up being a compromise between these two philosophies. Donald L. Kohn, vice chairman of the Board of Governors, gave a summary of this compromise:

Agrarian and progressive interests, led by William Jennings Bryan, favored a central bank under public, rather than banker, control. But the vast majority of the nation's bankers, concerned about government intervention in the banking business, opposed a central bank structure directed by political appointees. The legislation that Congress ultimately adopted in 1913 reflected a hard-fought battle to balance these two competing views and created the hybrid public-private, centralized-decentralized structure that we have today.

In the current system, private banks are for-profit businesses but there are restrictions on what they can do. These restrictions placed on private banks are government regulations. The Federal Reserve System is the part of government that regulates the private banks. The balance between privatization and government involvement is also seen in the structure of the system. Private banks elect members of the board of directors at their regional Federal Reserve Bank while the members of the Board of Governors are selected by the President of the United States and confirmed by the Senate. The private banks give input to the government officials about their economic situation and these government officials use this input in Federal Reserve policy decisions. In the end, private banking businesses are able to freely run a profitable business while the U.S. government, through the Federal Reserve System, oversees and regulates the activities of the private banks.

Government regulation and supervision

The **Board of Governors** is the part of the Federal Reserve System that is responsible for supervising the private banks. A general description of the types of regulation and supervision involved is given by the Federal Reserve:

The Board also plays a major role in the supervision and regulation of the U.S. banking system. It has supervisory responsibilities for state-chartered banks that are members of the Federal Reserve System, bank holding companies (companies that control banks), the foreign activities of member banks, the U.S. activities of foreign banks, and Edge Act and agreement corporations (limited-purpose institutions that engage in a foreign banking business). The Board and, under delegated authority, the Federal Reserve Banks, supervise approximately 900 state member banks and 5,000 bank holding companies. Other federal agencies also serve as the primary federal supervisors of commercial banks; the Office of the Comptroller of the Currency supervises national banks, and the Federal Deposit Insurance Corporation supervises state banks that are not members of the Federal Reserve System.

Some regulations issued by the Board apply to the entire banking industry, whereas others apply only to member banks, that is, state banks that have chosen to join the Federal Reserve System and national banks, which by law must be members of the System. The Board also issues regulations to carry out major federal laws governing consumer credit protection, such as the Truth in Lending, Equal Credit Opportunity, and

Home Mortgage Disclosure Acts. Many of these consumer protection regulations apply to various lenders outside the banking industry as well as to banks.

Members of the Board of Governors are in continual contact with other policy makers in government. They frequently testify before congressional committees on the economy, monetary policy, banking supervision and regulation, consumer credit protection, financial markets, and other matters.

The Board has regular contact with members of the President's Council of Economic Advisers and other key economic officials. The Chairman also meets from time to time with the President of the United States and has regular meetings with the Secretary of the Treasury. The Chairman has formal responsibilities in the international arena as well.

Preventing asset bubbles

The board of directors of each Federal Reserve Bank District also have regulatory and supervisory responsibilities. For example, a member bank (private bank) is not permitted to give out too many loans to people who cannot pay them back. This is because too many defaults on loans will lead to a bank run. If the board of directors has judged that a member bank is performing or behaving poorly, it will report this to the Board of Governors. This policy is described in United States Code, Title 12, Chapter 3, subchapter 7, section 301:

Each Federal reserve bank shall keep itself informed of the general character and amount of the loans and investments of its member banks with a view to ascertaining whether undue use is being made of bank credit for the speculative carrying of or trading in securities, real estate, or commodities, or for any other purpose inconsistent with the maintenance of sound credit conditions; and, in determining whether to grant or refuse advances, rediscounts, or other credit accommodations, the Federal reserve bank shall give consideration to such information. The chairman of the Federal reserve bank shall report to the Board of Governors of the Federal Reserve System any such undue use of bank credit by any member bank, together with his recommendation. Whenever, in the judgment of the Board of Governors of the Federal Reserve System, any member bank is making such undue use of bank credit, the Board may, in its discretion, after reasonable notice and an opportunity for a hearing, suspend such bank from the use of the credit facilities of the Federal Reserve System and may terminate such suspension or may renew it from time to time.

The punishment for making false statements or reports which overvalue an asset is stated in U.S. Code, Title 18, Part 1, Chapter 47, Section 1014:

Whoever knowingly makes any false statement or report, or willfully overvalues any land, property or security, for the purpose of influencing in any way...shall be fined not more than \$1,000,000 or imprisoned not more than 30 years, or both.

These aspects of the Federal Reserve System are the parts intended to prevent or minimize speculative asset bubbles which ultimately lead to severe market corrections.

Structure

Independent within government

The Federal Reserve System is an independent government institution that has private aspects, but is neither a private organization, nor operates for a profit. It derives its authority and public purpose from the Federal Reserve Act passed by Congress in 1913. As an independent institution, the Federal Reserve has the authority to act on its own without prior approval from Congress or the President. The members of its Board of Governors are appointed for long, staggered terms, limiting the influence of day-to-day political considerations. The Federal Reserve's unique structure also provides internal checks and balances, ensuring that its decisions and operations are not dominated by any one part of the system. It also generates revenue independently without need for Congressional funding. Congressional oversight and statute, which can alter the Fed's responsibilities and control, allows the government to keep the Federal Reserve in check. Since it was designed to be independent while also remaining within the government of the United States, it is often said to be "independent within the government."

The 12 Federal Reserve banks provide the financial means to operate the Federal Reserve. Each reserve bank is organized much like a private corporation so that it can provide the necessary revenue to cover operational expenses and implement the demands of the board. Member banks are privately owned banks that must buy a certain amount of stock in the Reserve Bank within its region to be a member of the Federal Reserve System. This stock "may not be sold, traded, or pledged as security for a loan" and all member banks receive a 6% annual dividend. These member banks must maintain fractional reserves either as vault cash or on account at its Reserve Bank; member banks earn no interest on either of these. The dividends paid by the Federal Reserve Banks to member banks are considered partial compensation for the lack of interest paid on the required reserves. All profit after expenses is returned to the U.S. Treasury or contributed to the surplus capital of the Federal Reserve Banks (and since shares in ownership of the Federal Reserve Banks are redeemable only at par, the nominal "owners" do not benefit from this surplus capital); the Federal Reserve system contributed over \$29 billion to the Treasury in 2006.

Outline

The Federal Reserve System as a whole

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- The nation's central bank
- A regional structure with 12 districts
- Subject to general Congressional authority and oversight
- Operates on its own earnings

Board of Governors

- 7 members serving staggered 14-year terms
- Appointed by the U.S. President and confirmed by the Senate
- Oversees System operations, makes regulatory decisions, and sets reserve requirements

Federal Open Market Committee

- The System's key monetary policymaking body
- Decisions seek to foster economic growth with price stability by influencing the flow of money and credit
- Composed of the 7 members of the Board of Governors and the Reserve Bank presidents, 5 of whom serve as voting members on a rotating basis

Federal Reserve Banks

- 12 regional banks with 25 branches
- Each independently incorporated with a 9-member board of directors, of whom 6 are from the private sector and 3 are designated by the Board of Governors.
- Set discount rate, subject to approval by Board of Governors.
- Monitor economy and financial institutions in their districts and provide financial services to the U.S. government and depository institutions.

Member banks

- Private banks
- Hold stock in their local Federal Reserve Bank
- Elect six of the nine members of Reserve Banks' boards of directors.

Advisory Committees

- carry out varied responsibilities

Board of Governors



The seven-member Board of Governors is the main governing body of the Federal Reserve System. It is charged with overseeing the 12 District Reserve Banks and with helping implement national monetary policy. Governors are appointed by the President of the United States and confirmed by the Senate., one on Jan. 31 of every even-numbered year, for staggered, 14-year terms. As an independent federal government agency, the Board of Governors does not receive funding from Congress, and the terms of the seven members of the Board span multiple presidential and congressional terms. Once a member of the Board of Governors is appointed by the president, he or she functions mostly independently. The Board is required to make an annual report of operations to the Speaker of the U.S. House of Representatives. It also supervises and regulates the operations of the Federal Reserve Banks, and US banking system in general.

Membership is generally limited to one term. However, if someone is appointed to serve the remainder of another member's uncompleted term, he or she may be reappointed to serve an additional 14-year term. Conversely, a governor may serve the remainder of another governor's term even after he or she has completed a full term. The law provides for the removal of a member of the Board by the President "for cause."

The current members of the Board of Governors are:

- Ben Bernanke, Chairman
- Donald Kohn, Vice-Chairman
- Frederic Mishkin
- Kevin Warsh
- Randall Kroszner

(*Because the Senate Banking Committee has refused to hold hearings on appointments to fill the two vacant positions until a new President takes office, there are currently two vacancies. Governor Kroszner's term has also expired, but the law allows him to remain in office until a successor is confirmed)

All current members of the Board of Governors have taken office during the presidency of George W. Bush.

Federal open market committee

The Federal Open Market Committee (FOMC) created under comprises the seven members of the board of governors and five representatives selected from the regional Federal Reserve Banks. The FOMC is charged under law with overseeing open market operations, the principal tool of national monetary policy. These operations affect the amount of Federal Reserve balances available to depository institutions, thereby influencing overall monetary and credit conditions. The FOMC also directs operations undertaken by the Federal Reserve in foreign exchange markets. The representative from the Second District, New York, (currently Timothy Geithner) is a permanent member, while the rest of the banks rotate at two- and three-year intervals. All the presidents participate in FOMC discussions, contributing to the committee's assessment of the economy and of policy options, but only the five presidents who are committee members vote on policy decisions. The FOMC, under law, determines its own internal organization and by tradition elects the Chairman of the Board of Governors as its chairman and the president of the Federal Reserve Bank of New York as its vice chairman. Formal meetings typically are held eight times each year in Washington, D.C. Nonvoting Reserve Bank presidents also participate in Committee deliberations and discussion. The FOMC generally meets eight times a year



Ben Bernanke, chairman of the Board of Governors of the Federal Reserve System.

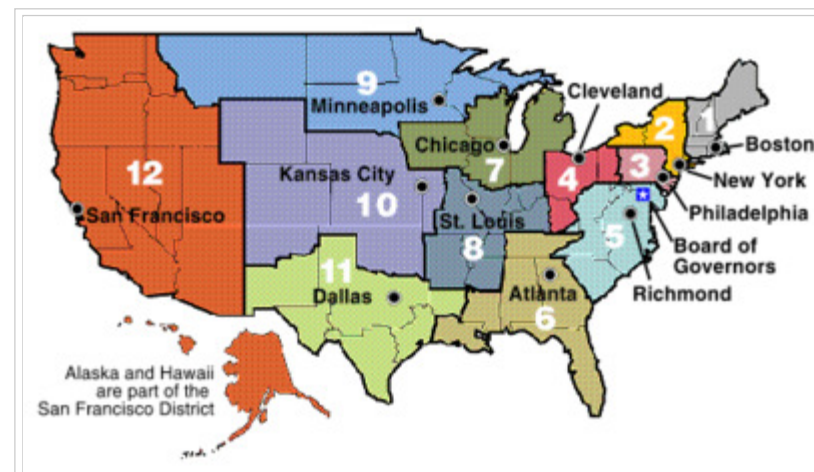
in Telephone consultations and other meetings are held when needed.

Federal Reserve Banks

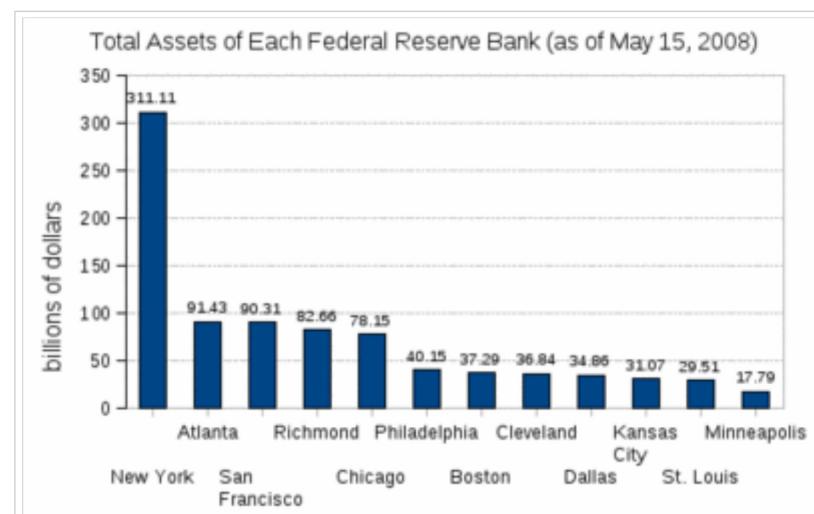
There are **12 regional Federal Reserve Banks** (not to be confused with the "member banks") with **25 branches**, which serve as the operating arms of the system. Each Federal Reserve Bank is subject to oversight by a Board of Governors. Each Federal Reserve Bank has a **board of directors**, whose members work closely with their Reserve Bank president to provide grassroots economic information and input on management and monetary policy decisions. These boards are drawn from the general public and the banking community and oversee the activities of the organization. They also appoint the **presidents of the Reserve Banks**, subject to the approval of the Board of Governors. Reserve Bank boards consist of **nine members**: six serving as representatives of nonbanking enterprises and the public (nonbankers) and three as representatives of banking. Each Federal Reserve **branch office** has its own board of directors, composed of **three to seven members**, that provides vital information concerning the regional economy.

The Reserve Banks opened for business on November 16, 1914. Federal Reserve Notes were created as part of the legislation, to provide a supply of currency. The notes were to be issued to the Reserve Banks for subsequent transmittal to banking institutions. The various components of the Federal Reserve System have differing legal statuses.

The **Federal Reserve Banks** have an intermediate status, with some features of private corporations and some features of public federal agencies. Each member bank owns nonnegotiable shares of stock in its regional Federal Reserve Bank—but these shares of stock give the member banks only limited control over the actions of the Federal Reserve Banks, and the charter of each Federal Reserve Bank is established by law and cannot be altered by the member banks. While it is unusual, private individuals and non-bank corporations (with proof of a resolution of the board of directors indicating it intends to do so) may also purchase one or more shares of stock of any of the Federal Reserve Banks. The stock is the same nonnegotiable stock as banks receive, cannot be sold and pays a small dividend. In *Lewis v. United States*, the United States Court of Appeals for the Ninth Circuit stated that "the Reserve Banks are not federal instrumentalities for purposes of the FTCA [the Federal Tort Claims Act], but are independent, privately owned and locally controlled corporations." The opinion also stated that "the Reserve Banks have properly been held to be federal instrumentalities for some purposes." Another decision is *Scott v. Federal Reserve Bank of Kansas City* in which the distinction between the Federal



Federal Reserve Districts



Total assets of each Federal Reserve Bank.

Reserve Banks and the Board of Governors is made.

Board of directors

The nine member board of directors of each district is made up of 3 classes, designated as **classes A, B, and C**. The directors serve a term of 3 years. The makeup of the boards of directors is outlined in U.S. Code, Title 12, Chapter 3, Subchapter 7:

Class A:

- three members
- chosen by and representative of the stockholding banks.
- member banks are divided into 3 groups based on size - large, medium, and small banks. Each group elects one member of Class A.

Class B:

- three members
- represent the public with due but not exclusive consideration to the interests of agriculture, commerce, industry, services, labor, and consumers.
- member banks are divided into 3 groups based on size - large, medium, and small banks. Each group elects one member of Class B.
- No director of class B shall be an officer, director, or employee of any bank

Class C:

- three members
- designated by the Board of Governors of the Federal Reserve System. They shall be elected to represent the public, and with due but not exclusive consideration to the interests of agriculture, commerce, industry, services, labor, and consumers.
- No director of class C shall be an officer, director, employee, or stockholder of any bank
- Shall have been for at least two years residents of the district for which they are appointed, one of whom shall be designated by said board as **chairman of the board of directors** of the Federal reserve bank and as **Federal reserve agent**.

List of Federal Reserve Banks

The Federal Reserve Districts are listed below along with their identifying letter and number. These are used on Federal Reserve Notes to identify the issuing bank for each note. The 25 branches are also listed.

Federal Reserve Bank	Letter	Number	Branches	Website	President
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Boston	A	1		http://www.bos.frb.org/	Eric S. Rosengren
New York	B	2	Buffalo, New York (will be closing after 31 October 2008)	http://www.newyorkfed.org/	Timothy F. Geithner
Philadelphia	C	3		http://www.philadelphiafed.org/	Charles I. Plosser
Cleveland	D	4	Cincinnati, Ohio / Pittsburgh, Pennsylvania	http://www.clevelandfed.org/	Sandra Pianalto
Richmond	E	5	Baltimore, Maryland / Charlotte, North Carolina	http://www.richmondfed.org/	Jeffrey M. Lacker
Atlanta	F	6	Birmingham, Alabama / Jacksonville, Florida / Miami, Florida / Nashville, Tennessee / New Orleans, Louisiana	http://www.frbatlanta.org/	Dennis P. Lockhart
Chicago	G	7	Detroit, Michigan	http://www.chicagofed.org/	Charles Evans
St Louis	H	8	Little Rock, Arkansas / Louisville, Kentucky / Memphis, Tennessee	http://www.stlouisfed.org/	James B. Bullard
Minneapolis	I	9	Helena, Montana	http://www.minneapolisfed.org/	Gary H. Stern
Kansas City	J	10	Denver, Colorado / Oklahoma City, Oklahoma / Omaha, Nebraska	http://www.kansascityfed.org/	Thomas M. Hoenig
Dallas	K	11	El Paso, Texas / Houston, Texas / San Antonio, Texas	http://www.dallasfed.org/	Richard W. Fisher
San Francisco	L	12	Los Angeles, California / Portland, Oregon / Salt Lake City, Utah / Seattle, Washington	http://www.frbsf.org/	Janet L. Yellen

Member banks

Each **member bank** is a private bank (e.g., a privately owned corporation) that holds stock in one of the twelve regional Federal Reserve banks. All of the

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commercial banks in the United States can be divided into **three types** according to which governmental body charters them and whether or not they are members of the Federal Reserve System:

1. **national banks** - Those chartered by the federal government (through the Office of the Comptroller of the Currency in the Department of the Treasury); by law, they are members of the Federal Reserve System
2. **state member banks** - Those chartered by the states who are members of the Federal Reserve System.
3. **state nonmember banks** - Those chartered by the states who are not members of the Federal Reserve System.

All nationally chartered banks hold stock in one of the Federal Reserve banks. State-chartered banks may choose to be members (and hold stock in a regional Federal Reserve bank), upon meeting certain standards.

Holding stock in a Federal Reserve bank is not, however, like owning publicly traded stock. The stock cannot be sold or traded. Member banks receive a fixed, 6 percent dividend annually on their stock, and they do not directly control the applicable Federal Reserve bank as a result of owning this stock. They do, however, elect six of the nine members of Reserve banks' boards of directors. Federal statute provides (in part):

Every national bank in any State shall, upon commencing business or within ninety days after admission into the Union of the State in which it is located, become a member bank of the Federal Reserve System by subscribing and paying for stock in the Federal Reserve bank of its district in accordance with the provisions of this chapter and shall thereupon be an insured bank under the Federal Deposit Insurance Act [. . .]"

Other banks may elect to become member banks. According to the Federal Reserve Bank of Boston:

Any state-chartered bank (mutual or stock-formed) may become a member of the Federal Reserve System. The twelve regional Reserve Banks supervise state member banks as part of the Federal Reserve System's mandate to assure strength and stability in the nation's domestic markets and banking system. Reserve Bank supervision is carried out in partnership with the state regulators, assuring a consistent and unified regulatory environment. Regional and community banking organizations constitute the largest number of banking organizations supervised by the Federal Reserve System.

For example, as of October 2006 the member banks in New Hampshire included Community Guaranty Savings Bank; The Lancaster National Bank; The Pemigewasset National Bank of Plymouth; and other banks. In California, member banks (as of September 2006) included Bank of America California, National Association; The Bank of New York Trust Company, National Association; Barclays Global Investors, National Association; and many other banks.

Lists of member banks

A list of all U.S. commercial banks can be found at the website of the Federal Deposit Insurance Corporation (FDIC). Some of the banks in this list are members of the Federal Reserve System. As of May 22, 2008, there were a total of 8,508 FDIC insured institutions. This list also includes the total assets of each bank and where the headquarters is located.

Summary of all FDIC insured banks:

FDIC Insured Institutions	
Number as of 5/22/08	8,508
Assets as of 12/31/2007	\$13,055,375
Deposits as of 12/31/2007	\$8,423,971
(dollar amounts in millions of dollars)	

Advisory Committees

The Federal Reserve System uses advisory committees in carrying out its varied responsibilities. Three of these committees advise the Board of Governors directly:

1. Federal Advisory Council
2. Consumer Advisory Council
3. Thrift Institutions Advisory Council

The Federal Reserve Banks also use advisory committees. Of these advisory committees, perhaps the most important are the committees (one for each Reserve Bank) that advise the Banks on matters of agriculture, small business, and labor. Biannually, the Board solicits the views of each of these committees by mail.

Monetary policy

The term "monetary policy" refers to the actions undertaken by a central bank, such as the Federal Reserve, to influence the availability and cost of money and credit to help promote national economic goals. What happens to money and credit affects interest rates (the cost of credit) and the performance of the U.S. economy. The Federal Reserve Act of 1913 gave the Federal Reserve responsibility for setting monetary policy.

Interbank lending is the basis of policy

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The Federal Reserve implements monetary policy by influencing the interbank lending of excess reserves. Interbank lending occurs when too many withdrawals have been made at a bank and it needs to borrow funds from another bank to make up the difference. The rate that banks charge each other for these loans is determined by the markets but the Federal Reserve influences this rate through the three tools of monetary policy which are described in the "Tools of monetary policy" section below. A summary of the basis and implementation of monetary policy is stated by the Federal Reserve:

The Federal Reserve implements U.S. monetary policy by affecting conditions in the market for balances that depository institutions hold at the Federal Reserve Banks...By conducting open market operations, imposing reserve requirements, permitting depository institutions to hold contractual clearing balances, and extending credit through its discount window facility, the Federal Reserve exercises considerable control over the demand for and supply of Federal Reserve balances and the federal funds rate. Through its control of the federal funds rate, the Federal Reserve is able to foster financial and monetary conditions consistent with its monetary policy objectives.

This influences the economy through its effect on the quantity of reserves that banks use to make loans. Policy actions that add reserves to the banking system encourage lending at lower interest rates thus stimulating growth in money, credit, and the economy. Policy actions that absorb reserves work in the opposite direction. The Fed's task is to supply enough reserves to support an adequate amount of money and credit, avoiding the excesses that result in inflation and the shortages that stifle economic growth.

Goals of monetary policy

The goals of monetary policy include:

- maximum employment
- stable prices
- moderate long-term interest rates
- promotion of sustainable economic growth

Tools of monetary policy

There are three main tools of monetary policy that the Federal Reserve uses to influence the amount of reserves in private banks:

1. open market operations: purchases and sales of U.S. Treasury and federal agency securities—the Federal Reserve's principal tool for implementing monetary policy. The Federal Reserve's objective for open market operations has varied over the years. During the 1980s, the focus gradually shifted toward attaining a specified level of the federal funds rate (the rate that banks charge each other for overnight loans of federal funds, which are the reserves held by banks at the Fed), a process that was largely complete by the end of the decade.

2. discount rate: the interest rate charged to commercial banks and other depository institutions on loans they receive from their regional Federal Reserve Bank's lending facility--the discount window.
3. reserve requirements: the amount of funds that a depository institution must hold in reserve against specified deposit liabilities.

In order to address problems related to the subprime mortgage crisis, three new tools have been created. The first new tool, called the *Term Auction Facility*, was added on December 12, 2007. It was first announced as a temporary tool but there have been suggestions that this new tool may remain in place for a prolonged period of time. Creation of the second new tool, called the *Term Securities Lending Facility*, was announced on March 11, 2008. The main difference between these two facilities is that the Term Auction Facility is used to inject cash into the banking system whereas the Term Securities Lending Facility is used to inject treasury securities into the banking system. Creation of the third tool, called the *Primary Dealer Credit Facility (PDCF)*, was announced on March 16, 2008. The PDCF was a fundamental change in Federal Reserve policy because now the Fed is able to lend directly to primary dealer's, which was previously against Fed policy. The differences between these 3 new facilities is described by the Federal Reserve:

The Term Auction Facility program offers term funding to depository institutions via a bi-weekly auction, for fixed amounts of credit. The Term Securities Lending Facility will be an auction for a fixed amount of lending of Treasury general collateral in exchange for OMO-eligible and AAA/Aaa rated private-label residential mortgage-backed securities. The Primary Dealer Credit Facility now allows eligible primary dealers to borrow at the existing Discount Rate for up to 120 days.

Open market operations

Open market operations put money in and take money out of the banking system. This is done through the sale and purchase of U.S. government treasury securities. When the U.S. government sells securities, it gets money from the banks and the banks get a piece of paper (I.O.U.) that says the U.S. government owes the bank money. This drains money from the banks. When the U.S. government buys securities, it gives money to the banks and the banks give the I.O.U. back to the U.S. government. This puts money back into the banks. The Federal Reserve education website describes open market operations as follows:

Open market operations involve the buying and selling of U.S. government securities (federal agency and mortgage-backed). The term 'open market' means that the Fed doesn't decide on its own which securities dealers it will do business with on a particular day. Rather, the choice emerges from an 'open market' in which the various securities dealers that the Fed does business with—the primary dealers—compete on the basis of price. Open market operations are flexible and thus, the most frequently used tool of monetary policy.

Open market operations are the primary tool used to regulate the supply of bank reserves. This tool consists of Federal Reserve purchases and sales of financial instruments, usually securities issued by the U.S. Treasury, Federal agencies and government-sponsored enterprises. Open market operations are carried out by the Domestic Trading Desk of the Federal Reserve Bank of New York under direction from the FOMC. The transactions are undertaken with primary dealers.

The Fed's goal in trading the securities is to affect the federal funds rate, the rate at which banks borrow reserves from each other. When the Fed wants to increase reserves, it buys securities and pays for them by making a deposit to the account maintained at the Fed by the primary dealer's bank. When the Fed wants to reduce reserves, it sells securities and collects from those accounts. Most days, the Fed does not want to increase or decrease reserves permanently so it usually engages in transactions reversed within a day or two. That means that a reserve injection today could be withdrawn tomorrow morning, only to be renewed at some level several hours later. These short-term transactions are called repurchase agreements (repos) – the dealer sells the Fed a security and agrees to buy it back at a later date.

A simpler description is described in *The Federal Reserve in Plain English*:

How do open market operations actually work? Currently, the FOMC establishes a target for the federal funds rate (the rate banks charge each other for overnight loans). Open market purchases of government securities increase the amount of reserve funds that banks have available to lend, which puts downward pressure on the federal funds rate. Sales of government securities do just the opposite—they shrink the reserve funds available to lend and tend to raise the funds rate. By targeting the federal funds rate, the FOMC seeks to provide the monetary stimulus required to foster a healthy economy. After each FOMC meeting, the funds rate target is announced to the public.

Repurchase agreements

To smooth temporary or cyclical changes in the monetary supply, the desk engages in repurchase agreements (repos) with its primary dealers. Repos are essentially secured, short-term lending by the Fed. On the day of the transaction, the Fed deposits money in a primary dealer's reserve account, and receives the promised securities as collateral. When the transaction matures, the process unwinds: the Fed returns the collateral and charges the primary dealer's reserve account for the principal and accrued interest. The term of the repo (the time between settlement and maturity) can vary from 1 day (called an overnight repo) to 65 days.

Federal funds rate and discount rate

The Federal Reserve System implements monetary policy largely by targeting the federal funds rate. This is the rate that banks charge each other for overnight loans of federal funds, which are the reserves held by banks at the Fed. This rate is actually determined by the market and is not explicitly mandated by the Fed. The Fed therefore tries to align the effective federal funds rate with the targeted rate by adding or subtracting from the money supply through open market operations. The late economist Milton Friedman consistently criticized this reverse method of controlling inflation by seeking an ideal interest rate and enforcing it through affecting the money supply since nowhere in the widely accepted money supply equation are interest rates found.

The Federal Reserve System also directly sets the "discount rate", which is the interest rate that banks pay the Fed to borrow directly from it. This rate is generally set at a rate close to 100 points above the target federal funds rate. The idea is to encourage banks to seek alternative funding before using the "discount rate" option.

Both of these rates influence the prime rate which is usually about 3 percentage points higher than the federal funds rate.

Lower interest rates stimulate economic activity by lowering the cost of borrowing, making it easier for consumers and businesses to buy and build, but at the cost of promoting the expansion of the money supply and thus greater inflation. Higher interest rates slow the economy by increasing the cost of borrowing. (See monetary policy for a fuller explanation.)

The Federal Reserve System usually adjusts the federal funds rate by 0.25% or 0.50% at a time.

The Federal Reserve System might also attempt to use open market operations to change long-term interest rates, but its "buying power" on the market is significantly smaller than that of private institutions. The Fed can also attempt to "jawbone" the markets into moving towards the Fed's desired rates, but this is not always effective.

Reserve requirements

Another instrument of monetary policy adjustment employed by the Federal Reserve System is the fractional reserve requirement, also known as the required reserve ratio. The required reserve ratio sets the balance that the Federal Reserve System requires a depository institution to hold in the Federal Reserve Banks, which depository institutions trade in the federal funds market discussed above. The required reserve ratio is set by the Board of Governors of the Federal Reserve System.

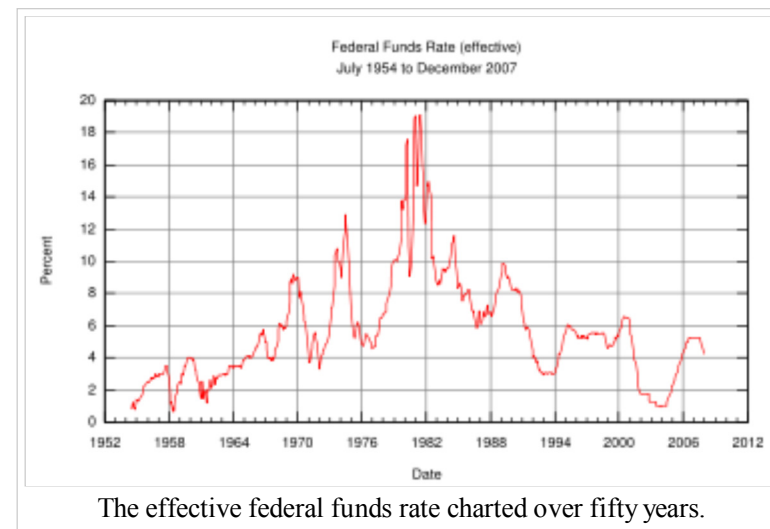


Table: Reserve Requirements in the U.S. Federal Reserve System		
Type of liability	Requirement	
	Percentage of liabilities	Effective date
Net transaction accounts		
\$0 to \$9.3 million	0	12/20/07
More than \$9.3 million to \$43.9 million	3	12/20/07
More than \$43.9 million	10	12/20/07
Nonpersonal time deposits	0	12/27/90
Eurocurrency liabilities	0	12/27/90

Term auction facility

The Term Auction Facility is a program in which the Federal Reserve auctions term funds to depository institutions. The creation of this facility was announced by the Federal Reserve on December 12, 2007 and was done in conjunction with the Bank of Canada, the Bank of England, the European Central Bank, and the Swiss National Bank to address elevated pressures in short-term funding markets. The reason it was created is because banks were not lending funds to one another and banks in need of funds were refusing to go to the discount window. Banks were not lending money to each other because there was a fear that the loans would not be paid back. Banks refused to go to the discount window because it is usually associated with the stigma of bank failure. Under the Term Auction Facility, the identity of the banks in need of funds is protected in order to avoid the stigma of bank failure. Foreign exchange swap lines with the European Central Bank and Swiss National Bank were opened so the banks in Europe could have access to U.S. dollars. Federal Reserve Chairman Ben Bernanke briefly described this facility to the U.S. House of Representatives on January 17, 2008:

the Federal Reserve recently unveiled a term auction facility, or TAF, through which prespecified amounts of discount window credit can be auctioned to eligible borrowers. The goal of the TAF is to reduce the incentive for banks to hoard cash and increase their willingness to provide credit to households and firms...TAF auctions will continue as long as necessary to address elevated pressures in short-term funding markets, and we will continue to work closely and cooperatively with other central banks to address market strains that could hamper the achievement of our broader economic objectives.

It is also described in the *Term Auction Facility FAQ*:

The TAF is a credit facility that allows a depository institution to place a bid for an advance from its local Federal Reserve Bank at an interest rate that is determined as the result of an auction. By allowing the Federal Reserve to inject term funds through a broader range of counterparties and against a broader range of collateral than open market operations, this facility could help ensure that liquidity provisions can be disseminated efficiently even when the unsecured interbank markets are under stress. In short, the TAF will auction term funds of approximately one-month maturity. All depository institutions that are judged to be in sound financial condition by their local Reserve Bank and that are eligible to borrow at the discount window are also eligible to participate in TAF auctions. All TAF credit must be fully collateralized. Depositories may pledge the broad range of collateral that is accepted for other Federal Reserve lending programs to secure TAF credit. The same collateral values and margins applicable for other Federal Reserve lending programs will also apply for the TAF.

Term securities lending facility

The Term Securities Lending Facility is a 28-day facility that will offer Treasury general collateral to the Federal Reserve Bank of New York's primary dealers in exchange for other program-eligible collateral. It is intended to promote liquidity in the financing markets for Treasury and other collateral and thus to foster the functioning of financial markets more generally. Like the Term Auction Facility, the TSLF was done in conjunction with the Bank of Canada, the Bank of England, the European Central Bank, and the Swiss National Bank. The resource allows dealers to switch debt that is less liquid for U.S. government securities that are easily tradable. It is anticipated by Federal Reserve officials that the primary dealers, which include Goldman Sachs Group, Inc., Bear Stearns Cos. and Merrill Lynch & Co., will lend the Treasuries on to other firms in return for cash. That will help the dealers finance their balance sheets. The currency swap lines with the European Central Bank and Swiss National Bank were increased.

Primary dealer credit facility

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The Primary Dealer Credit Facility (PDCF) is an overnight loan facility that will provide funding to primary dealers in exchange for a specified range of eligible collateral and is intended to foster the functioning of financial markets more generally. This new facility marks a fundamental change in Federal Reserve policy because now primary dealers can borrow directly from the Fed when this previously was not permitted.

Measurement of economic variables

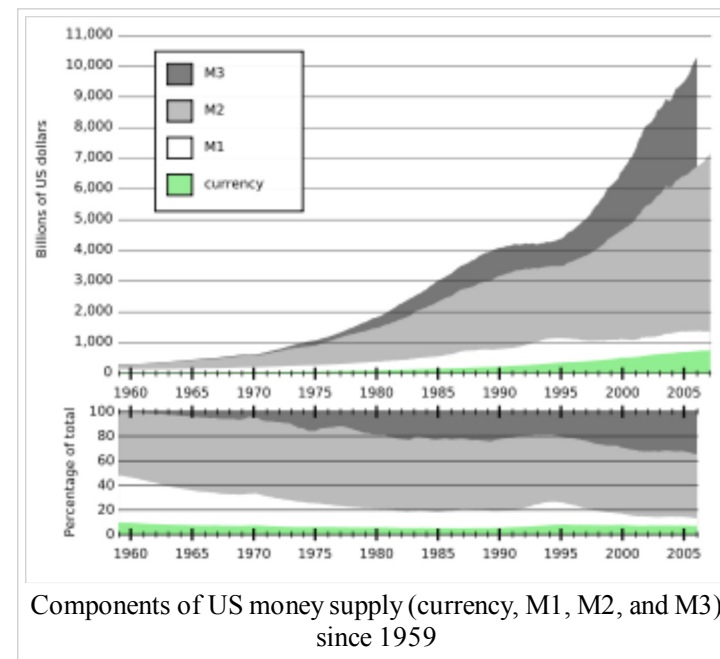
The money supply

The most common measures are named M0 (narrowest), M1, M2, and M3. In the United States they are defined by the Federal Reserve as follows:

- **M0**: The total of all physical currency, plus accounts at the central bank that can be exchanged for physical currency.
- **M1**: M0 + those portions of M0 held as reserves or vault cash + the amount in demand accounts ("checking" or "current" accounts).
- **M2**: M1 + most savings accounts, money market accounts, and small denomination time deposits (certificates of deposit of under \$100,000).
- **M3**: M2 + all other CDs, deposits of eurodollars and repurchase agreements.

The Federal Reserve ceased publishing M3 statistics in March 2006, explaining that it cost a lot to collect the data but did not provide significantly useful information. The other three money supply measures continue to be provided in detail.

Consumer price index



The consumer price index is used to measure the value of the money. It is defined as:

A measure of the average price level of a fixed basket of goods and services purchased by consumers as determined by the Bureau of Labor Statistics. Monthly changes in the CPI represent the rate of inflation. Core CPI excludes volatile components, i.e., food and energy prices.

The data consists of the US city average of consumer prices and can be found at *The US Department of Labor - Bureau of Labor Statistics*

The CPI has powerful political ramifications, and Administrations of both parties have been tempted to change the basis for its calculation, progressively underestimating the true rate of decline in purchasing power.

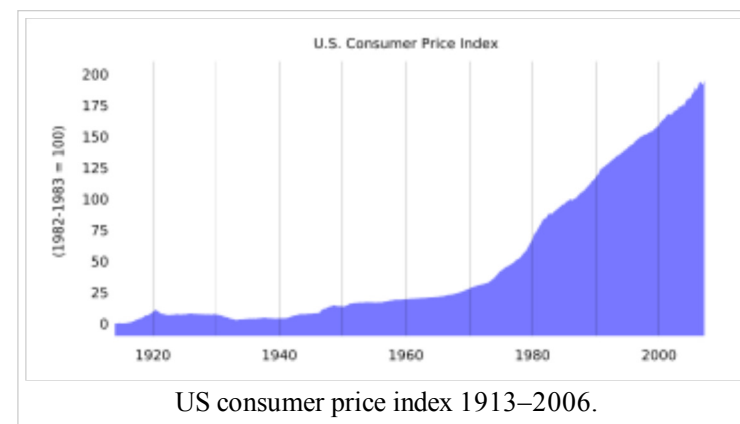
One of the Fed's main roles is to maintain price stability. This means that the change in the consumer price index over time should be as small as possible. The ability to maintain a low inflation rate is a long-term measure of the Fed's success. Although the Fed usually tries to keep the year-on-year change in CPI between 2 and 3 percent, there has been debate among policy makers as to whether or not the Federal Reserve should have a specific inflation targeting policy.

Inflation and the economy

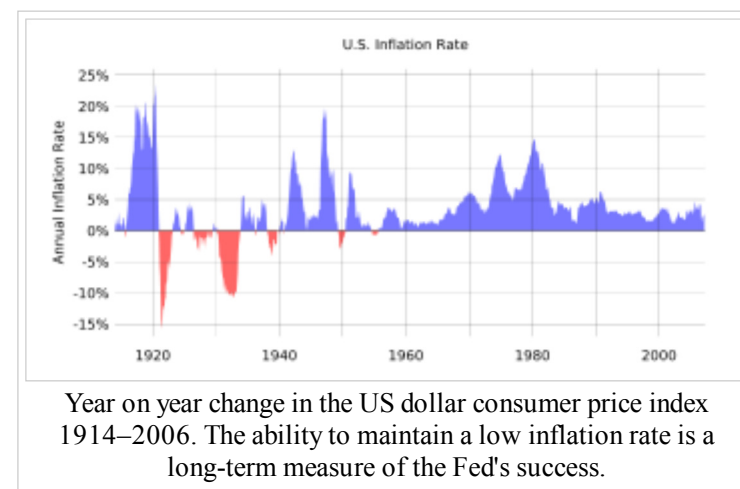
Inflation is a sustained increase in the general level of prices, which is equivalent to a decline in the value or purchasing power of money. If the supply of money and credit increases too rapidly over many months, the result will be inflation. With inflation, a dollar buys less and less over time.

The effects of inflation include:

- Inflation might make people worse off if their incomes don't rise as rapidly as prices.
- Lenders might lose because they will be repaid with dollars that aren't worth as much.
- Savers might lose because the dollar they save today will not buy as much when they are ready to spend it.
- Businesses will find it harder to plan and therefore may decrease investment in future projects.
- Owners of financial assets suffer.



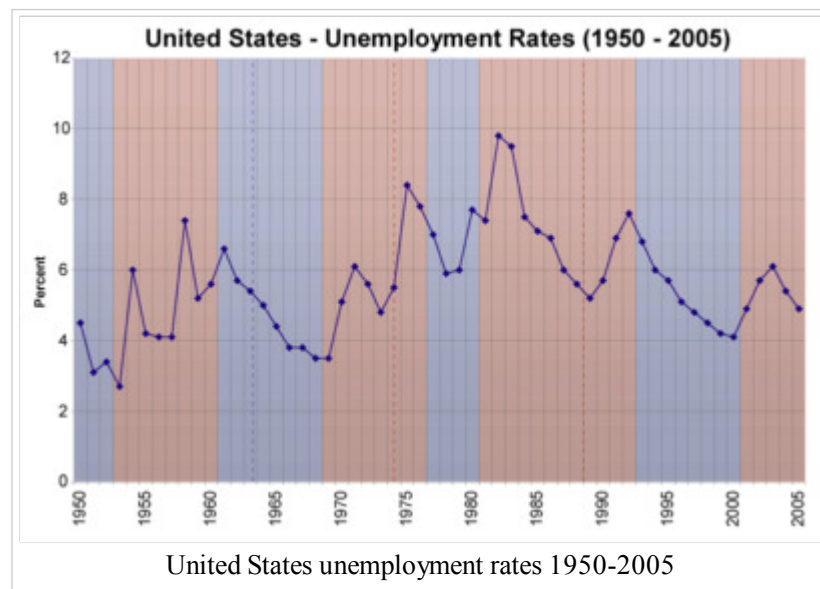
US consumer price index 1913–2006.



Year on year change in the US dollar consumer price index 1914–2006. The ability to maintain a low inflation rate is a long-term measure of the Fed's success.

- Interest rate-sensitive industries, like mortgage companies, may suffer as inflation drives up long-term interest rates and Federal Reserve tightening raises short-term rates.

Unemployment rate



The unemployment rate statistics are collected by the Bureau of Labor Statistics. Since one of the stated goals of monetary policy is maximum employment, the unemployment rate is a sign of the success of the Federal Reserve System.

Like the CPI, the unemployment rate is used as a barometer of the nation's economic health, and thus as a measure of the success of an administration's economic policies. Since 1980, both parties have made progressive changes in the basis for calculating unemployment, so that the numbers now quoted cannot be compared directly to the corresponding rates from earlier administrations, or to the rest of the world.

Budget

The Federal Reserve is self-funded. The vast majority (90%+) of Fed revenues come from open market operations, specifically the interest on the portfolio of Treasury securities as well as “capital gains/losses” that may arise from the buying/selling of the securities and their derivatives as part of Open Market Operations. The balance of revenues come from sales of financial services (check and electronic payment processing) and discount window loans.

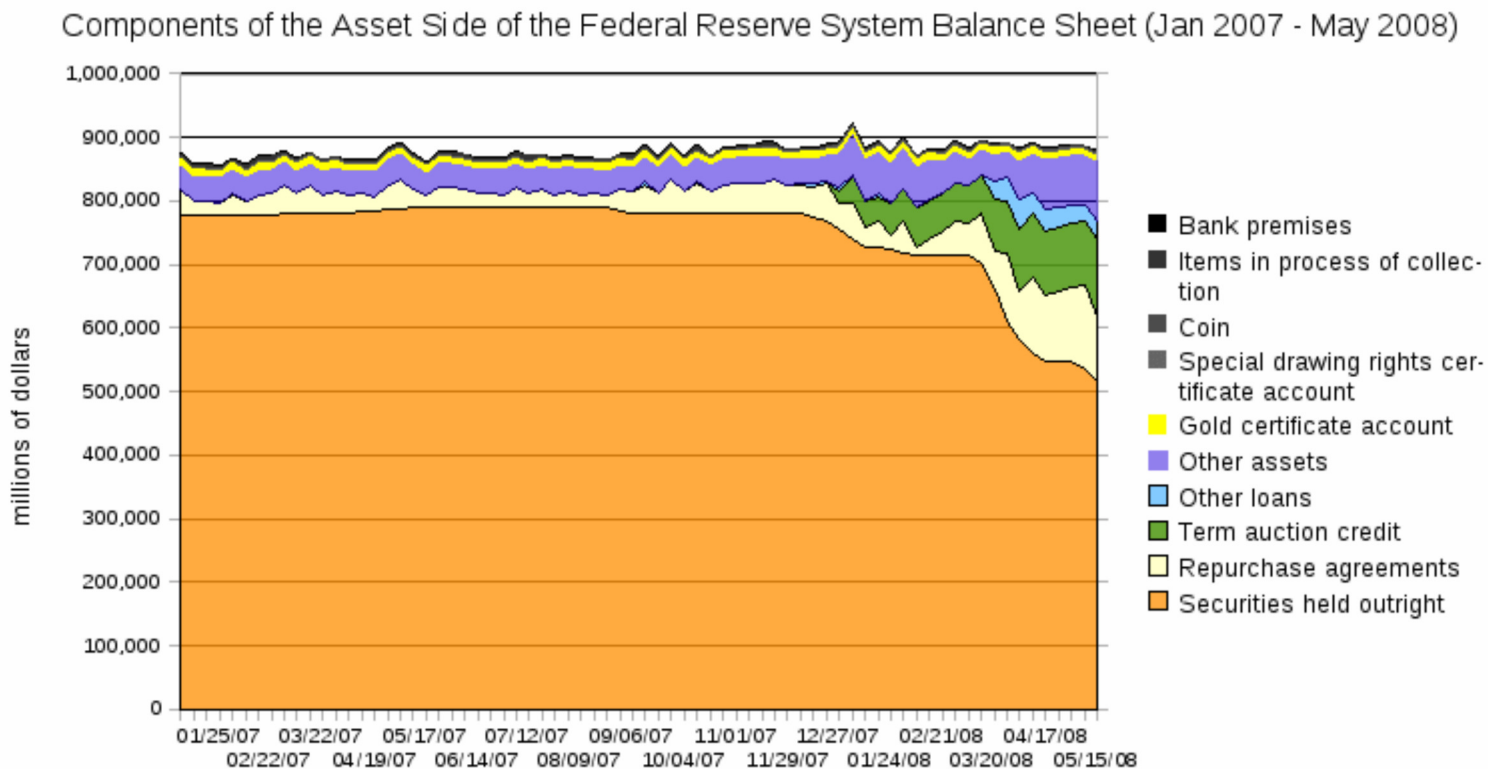
Balance sheet

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One of the keys to understanding the Federal Reserve is the Federal Reserve balance sheet (or balance statement). In accordance with Section 11 of the Federal Reserve Act, the Board of Governors of the Federal Reserve System publishes once each week the "Consolidated Statement of Condition of All Federal Reserve Banks" showing the condition of each Federal Reserve bank and a consolidated statement for all Federal Reserve banks.

Below is the balance sheet as of May 15, 2008 (in millions of dollars):

ASSETS:		LIABILITIES:		CAPITAL (AKA Net Equity)	
Gold certificate account	11,037	Federal Reserve notes outstanding	982,744	Capital paid in	19,861
Special drawing rights certificate acct.	2,200	Less: notes held by F.R. Banks	201,956	Surplus	18,479
Coin	1,386	Federal Reserve notes, net	780,789	Other capital	2,189
Securities, repurchase agreements, term auction credit, and other loans	768,561	Reverse repurchase agreements	39,114	Total capital	40,528
Securities held outright	515,656	Deposits	14,959	MEMO (off-balance-sheet items)	
U.S. Treasury	515,656	Depository institutions	10,574	Marketable securities held in custody for foreign official and international accounts	2,278,674
Bills	49,610	U.S. Treasury, general account	4,020	U.S. Treasury	1,348,648
Notes and bonds	421,816	Foreign official	97	Federal agency	930,025
Repurchase agreements	100,000	Other	268	Securities lent to dealers	150,541
Term auction credit	125,000	Deferred availability cash items	2,629	Overnight facility	12,452
Other loans	27,905	Other liabilities and accrued dividends	2,734	Term facility	138,089
Items in process of collection	2,282	Total liabilities	840,224		
Bank premises	2,147				
Other assets	93,139				
Total Assets	880,752				



Analyzing the Federal Reserve's Balance Sheet reveals a number of facts:

- The Fed has over \$11 billion in gold which is a holdover from the days the government used to back US Notes and Federal Reserve Notes with gold.. The value reported here is based on a statutory valuation of \$42 2/9 per fine troy ounce.
- The Fed holds almost a billion dollars in coinage not as a liability but as an asset. The Treasury Department is actually in charge of creating coins and US Notes. The Fed then buys coinage from the Treasury by increasing the liability assigned to the Treasury's account.
- The Fed holds at least \$515 billion of the national debt. The "securities held outright" value used to directly represent the Fed's share of the national debt, but after the creation of new facilities in the winter of 2007-2008, this number has been reduced and the difference is shown with values from some of the new facilities.
- The Fed has about \$100 billion in assets from Overnight Repurchase agreements. Repurchase agreements are the primary asset of choice for the Fed in dealing in the Open Market. Repo assets are bought by creating 'Depository institution' liabilities and directed to the bank the Primary Dealer uses when they sell into the Open Market.

- The \$982 billion in Federal Reserve Note liabilities represents the total value of all dollar bills in existence; over \$200 billion is held by the Fed (not in circulation); and the "net" figure of \$780 billion represents the total face value of Federal Reserve Notes in circulation.
- The \$10.5 billion in deposit liabilities of 'Depository institutions' shows that dollar bills are not the only source of government money. Banks can swap 'Deposit Liabilities' of the Fed for 'Federal Reserve Notes' back and forth as needed to match demand from customers, and the Fed can have the 'Bureau of Engraving and Printing' create the paper bills as needed to match demand from banks for paper money. The amount of money printed has no relation to the growth of the monetary base (M0).
- The \$4 billion in Treasury liabilities shows that the Treasury Department does not use a private banks but rather uses the Fed directly (the lone exception to this rule is Treasury Tax and Loan because government worries that pulling too much money out of the private banking system during tax time could be disruptive).
- The \$97 million Foreign liability represents the amount of foreign central bank deposits with the Federal Reserve.
- The \$2.7 billion in 'Other liabilities and accrued dividends' represents partly the amount of money owed so far in the year to member banks for the 6% dividend on the 3% of their net capital they are required to contribute in exchange for nonvoting stock their regional Reserve Bank in order to become a member. Member banks are also subscribed for an additional 3% of their net capital, which can be called at the Federal Reserve's discretion. All nationally-chartered banks must be members of a Federal Reserve Bank, and state-chartered banks have the choice to become members or not.
- Total capital represents the profit the Fed has earned which comes mostly from the assets they purchase with the deposit and note liabilities they create. Excess capital is then turned over to the Treasury Department and Congress to be included into the Federal Budget as "Miscellaneous Revenue".

In addition, the balance sheet also indicates which assets are held as collateral against Federal Reserve Notes.

Federal Reserve Notes and collateral	
Federal Reserve notes outstanding	982,744
Less: Notes held by F.R. Banks	201,956
Federal Reserve notes to be collateralized	780,789
Collateral held against Federal Reserve notes	780,789
Gold certificate account	11,037
Special drawing rights certificate account	2,200
U.S. Treasury and agency securities pledged	576,601
Other assets pledged	190,951

Criticisms

A large and varied group of criticisms has been directed against the Federal Reserve System. One critique, typified by the Austrian School, is that the Federal Reserve is an unnecessary and counterproductive interference in the economy. Other critiques include arguments in favour of the gold standard (usually coupled with the charge that the Federal Reserve System is unconstitutional) or beliefs that the centralized banking system is doomed to fail (due to the fractional reserve system's strong resemblance of the unsustainable pyramid scheme scam). Some critics argue that the Fed lacks accountability and transparency or that there is a culture of secrecy within the Reserve.

Historical criticisms

Criticisms of the Federal Reserve System are not new, and some historical criticisms are reflective of current concerns.

At one end of the spectrum are economists from the Austrian School and the Chicago School who want the Federal Reserve System abolished. They criticize the Federal Reserve System's expansionary monetary policy in the 1920s, arguing that the policy allowed misallocations of capital resources and supported a massive stock price bubble. They also cite politically motivated expansions or tightening of currency in the 1970s and 1980s.



Critics charge that a cult of personality surrounded Alan Greenspan

Handling of The Great Depression

Milton Friedman, leader of the Chicago School, argued that the Federal Reserve System did not cause the Great Depression, but made it worse by contracting the money supply at the very moment that markets needed liquidity. Since its entire existence was predicated on its mission to prevent events like the Great Depression, it had failed in what the 1913 bill tried to enact. Friedman explains his hypothesis on the cause of The Great Depression and the role the Federal Reserve played in it in his book and documentary series *Free to Choose*. An excerpt of his hypothesis:

the recession only became a crisis when these failures spread to New York and in particular to this building, then the headquarters of the Bank of United States. The failure of this bank had far reaching effects and need never have happened...Only a few blocks away is the Federal Reserve Bank of New York. It was here that the Bank of United States could have been saved. Indeed, the Federal Reserve System had been set up 17 years earlier precisely to prevent the worst consequences of bank failures...It was all a question of reassuring the public that they could get their money. The Federal Reserve System was there to ensure that this happened by supplying cash to the banks...Why didn't this system prevent The Great Depression after 1929? Because from 1929 to 1930 after the stock market crashed, the Federal Reserve system allowed the quantity of money to decline slowly thereby throttling the monetary structure...If the Federal Reserve had stepped in, bought government securities on a large scale, provided the cash, the depositors would have

found that they could've got their money and they would have stopped asking for it...Despite excellent advice from New York, the system refused to buy government bonds, something which would have provided cash to the commercial banks with which they could have met more easily the insisted demands of their depositors. Instead, believe it or not, the system stood idly by while banks crashed on all sides. As the head of one of the banks put it, the reserve system had to keep its powder dry for a real emergency.

This is also the current conventional wisdom on the matter, as both Ben Bernanke and other economists such as the late John Kenneth Galbraith- the latter being an ardent Keynesian- have upheld this reasoning. In an interview with Peter Jaworski (*The Journal*, Queen's University, March 15, 2002 - Issue 37, Volume 129) Friedman also said that ideally he would "prefer to abolish the federal reserve system altogether" rather than try to reform it, because it was a flawed system in the first place. He later said he would like to "abolish the Federal Reserve and replace it with a computer", meaning that it would be a mechanical system in nature that would keep the quantity of money going up at a steady rate. Friedman also believed that, ideally, the issuing power of money should rest with the Government instead of private banks issuing money through fractional reserve lending.

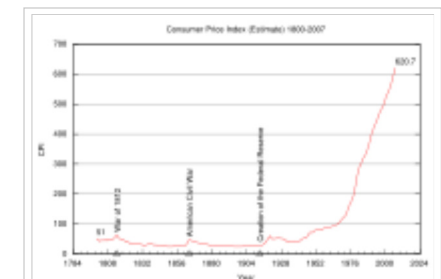
Ben Bernanke agreed that the Fed had made the Great Depression worse, saying in a 2002 speech:

I would like to say to Milton [Friedman] and Anna [J. Schwartz]: Regarding the Great Depression. You're right, we did it. We're very sorry. But thanks to you, we won't do it again."

Inflation

One major area of criticism focuses on the failure of the Federal Reserve System to stop inflation; this is seen as a failure of the Fed's legislatively mandated duty to maintain stable prices. These critics focus particularly on inflation's effects on wages, since workers are hurt if their wages do not keep up with inflation. They point out that wages, as adjusted for inflation, or real wages, have dropped in the past.

Milton Friedman alleged that the Fed caused the high inflation of the 1970s. When asked about the greatest economic problem of the day, he said the most pressing was how to get rid of the Federal Reserve. Friedman discusses the high inflation rate of the 1970s and other periods in *Free to Choose*:



CPI (relative to 1967) since 1800

Inflation is just like alcoholism. In both cases when you start drinking or when you start printing too much money, the good effects come first. The bad effects only come later...That's why in both cases there is a strong temptation to overdo it. To drink too much and to print too much money. When it comes to the cure, it's the other way around. When you stop drinking or when you stop printing money, the bad effects come first and the good effects only come later. That's why it's so hard to persist with the cure. In the United States, four times in the 20 years after 1957, we undertook the cure. But each time we lacked the will to continue. As a result, we had all the bad effects and none of the good effects.

United States Congressman Ron Paul, ranking member of the Subcommittee on Domestic and International Monetary Policy (of the House Banking Committee), has also criticized Federal Reserve policy for creating and downplaying excessive inflation:

This decline in the value of the dollar is simple to explain. The dollar loses value as the direct result of the Federal Reserve and U.S. Treasury increasing the money supply. Inflation, as the late Milton Friedman explained, is always a monetary phenomenon. The federal government consistently wants to spend more than it can tax and borrow, so Congress turns to the Fed for help in covering the difference. The result is more dollars, both real and electronic-- which means the value of every existing dollar goes down...when the Fed sets interest rates artificially low, the cost of borrowing becomes cheap. Individuals incur greater amounts of debt, while businesses overextend themselves and grow without real gains in productivity. The bubble bursts quickly once the credit dries up and the bills cannot be paid...the Fed steadily increased the monetary supply throughout the 1990s by printing money. Recent Fed numbers show double-digit annual increases in the M2 money supply. These new dollars may make Americans feel richer, but the net result of monetary inflation has to be the devaluation of savings and purchasing power.

Monetary policy uncertainties

A few of the uncertainties involved in monetary policy decision making are described by the federal reserve:

- While these policy choices seem reasonably straightforward, monetary policy makers routinely face certain notable uncertainties. First, the actual position of the economy and growth in aggregate demand at any point in time are only partially known, as key information on spending, production, and prices becomes available only with a lag. Therefore, policy makers must rely on estimates of these economic variables when assessing the appropriate course of policy, aware that they could act on the basis of misleading information. Second, exactly how a given adjustment in the federal funds rate will affect growth in aggregate demand—in terms of both the overall magnitude and the timing of its impact—is never certain. Economic models can provide rules of thumb for how the economy will respond, but these rules of thumb are subject to statistical error. Third, the growth in aggregate supply, often called the growth in potential output, cannot be measured with certainty.

- In practice, as previously noted, monetary policy makers do not have up-to-the-minute information on the state of the economy and prices. Useful information is limited not only by lags in the construction and availability of key data but also by later revisions, which can alter the picture considerably. Therefore, although monetary policy makers will eventually be able to offset the effects that adverse demand shocks have on the economy, it will be some time before the shock is fully recognized and—given the lag between a policy action and the effect of the action on aggregate demand—an even longer time before it is countered. Add to this the uncertainty about how the economy will respond to an easing or tightening of policy of a given magnitude, and it is not hard to see how the economy and prices can depart from a desired path for a period of time.
- The statutory goals of maximum employment and stable prices are easier to achieve if the public understands those goals and believes that the Federal Reserve will take effective measures to achieve them.
- Although the goals of monetary policy are clearly spelled out in law, the means to achieve those goals are not. Changes in the FOMC's target federal funds rate take some time to affect the economy and prices, and it is often far from obvious whether a selected level of the federal funds rate will achieve those goals.

Opacity

Some argue that the Federal Reserve System is shrouded in excessive secrecy. Meetings of some components of the Fed are held behind closed doors, and the transcripts are released five years after the meeting was held. Even expert policy analysts are unsure about the logic behind Fed decisions. Critics argue that such opacity leads to greater market volatility, because the markets must guess, often with only limited information, about how the Fed is likely to change policy in the future. The jargon-laden fence-sitting opaque style of Fed communication, especially under the previous Fed Chairman Alan Greenspan, has often been called "Fed speak."

The Federal Reserve System has also been considered reserved in its relations with the media in an effort to maintain its carefully crafted image and resents any public information that runs contrary to this notion. Maria Bartiromo reported on CNBC that during a conversation at the White House Correspondents' Dinner in April 2006, Federal Reserve Board Chairman Ben Bernanke stated investors had misinterpreted his recent congressional remarks as an indication the Fed was nearly done raising rates. This triggered a drop in stock prices just when the market was about to close.

In 1993, Rep. Henry Gonzalez confirmed that the Fed did have tapes and transcripts of the meetings and could have complied with the FOIA requests, but had misrepresented the existence of the transcripts and chosen to ignore questions from Congress. After the existence of the transcripts was revealed, the Fed agreed to release the transcripts on a five-year time lag. The time period has been extended, so that for example 1992's transcripts were not released until 1998.

Some critics believe the Fed exacerbated this idea when it decided to stop publishing the M3 aggregate of financial data, which details the total amount of money in circulation at a time. Some of them argue that it is a way the Fed could hide an impending economic disaster from the public if it felt the need. The Fed said that economists did not need M3 when they had M2, despite the fact that the M3 was the only aggregate to contain information regarding the most extravagant monetary exchanges, and therefore would be needed to have a complete understanding of the overall monetary policy in the United States.

Business cycles, libertarian philosophy and free markets

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Economists of the Austrian School such as Ludwig von Mises contend that the Federal Reserve's operation amounts to an artificial manipulation of the money supply and has led to the boom/bust business cycle occurring over the last century. Many economic libertarians, such as Austrian School economist Murray Rothbard, believe that the Federal Reserve's manipulation of the money supply to stop "gold flight" from England caused, or was instrumental in causing, the Great Depression. See Austrian Business Cycle Theory. In general, laissez-faire advocates of free banking argue that there is no better judge of the proper interest rate and money supply than the market.

Many libertarians also contend that the Federal Reserve Act is unconstitutional. Congressman Ron Paul (ranking member of the House Subcommittee on Domestic Monetary Policy), for example, argues that:

"The United States Constitution grants to Congress the authority to coin money and regulate the value of the currency. The Constitution does not give Congress the authority to delegate control over monetary policy to a central bank. Furthermore, the Constitution certainly does not empower the federal government to erode the American standard of living via an inflationary monetary policy."

Congress

Congressman Louis T. McFadden, Chairman of the House Committee on Banking and Currency from 1920–31, accused the Federal Reserve of deliberately causing the Great Depression. In several speeches made shortly after he lost the chairmanship of the committee, McFadden claimed that the Federal Reserve was run by Wall Street banks and their affiliated European banking houses. On June 10, 1932, McFadden said:

Mr. Chairman, we have in this country one of the most corrupt institutions the world has ever known. I refer to the Federal Reserve Board and the Federal Reserve Banks. The Federal Reserve Board, a Government board, has cheated the Government of the United States and the people of the United States out of enough money to pay the national debt. These twelve private credit monopolies were deceitfully and disloyally foisted upon this country by the bankers who came here from Europe and repaid us for our hospitality by undermining our American institutions...The people have a valid claim against the Federal Reserve Board and the Federal Reserve banks.

Quite a few Congressmen who have been involved in the House and Senate Banking and Currency Committees have been open critics of the Federal Reserve. Currently, Congressman Paul is the ranking member of the Monetary Policy Subcommittee and he is a staunch opponent of the Federal Reserve System. During each Congress Paul introduces a bill to abolish the Federal Reserve System (H.R. 2755 - 110th Congress, H.R. 2778 - 108th Congress, H.R. 5356 - 107th Congress, H.R. 1148 - 106th Congress), although he has yet to have any hearings held on his legislation or even to gather any cosponsors. It has often been said that the Federal Reserve is a creature of Congress and it is the fluctuating opinion of that body that it answers to.

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Finance

2008/9 Schools Wikipedia Selection. Related subjects: Economics

The field of **finance** refers to the concepts of time, money and risk and how they are interrelated. The term "finance" may thus incorporate any of the following:

- The study of money and other assets;
- The management and control of those assets;
- Profiling and managing project risks;
- The science of managing money;
- The industry that delivers financial services
- As a verb, "to finance" is to provide funds for business or for an individual's large purchases (car, home, etc.).

The main techniques and sectors of the financial industry

An entity whose income exceeds its expenditure can lend or invest the excess income. On the other hand, an entity whose income is less than its expenditure can raise capital by borrowing or selling equity claims, decreasing its expenses, or increasing its income. The lender can find a borrower, a financial intermediary such as a bank, or buy notes or bonds in the bond market. The lender receives interest, the borrower pays a higher interest than the lender receives, and the financial intermediary pockets the difference.

A bank aggregates the activities of many borrowers and lenders. A bank accepts deposits from lenders, on which it pays the interest. The bank then lends these deposits to borrowers. Banks allow borrowers and lenders, of different sizes, to coordinate their activity. Banks are thus compensators of money flows in space.

A specific example of corporate finance is the sale of stock by a company to institutional investors like investment banks, who in turn generally sell it to the public. The stock gives whoever owns it part ownership in that company. If you buy one share of XYZ Inc, and they have 100 shares outstanding (held by investors), you are 1/100 owner of that company. Of course, in return for the stock, the company receives cash, which it uses to expand its business in a process called "equity financing". Equity financing mixed with the sale of bonds (or any other debt financing) is called the company's capital structure.

Finance is used by individuals (personal finance), by governments (public finance), by businesses (corporate finance), as well as by a wide variety of organizations including schools and non-profit organizations. In general, the goals of each of the above

Finance



Financial Markets

Bond market
 Stock (Equities) Market
 Forex market
 Derivatives market
 Commodity market
 Money market
 Spot (cash) Market
 OTC market
 Real Estate market

Market Participants

Investors
 Speculators
 Institutional Investors

Corporate finance

Structured finance
 Capital budgeting
 Financial risk management

activities are achieved through the use of appropriate financial instruments, with consideration to their institutional setting.

Finance is one of the most important aspects of business management. Without proper financial planning a new enterprise is unlikely to be successful. Managing money (a liquid asset) is essential to ensure a secure future, both for the individual and an organization.

Personal finance

Questions in personal finance revolve around

- How much money will be needed by an individual (or by a family) at various points in the future?
- Where will this money come from (e.g. savings or borrowing)?
- How can people protect themselves against unforeseen events in their lives, and risk in financial markets?
- How can family assets be best transferred across generations (bequests and inheritance)?
- How do taxes (tax subsidies or penalties) affect personal financial decisions?
- How does credit affect an individual's financial standing?
- How can one plan for a secure financial future in an environment of economic instability?

Personal financial decisions may involve paying for education, financing durable goods such as real estate and cars, buying insurance, e.g. health and property insurance, investing and saving for retirement.

Personal financial decisions may also involve paying for a loan.

Corporate finance

Managerial or corporate finance is the task of providing the funds for a corporation's activities. For small business, this is referred to as SME finance. It generally involves balancing risk and profitability, while attempting to maximize an entity's wealth and the value of its stock.

Long term funds are provided by ownership equity and long-term credit, often in the form of bonds. The balance between these forms the company's capital structure. Short-term funding or working capital is mostly provided by banks extending a line of credit.

Another business decision concerning finance is investment, or fund management. An investment is an acquisition of an asset in the hope that it will maintain or increase its value. In investment management -- in choosing a portfolio -- one has to decide *what*, *how much* and *when* to invest. To do this, a company must:

Mergers and Acquisitions
Accounting
Financial Statements
Auditing
Credit rating agency

Personal finance

Credit and Debt
Employment contract
Retirement
Financial planning

Public finance

Tax

Banks and Banking

Fractional-reserve banking
Central Bank
List of banks
Deposits
Loan
Money supply

Financial regulation

Finance designations
Accounting scandals

History of finance

Stock market bubble
Recession
Stock market crash

- Identify relevant objectives and constraints: institution or individual goals, time horizon, risk aversion and tax considerations;
- Identify the appropriate strategy: active v. passive -- hedging strategy
- Measure the portfolio performance



Financial management is duplicate with the financial function of the Accounting profession. However, financial accounting is more concerned with the reporting of historical financial information, while the financial decision is directed toward the future of the firm.

Capital

Capital, in the financial sense, is the money which gives the business the power to buy goods to be used in the production of other goods or the offering of a service.

Borrowed capital

This is capital which the business borrows from institutions or people, and includes debentures:

- Redeemable debentures
- Irredeemable debentures
- Debentures to bearer
- Hardcore debentures

Own capital

This is capital that owners of a business (shareholders and partners, for example) provide:

- Preference shares/hybrid source of finance
 - Ordinary preference shares
 - Cumulative preference shares
 - Participating preference share
- Ordinary shares
- Bonus shares
- Founders' shares

They have preference over the equity shares. Means the Payment made to the shareholders is done by firstly paying to preference shareholder and than to the equity shareholders.

Differences between shares and debentures

- Shareholders are effectively owners; debenture-holders are creditors.
- Shareholders may vote at AGMs and be elected as directors; debenture-holders may not vote at AGMs or be elected as directors.
- Shareholders receive profit in the form of dividends; debenture-holders receive a fixed rate of interest.
- If there is no profit, the shareholder does not receive a dividend; interest is paid to debenture-holders regardless of whether or not a profit has been made.
- In case of dissolution of firms debenture holders are paid first as compared to shareholder.

Fixed capital

This is money which is used to purchase assets that will remain permanently in the business and help it to make a profit.

Factors determining fixed capital requirements

- Nature of business
- Size of business
- Stage of development
- Capital invested by the owners
- location of that area

Working capital

This is money which is used to buy stock, pay expenses and finance credit.

Factors determining working capital requirements

- Size of business
- Stage of development
- Time of production
- Rate of stock turnover ratio
- Buying and selling terms
- Seasonal consumption
- Seasonal production
- seasonal cost

The desirability of budgeting

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Capital budget

This concerns fixed asset requirements for the next five years and how these will be financed.

Cash budget

Working capital requirements of a business should be monitored at all times to ensure that there are sufficient funds available to meet short-term expenses.

Management of current assets

Credit policy

Credit gives the customer the opportunity to buy goods and services, and pay for them at a later date.

Advantages of credit trade

- Usually results in more customers than cash trade.
- Can charge more for goods to cover the risk of bad debt.
- Gain goodwill and loyalty of customers.
- People can buy goods and pay for them at a later date.
- Farmers can buy seeds and implements, and pay for them only after the harvest.
- Stimulates agricultural and industrial production and commerce.
- Can be used as a promotional tool.
- Increase the sales.

Disadvantages of credit trade

- Risk of bad debt.
- High administration expenses.
- People can buy more than they can afford.
- More working capital needed.
- Risk of Bankruptcy.

Forms of credit

- Suppliers credit:
 - Credit on ordinary open account
 - Instalment sales
 - Bills of exchange
 - Credit cards
- Contractor's credit
- Factoring of debtors

Factors which influence credit conditions

- Nature of the business's activities
- Financial position
- Product durability
- Length of production process
- Competition and competitors' credit conditions
- Country's economic position
- Conditions at financial institutions
- Discount for early payment
- Debtor's type of business and financial position

Credit collection

Overdue accounts

- Cards arranged alphabetically in card index system
- Attach a notice of overdue account to statement.
- Send a letter asking for settlement of debt.
- Send a second or third letter if first is ineffectual.
- Threaten legal action.

Effective credit control

- Increases sales
- Reduces bad debts
- Increases profits
- Builds customer loyalty

Sources of information on creditworthiness

- Business references
- Bank references
- Credit agencies
- Chambers of commerce
- Employers
- Credit application forms

Duties of the credit department

- Legal action
- Taking necessary steps to ensure settlement of account
- Knowing the credit policy and procedures for credit control
- Setting credit limits
- Ensuring that statements of account are sent out
- Ensuring that thorough checks are carried out on credit customers
- Keeping records of all amounts owing
- Ensuring that debts are settled promptly
- Timely reporting to the upper level of management for better management.

Stock**Purpose of stock control**

- Ensures that enough stock is on hand to satisfy demand.
- Protects and monitors theft.
- Safeguards against having to stockpile.
- Allows for control over selling and cost price.

Stockpiling

This refers to the purchase of stock at the right time, at the right price and in the right quantities.

There are several advantages to the stockpiling, the following are some of the examples:

- Losses due to price fluctuations and stock loss kept to a minimum
- Ensures that goods reach customers timeously; better service
- Saves space and storage cost
- Investment of working capital kept to minimum
- No loss in production due to delays

There are several disadvantages to the stockpiling, the following are some of the examples:

- Obsolescence
- Danger of fire and theft
- Initial working capital investment is very large
- Losses due to price fluctuation

Influence of stock management on rate of return

- Right price
- Right quantity
- Right quality
- Right place
- Right time
- Right property

Rate of stock turnover

This refers to the number of times per year that the average level of stock is sold. It may be worked out by dividing the cost price of goods sold by the cost price of the average stock level.

Determining optimum stock levels

- **Maximum stock level** refers to the maximum stock level that may be maintained to ensure cost effectiveness.
- **Minimum stock level** refers to the point below which the stock level may not go.
- **Standard order** refers to the amount of stock generally ordered.
- **Order level** refers to the stock level which calls for an order to be made.

Cash

Reasons for keeping cash

- The **transaction motive** refers to the money kept available to pay expenses.
- The **precautionary motive** refers to the money kept aside for unforeseen expenses.
- The **speculative motive** refers to the money kept aside to take advantage of suddenly arising opportunities.

Advantages of sufficient cash

- Current liabilities may be catered for.
- Cash discounts are given for cash payments.
- Production is kept moving.
- Surplus cash may be invested on a short-term basis.
- The business is able to pay its accounts timeously, allowing for easily-obtained credit.
- Liquidity

Management of fixed assets

Depreciation

Depreciation is the decrease in the value of an asset due to wear and tear or obsolescence. It is calculated yearly to ensure realistic book values for assets.

Insurance

Insurance is the undertaking of one party to indemnify another, in exchange for a premium, against a certain eventuality.

Uninsurable risks

- Bad debt
- Changes in fashion
- Time lapses between ordering and delivery
- New machinery or technology
- Different prices at different places

Requirements of an insurance contract

- Insurable interest

- The insured must derive a real financial gain from that which he is insuring, or stand to lose if it is destroyed or lost.
- The item must belong to the insured.
- One person may take out insurance on the life of another if the second party owes the first money.
- Must be some person or item which can, legally, be insured.
- The insured must have a legal claim to that which he is insuring.
- Good faith
 - *Uberrimae fidei* refers to absolute honesty and must characterise the dealings of both the insurer and the insured.

Shared Services

There is currently a move towards converging and consolidating Finance provisions into shared services within an organization. Rather than an organization having a number of separate Finance departments performing the same tasks from different locations a more centralized version can be created.

Finance of states

Country, state, county, city or municipality finance is called public finance. It is concerned with

- Identification of required expenditure of a public sector entity
- Source(s) of that entity's revenue
- The budgeting process
- Debt issuance (municipal bonds) for public works projects

Financial economics

Financial economics is the branch of economics studying the interrelation of financial variables, such as prices, interest rates and shares, as opposed to those concerning the real economy. Financial economics concentrates on influences of real economic variables on financial ones, in contrast to pure finance.

It studies:

- Valuation - Determination of the fair value of an asset
 - How risky is the asset? (identification of the asset appropriate discount rate)
 - What cash flows will it produce? (discounting of relevant cash flows)
 - How does the market price compare to similar assets? (relative valuation)
 - Are the cash flows dependent on some other asset or event? (derivatives, contingent claim valuation)

- Financial markets and instruments
 - Commodities - topics
 - Stocks - topics
 - Bonds - topics
 - Money market instruments- topics
 - Derivatives - topics

- Financial institutions and regulation

Financial Econometrics is the branch of Financial Economics that uses econometric techniques to parameterise the relationships.

Financial mathematics

Financial mathematics is a main branch of applied mathematics concerned with the financial markets. Financial mathematics is the study of financial data with the tools of mathematics, mainly statistics. Such data can be movements of securities—stocks and bonds etc.—and their relations. Another large subfield is insurance mathematics.

Experimental finance

Experimental finance aims to establish different market settings and environments to observe experimentally and provide a lens through which science can analyze agents' behaviour and the resulting characteristics of trading flows, information diffusion and aggregation, price setting mechanisms, and returns processes. Researchers in experimental finance can study to what extent existing financial economics theory makes valid predictions, and attempt to discover new principles on which such theory can be extended. Research may proceed by conducting trading simulations or by establishing and studying the behaviour of people in artificial competitive market-like settings.

Quantitative behavioural finance

Quantitative Behavioral Finance is a new discipline that uses mathematical and statistical methodology to understand behavioural biases in conjunction with valuation. Some of this endeavor has been lead by Gunduz Caginalp (Professor of Mathematics and Editor of Journal of Behavioural Finance during 2001-2004) and collaborators including Vernon Smith (2002 Nobel Laureate in Economics), David Porter, Don Balenovich, Vladimira Ilieva, Ahmet Duran, Huseyin Merdan). Studies by Jeff Madura, Ray Sturm and others have demonstrated significant behavioural effects in stocks and exchange traded funds.

The research can be grouped into the following areas:

1. Empirical studies that demonstrate significant deviations from classical theories.
2. Modeling using the concepts of behavioural effects together with the non-classical assumption of the finiteness of assets.

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :355 of 626.

3. Forecasting based on these methods.
4. Studies of experimental asset markets and use of models to forecast experiments.

Intangible Asset Finance

Intangible asset finance is the area of finance that deals with intangible assets such as patents, trademarks, goodwill, reputation, etc.

Related Professional Qualifications

There are several related professional qualifications in finance, that can lead to the field:

- **Qualified accountant qualifications:** Chartered Certified Accountant (ACCA, UK certification), Chartered Accountant (CA, certification in Commonwealth countries), Certified Public Accountant (CPA, US certification)
- **Non-statutory accountancy qualifications:** Chartered Cost Accountant CCA Designation from AAFM
- **Business qualifications:** Master of Business Administration (MBA), Bachelor of Business Management (BBM), Master of Financial Administration (MFA), Doctor of Business Administration (DBA)
- **Finance qualifications:** Chartered Financial Analyst (CFA), Certified International Investment Analyst (CIIA), Association of Corporate Treasurers (ACT), Masters degree in Finance, Certified Market Analyst (CMA/FAD) Dual Designation, Master Financial Manager (MFM), Corporate Finance Qualification (CF) Register Financial Planner (RFP), Certified Financial Consultants (CFC)
- **Quantitative Finance qualifications:** Master of Science in Financial Engineering (MSFE), Master of Quantitative Finance (MQF), Master of Computational Finance (MCF), Master of Financial Mathematics (MFM)

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Financial statements

2008/9 Schools Wikipedia Selection. Related subjects: Business

Corporate finance



Working capital management

Cash conversion cycle
Return on capital
Economic value added
Just In Time
Economic order quantity
Discounts and allowances
Factoring (finance)

Capital budgeting

Capital investment decisions
The investment decision
The financing decision

Sections

Managerial finance
Financial accounting
Management accounting
Mergers and acquisitions
Balance sheet analysis

Financial statements (or **financial reports**) are formal records of a business' financial activities.

In British English, including United Kingdom company law, financial statements are often referred to as **accounts**, although the term financial statements is also used, particularly by accountants.

Financial statements provide an overview of a business' financial condition in both short and long term. There are four basic financial statements:

1. **Balance sheet:** also referred to as statement of financial position or condition, reports on a company's assets, liabilities, and net equity as of a given point in time.
2. **Income statement:** also referred to as Profit and Loss statement (or a "P&L"), reports on a company's income, expenses, and profits over a period of time.
3. **Statement of retained earnings:** explains the changes in a company's retained earnings over the reporting period.
4. **Statement of cash flows:** reports on a company's cash flow activities, particularly its operating, investing and financing activities.

For large corporations, these statements are often complex and may include an extensive set of notes to the financial statements and management discussion and analysis. The notes typically describe each item on the balance sheet, income statement and cash flow statement in further detail. Notes to financial statements are considered an integral part of the financial statements.

Purpose of financial statements

"The objective of financial statements is to provide information about the financial strength, performance and changes in financial position of an enterprise that is useful to a wide range of users in making economic decisions."

Financial statements should be understandable, relevant, reliable and comparable. Reported assets, liabilities and equity are directly related to an organization's financial position. Reported income and expenses are directly related to an organization's financial performance.

Financial statements are intended to be understandable by readers who have "a reasonable knowledge of business and economic activities and accounting and who are willing to study the information diligently."

- Owners and managers require financial statements to make important business decisions that affect its continued operations. Financial analysis are then performed on these statements to provide management with a more detailed understanding of the figures. These statements are also used as part of management's annual report to the stockholders.
- Employees also need these reports in making collective bargaining agreements (CBA) with the management, in the case of labor unions or for individuals in discussing their compensation, promotion and rankings.

Business plan
Corporate action

Finance series

Financial market
Financial market participants
Corporate finance
Personal finance
Public finance
Banks and Banking
Financial regulation

STATEMENT	
WACHOVIA NATIONAL BANK, WINSTON, N. C.	
JANUARY 20TH, 1908.	
(CHECKED FROM REPORT TO THE COMPTROLLER OF THE CURRENCY.)	
RESOURCES.	LIABILITIES.
Loans, including Overdrafts \$ 511,789.61	Capital \$ 150,000.00
U. S. Bonds and Premiums 52,300.00	Surplus and Undivided Profits 171,167.89
Real Estate, Furniture and Fixtures, 4,500.00	Circulation 50,000.00
Redemption fund with U. S. Treasurer 2,500.00	
Cash and Due from Banks... 268,231.30	Deposits..... 468,153.02
\$839,320.91	\$839,320.91
W. A. LEMLY, President.	JAS. A. GRAY, Cashier.

Historical financial statement

2. **External Users:** are potential investors, banks, government agencies and other parties who are outside the business but need financial information about the business for a diverse number of reasons.

- Prospective investors make use of financial statements to assess the viability of investing in a business. Financial analyses are often used by investors and is prepared by professionals (financial analysts), thus providing them with the basis in making investment decisions.
- Financial institutions (banks and other lending companies) use them to decide whether to grant a company with fresh working capital or extend debt securities (such as a long-term bank loan or debentures) to finance expansion and other significant expenditures.
- Government entities (tax authorities) need financial statements to ascertain the propriety and accuracy of taxes and other duties declared and paid by a company.
- Media and the general public are also interested in financial statements for a variety of reasons.

Government financial statements

The rules for the recording, measurement and presentation of government financial statements may be different from those required for business and even for non-profit organizations. They may use either of two accounting methods: accrual accounting, or cash accounting, or a combination of the two. A complete set of chart of accounts is also used that is substantially different from the chart of a profit-oriented business

Audit and legal implications

Although the legal statutes may differ from country to country, an audit of financial statements are usually, but not exclusively required for investment, financing, and tax purposes. These are usually performed by independent accountants or auditing firms. Results of the audit are summarized in an audit report that either provide an unqualified opinion on the financial statements or qualifications as to its fairness and accuracy. The audit opinion on the financial statements is usually included in the annual report.

There has been much legal debate over who an auditor is liable to. Since audit reports tend to be addressed to the current shareholders, it is commonly thought that they owe a legal duty of care to them. But this may not be the case as determined by common law precedent. In Canada, auditors are liable only to investors using a prospectus to buy shares in the primary market. In the United Kingdom, they have been held liable to potential investors when the auditor was aware of the potential investor and how they would use the information in the financial statements. Nowadays auditors tend to include in their report liability restricting language, discouraging anyone other than the addressees of their report from relying on it. Liability is an important issue: in the UK, for example, auditors have unlimited liability.

In the United States, especially in the post- Enron era there has been substantial concern about the accuracy of financial statements. Corporate officers (the chief executive officer (CEO) and chief financial officer (CFO)) are personally liable for attesting that financial statements "do not contain any untrue statement

of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by th[e] report". Making or certifying misleading financial statements exposes the people involved to substantial civil and criminal liability. For example Bernie Ebbers (former CEO of WorldCom) was sentenced to 25 years in federal prison for allowing WorldCom's revenues to be overstated by \$11 billion over five years.

Standards and regulations

Different countries have developed their own accounting principles over time, making international comparisons of companies difficult. To ensure uniformity and comparability between financial statements prepared by different companies, a set of guidelines and rules are used. Commonly referred to as Generally Accepted Accounting Principles (GAAP), these set of guidelines provide the basis in the preparation of financial statements.

Recently there has been a push towards standardizing accounting rules made by the International Accounting Standards Board ("IASB"). IASB develops International Financial Reporting Standards that have been adopted by Australia, Canada and the European Union (for publicly quoted companies only), are under consideration in South Africa and other countries. The United States Federal Accounting Standards Board has made a commitment to converge the U.S. GAAP and IFRS over time.

Inclusion in annual reports

To entice new investors, most public companies assemble their financial statements on fine paper with pleasing graphics and photos in an annual report to shareholders, attempting to capture the excitement and culture of the organization in a "marketing brochure" of sorts. Usually the company's chief executive will write a letter to shareholders, describing management's performance and the company's financial highlights.

In the United States, prior to the advent of the internet, the annual report is considered the most effective way for corporations to communicate with individual shareholders. Blue chip companies went to great expense to produce and mail out attractive annual reports to every shareholder. The annual report was often prepared in the style of a coffee table book.

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Globalization

2008/9 Schools Wikipedia Selection. Related subjects: Economics

Globalization (or globalisation) in its literal sense is the process of making, transformation of some things or phenomena into global ones. It can be described as a process by which the people of the world are unified into a single society and function together. This process is a combination of economic, technological, sociocultural and political forces. Globalization is very often used to refer to economic globalization, that is integration of national economies into the international economy through trade, foreign direct investment, capital flows, migration, and the spread of technology.

Thomas L. Friedman "examines the impact of the 'flattening' of the globe", and argues that globalized trade, outsourcing, supply-chaining, and political forces have changed the world permanently, for both better and worse. He also argues that the pace of globalization is quickening and will continue to have a growing impact on business organization and practice.

Noam Chomsky argues that the word globalization is also used, in a doctrinal sense, to describe the neoliberal form of economic globalization.

Herman E. Daly argues that sometimes the terms internationalization and globalization are used interchangeably but there is a slight formal difference. The term "internationalization" refers to the importance of international trade, relations, treaties etc. International means between or among nations. "Globalization" means erasure of national boundaries for economic purposes; international trade (governed by comparative advantage) becomes interregional trade (governed by absolute advantage).

History

The word "**Globalization**" has been used by economists since the 1980's; however, its concepts did not become popular until the later half of the 1980s and 1990's. The earliest written theoretical concepts of globalization were penned by an American entrepreneur-turned-minister Charles Taze Russell who coined the term 'corporate giants' in 1897.

Globalization in its largest extent began a bit before the turn of the 16th century, in Portugal. The country's global explorations in the 16th century linked continents, economies and cultures as never before. The Kingdom of Portugal kicked off what has come to be known as the Age of Discovery, in the mid-1400s. The western-most country in Europe, it was the first to significantly probe the Atlantic Ocean, colonizing the Azores, Madeira and other Atlantic islands, then braving the west coast of Africa. In 1488, Portuguese explorer Bartolomeu Dias was the first to sail around the southern tip of Africa, and in 1498 his countryman Vasco da Gama repeated the experiment, making it as far as India. In 1500, Pedro Álvares Cabral discovered Brazil. The Portuguese Empire



Puxi side of Shanghai, China.

would establish ports, forts and trading posts as far west as Brazil, as far east as Japan and Timor, and along the coasts of Africa, India and China. For the first time in history, a wave of global trade, colonization, and enculturation reached all corners of the world.

Globalization is viewed as a centuries long process, tracking the expansion of human population and the growth of civilization, that has accelerated dramatically in the past 50 years. Early forms of globalization existed during the Roman Empire, the Parthian empire, and the Han Dynasty, when the silk road started in China, reached the boundaries of the Parthian empire, and continued onwards towards Rome. The Islamic Golden Age is also an example, when Muslim traders and explorers established an early global economy across the Old World resulting in a globalization of crops, trade, knowledge and technology; and later during the Mongol Empire, when there was greater integration along the Silk Road. Global integration continued through the expansion of European trade, as in the 16th and 17th centuries, when the Portuguese and Spanish Empires reached to all corners of the world after expanding to the Americas. Globalization has had a tremendous impact on cultures, particularly indigenous cultures, around the world.

In the 17th century, Globalization became a business phenomenon when the Dutch East India Company, which is often described as the first multinational corporation, was established. Because of the high risks involved with international trade, the Dutch East India Company became the first company in the world to share risk and enable joint ownership through the issuing of shares: an important driver for globalization.

In the 19th century it was sometimes called "The First Era of Globalization" a period characterized by rapid growth in international trade and investment, between the European imperial powers, their colonies, and, later, the United States. It was in this period that areas of sub-saharan Africa and the Island Pacific were incorporated into the world system. The "First Era of Globalization" began to break down at the beginning with the first World War, and later collapsed during the gold standard crisis in the late 1920s and early 1930s.

Modern Globalization

Globalization in the era since World War II was first the result of planning by economists, business interests, and politicians who recognized the costs associated with protectionism and declining international economic integration. Their work led to the Bretton Woods conference and the founding of several international institutions intended to oversee the renewed processes of globalization, promoting growth and managing adverse consequences.

These were the International Bank for Reconstruction and Development (the World Bank) and the International Monetary Fund. It has been facilitated by advances in technology which have reduced the costs of trade, and trade negotiation rounds, originally under the auspices of GATT, which led to a series of agreements to remove restrictions on free trade.

Since World War II, barriers to international trade have been considerably lowered through international agreements - General Agreement on Tariffs and Trade (GATT). Particular initiatives carried out as a result of GATT and the World Trade Organization (WTO), for which GATT is the foundation, have included:

- Promotion of free trade:
 - Reduction or elimination of tariffs; construction of free trade zones with small or no tariffs
 - Reduced transportation costs, especially from development of containerization for ocean shipping.

- Reduction or elimination of capital controls
- Reduction, elimination, or harmonization of subsidies for local businesses
- Restriction of free trade:
 - Harmonization of intellectual property laws across the majority of states, with more restrictions.
 - Supranational recognition of intellectual property restrictions (e.g. patents granted by China would be recognized in the United States)

The Uruguay Round (1984 to 1995) led to a treaty to create the World Trade Organization (WTO), to mediate trade disputes and set up a uniform platform of trading. Other bi- and multilateral trade agreements, including sections of Europe's Maastricht Treaty and the North American Free Trade Agreement (NAFTA) have also been signed in pursuit of the goal of reducing tariffs and barriers to trade.

World exports rose from 8.5% of gross world product in 1970 to 16.1% of gross world product in 2001.

The use of the term globalization (in the doctrinal sense), in the context of these developments has been analysed by many including Noam Chomsky who states

“ ... That enhances what's called "globalization," a term of propaganda used conventionally to refer to a certain particular form of international integration that is (not surprisingly) beneficial to its designers: Multinational corporations and the powerful states to which they are closely linked. ”

Critics have observed that the term's contemporary usage comprises several meanings, for example Noam Chomsky states that:

“ The term "globalization," like most terms of public discourse, has two meanings: its literal meaning, and a technical sense used for doctrinal purposes. In its literal sense, "globalization" means international integration. Its strongest proponents since its origins have been the workers movements and the left (which is why unions are called "internationals"), and the strongest proponents today are those who meet annually in the World Social Forum and its many regional offshoots. In the technical sense defined by the powerful, they are described as "anti-globalization," which means that they favour globalization directed to the needs and concerns of people, not investors, financial institutions and other sectors of power, with the interests of people incidental. That's "globalization" in the technical doctrinal sense. ”

Measuring globalization

Looking specifically at economic globalization, it can be measured in different ways. These centre around the four main economic flows that characterize globalization:

- Goods and services, e.g. exports plus imports as a proportion of national income or per capita of population
- Labor/people, e.g. net migration rates; inward or outward migration flows, weighted by population
- Capital, e.g. inward or outward direct investment as a proportion of national income or per head of population
- Technology, e.g. international research & development flows; proportion of populations (and rates of change thereof) using particular inventions (especially 'factor-neutral' technological advances such as the telephone, motorcar, broadband)

As globalization is not only an economic phenomenon, a multivariate approach to measuring globalization is the recent index calculated by the Swiss think tank KOF. The index measures the three main dimensions of globalization: economic, social, and political. In addition to three indices measuring these dimensions, an overall index of globalization and sub-indices referring to actual economic flows, economic restrictions, data on personal contact, data on information flows, and data on cultural proximity is calculated. Data is available on a yearly basis for 122 countries, as detailed in Dreher, Gaston and Martens (2008). According to the index, the world's most globalized country is Belgium, followed by Austria, Sweden, the United Kingdom and the Netherlands. The least globalized countries according to the KOF-index are Haiti, Myanmar the Central African Republic and Burundi. Other measures conceptualize Globalization as diffusion and develop interactive procedure to capture the degree of its impact Jahn 2006.

A.T. Kearney and Foreign Policy Magazine jointly publish another Globalization Index. According to the 2006 index, Singapore, Ireland, Switzerland, the U.S., the Netherlands, Canada and Denmark are the most globalized, while Egypt, Indonesia, India and Iran are the least globalized among countries listed.

Effects of globalization

Globalization has various aspects which affect the world in several different ways such as:

- *Industrial* (alias *trans nationalization*) - emergence of worldwide production markets and broader access to a range of foreign products for consumers and companies. Particularly movement of material and goods between and within transnational corporations, and access to goods by wealthier nations and individuals at the expense of poorer nations and individuals who supply the labour.
- *Financial* - emergence of worldwide financial markets and better access to external financing for corporate, national and subnational borrowers. Simultaneous though not necessarily purely globalist is the emergence of under or un-regulated foreign exchange and speculative markets leading to inflated wealth of investors and artificial inflation of commodities, goods, and in some instances entire nations as with the Asian economic boom-bust that was brought on externally by "free" trade.
- *Economic* - realization of a global common market, based on the freedom of exchange of goods and capital.
- *Political* - political globalization is the creation of a world government which regulates the relationships among nations and guarantees the rights arising from social and economic globalization. Politically, the United States has enjoyed a position of power among the world powers; in part because of its



Globalization has had an impact on different cultures around the world.

strong and wealthy economy. With the influence of Globalization and with the help of The United States' own economy, the People's Republic of China has experienced some tremendous growth within the past decade. If China continues to grow at the rate projected by the trends, then it is very likely that in the next twenty years, there will be a major reallocation of power among the world leaders. China will have enough wealth, industry, and technology to rival the United States for the position of leading world power. The European Union, Russian Federation and India are among the other already-established world powers which may have the ability to influence future world politics.

- *Informational* - increase in information flows between geographically remote locations. Arguably this is a technological change with the advent of fibre optic communications, satellites, and increased availability of telephony and Internet, possibly ancillary or unrelated to the globalist ideology.
- *Cultural* - growth of cross-cultural contacts; advent of new categories of consciousness and identities such as *Globalism* - which embodies cultural diffusion, the desire to consume and enjoy foreign products and ideas, adopt new technology and practices, and participate in a "world culture"; loss of languages (and corresponding loss of ideas), also see Transformation of culture
- *Ecological*- the advent of global environmental challenges that can not be solved without international cooperation, such as climate change, cross-boundary water and air pollution, over-fishing of the ocean, and the spread of invasive species. Many factories are built in developing countries where they can pollute freely. Globalism and free trade interplay to increase pollution and accelerate it in the name of an ever expanding capitalist growth economy in a non-expanding world. The detriment is again to the poorer nations while the benefit is allocated to the wealthier nations.
- *Social* - increased circulation by people of all nations with fewer restrictions. Provided that the people of those nations are wealthy enough to afford international travel, which the majority of the world's population is not. An illusory 'benefit' recognized by the elite and wealthy, and increasingly so as fuel and transport costs rise.
- *Transportation* - fewer and fewer European cars on European roads each year (the same can also be said about American cars on American roads) and the death of distance through the incorporation of technology to decrease travel time. This would appear to be a technological advancement recognized by those who work in information, rather than labour intensive markets, accessible to the few rather than the many, and if it is indeed an effect of globalism, reflects the disproportionate inequitable allocation of resources rather than a benefit to humanity overall.
- *International cultural exchange*
 - Spreading of multiculturalism, and better individual access to cultural diversity (e.g. through the export of Hollywood and Bollywood movies). However, the imported culture can easily supplant the local culture, causing reduction in diversity through hybridization or even assimilation. The most prominent form of this is Westernization, but Sinicization of cultures has taken place over most of Asia for many centuries. Arguably the hegemonic effects of globalism and homogenization of culture as the capitalist globalist economy becomes the "only" way that countries may participate through the IMF and World Bank leads to a destruction rather than an appreciation of differences in culture.
 - Greater international travel and tourism for the few who can afford international travel and tourism.
 - Greater immigration, including illegal immigration, except for those countries around the world including the UK, Canada, and the United States who have in 2008 accelerated removal of illegal migrants and modified laws to increase the ease of removing those who have entered the country illegally, while ensuring that immigration policies allow those more favourable to the stimulation of economy to enter, primarily focusing on the capital that immigrants can move into a country with them.
 - Spread of local consumer products (e.g. food) to other countries (often adapted to their culture) including genetically modified organisms. A new and novel feature of the globalist growth economy is the birth of the licensed seed which will only be viable for one season and can not be replanted in a subsequent season - ensuring a captive market to a corporation. Entire nations may have their food supply controlled by a company successful in implementing such GMOs potentially through World Bank or IMF loan conditions.
 - World-wide fads and pop culture such as Pokémon, Sudoku, Numa Numa, Origami, Idol series, YouTube, Orkut, Facebook, and MySpace.

Accessible to those who have Internet or Television, leaving out a substantial segment of the Earth's population.

- World-wide sporting events such as FIFA World Cup and the Olympic Games.
- Formation or development of a set of universal values - Homogenization of Culture
- *Technical*
 - Development of a global telecommunications infrastructure and greater transborder data flow, using such technologies as the Internet, communication satellites, submarine fibre optic cable, and wireless telephones
 - Increase in the number of standards applied globally; e.g. copyright laws, patents and world trade agreements.
- *Legal/Ethical*
 - The creation of the international criminal court, which the United States has refused to sign on to, and international justice movements.
 - Crime importation and raising awareness of global crime-fighting efforts and cooperation.
 - Sexual awareness – It is often easy to only focus on the economic aspects of Globalization. This term also has strong social meanings behind it. Globalization can also mean a cultural interaction between different countries. Globalization may also have social effects such changes in sexual inequality, and to this issue brought about a greater awareness of the different (often more brutal) types of gender discrimination throughout the world. For example, Women and girls in African countries have long been subjected to female circumcision- such a harmful procedure has been since exposed to the world, and the practice is now decreasing in occurrence.
 - Increasing concentration of wealth in fewer and fewer hands. Media and other multinational mergers leading to fewer corporations controlling vaster segments of society and production. The decrease in the middle class, and the increase in poverty observed within Globalized and deregulated nations. Globalization was responsible for the largest sovereign debt default in world history, bankrupting the entire nation of Argentina in 2002. Globalization did, however, benefit business and finance in that large corporations and multinational banks were able to move over \$40BN in cash out of Argentina literally in the dead of night as there were no regulations in this deregulated and globalized country to prevent them from doing so. Opponents of Globalization argue that the banks locking the citizens out of their own accounts, the 60% and above unemployment rate, and the bankruptcy of an entire nation are arguments against globalization.

Pro-globalization (globalism)

Generally, support of Free Trade, Capitalism, and Democracy - systems which are widely believed to facilitate Globalization. Supporters of free trade claim that it increases economic prosperity as well as opportunity, especially among developing nations, enhances civil liberties and leads to a more efficient allocation of resources. Economic theories of comparative advantage suggest that free trade leads to a more efficient allocation of resources, with all countries involved in the trade benefiting. In general, this leads to lower prices, more employment, higher output and a higher standard of living for those in developing countries.

One of the ironies of the recent success of India and China is the fear that... success in these two countries comes at the expense of the United States. These fears are fundamentally wrong and, even worse, dangerous. They are wrong because the world is not a zero-sum struggle... but rather is a positive-sum opportunity in which improving technologies and skills can raise living standards around the world.

— Jeffrey D. Sachs, *The End of Poverty*, 2005

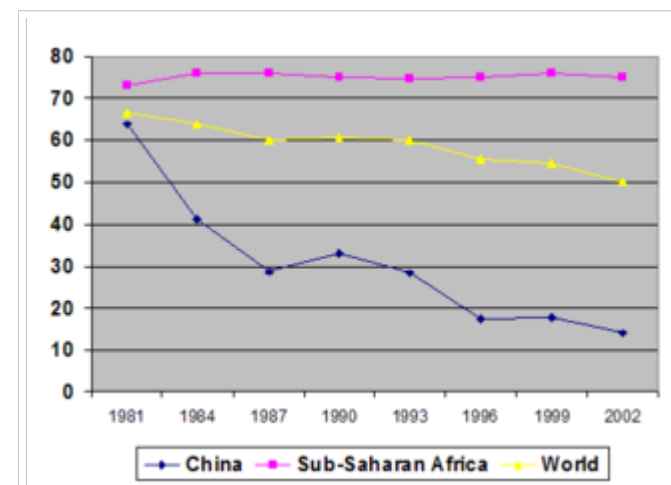
Libertarians and proponents of laissez-faire capitalism say that higher degrees of political and economic freedom in the form of democracy and capitalism in the developed world are ends in themselves and also produce higher levels of material wealth. They see globalization as the beneficial spread of liberty and capitalism.

Supporters of democratic globalization are sometimes called pro-globalists. They believe that the first phase of globalization, which was market-oriented, should be followed by a phase of building global political institutions representing the will of world citizens. The difference from other globalists is that they do not define in advance any ideology to orient this will, but would leave it to the free choice of those citizens via a democratic process.

Some, such as Senator Douglas Roche, O.C., simply view globalization as inevitable and advocate creating institutions such as a directly-elected United Nations Parliamentary Assembly to exercise oversight over unelected international bodies.

Supporters of globalization argue that the anti-globalization movement uses anecdotal evidence to support their protectionist view, whereas worldwide statistics strongly support globalization:

- From 1981 to 2001, according to World Bank figures, the number of people living on \$1 a day or less declined from 1.5 billion to 1.1 billion in absolute terms. At the same time, the world population increased, so in percentage terms the number of such people in developing nations declined from 40% to 20% of the population. with the greatest improvements occurring in economies rapidly reducing barriers to trade and investment; yet, some critics argue that more detailed variables measuring poverty should be studied instead .
- The percentage of people living on less than \$2 a day has decreased greatly in areas effected by globalization, whereas poverty rates in other areas have remained largely stagnant. In East-Asia, including China, the percentage has decreased by 50.1% compared to a 2.2% increase in Sub-Saharan Africa.



Globalization advocates such as Jeffrey Sachs point to the above average drop in poverty rates in countries, such as China, where globalization has taken a strong foothold, compared to areas less affected by globalization, such as Sub-Saharan Africa, where poverty rates have remained stagnant.

Area	Demographic	1981	1984	1987	1990	1993	1996	1999	2002	Percentage Change 1981-2002
East Asia and Pacific	Less than \$1 a day	57.7%	38.9%	28.0%	29.6%	24.9%	16.6%	15.7%	11.1%	-80.76%
	Less than \$2 a day	84.8%	76.6%	67.7%	69.9%	64.8%	53.3%	50.3%	40.7%	-52.00%
Latin America	Less than \$1 a day	9.7%	11.8%	10.9%	11.3%	11.3%	10.7%	10.5%	8.9%	-8.25%
	Less than \$2 a day	29.6%	30.4%	27.8%	28.4%	29.5%	24.1%	25.1%	23.4%	-29.94%
Sub-Saharan Africa	Less than \$1 a day	41.6%	46.3%	46.8%	44.6%	44.0%	45.6%	45.7%	44.0%	+5.77%
	Less than \$2 a day	73.3%	76.1%	76.1%	75.0%	74.6%	75.1%	76.1%	74.9%	+2.18%

'SOURCE: World Bank, Poverty Estimates, 2002

- Income inequality for the world as a whole is diminishing. Due to definitional issues and data availability, there is disagreement with regards to the pace of the decline in extreme poverty. As noted below, there are others disputing this. The economist Xavier Sala-i-Martin in a 2007 analysis argues that this is incorrect, income inequality for the world as a whole has diminished. . Regardless of who is right about the past trend in income inequality, it has been argued that improving absolute poverty is more important than relative inequality.
- Life expectancy has almost doubled in the developing world since World War II and is starting to close the gap between itself and the developed world where the improvement has been smaller. Even in Sub-Saharan Africa, the least developed region, life expectancy increased from 30 years before World War II to about a peak of about 50 years before the AIDS pandemic and other diseases started to force it down to the current level of 47 years. Infant mortality has decreased in every developing region of the world.
- Democracy has increased dramatically from there being almost no nations with universal suffrage in 1900 to 62.5% of all nations having it in 2000.
- Feminism has made advances in areas such as Bangladesh through providing women with jobs and economic safety.
- The proportion of the world's population living in countries where per-capita food supplies are less than 2,200 calories (9,200 kilojoules) per day decreased from 56% in the mid-1960s to below 10% by the 1990s.
- Between 1950 and 1999, global literacy increased from 52% to 81% of the world. Women made up much of the gap: female literacy as a percentage of male literacy has increased from 59% in 1970 to 80% in 2000.
- The percentage of children in the labor force has fallen from 24% in 1960 to 10% in 2000.
- There are similar increasing trends toward electric power, cars, radios, and telephones per capita, as well as a growing proportion of the population with access to clean water.
- The book *The Improving State of the World* also finds evidence for that these, and other, measures of human well-being has improved and that globalization is part of the explanation. It also responds to arguments that environmental impact will limit the progress.

Although critics of globalization complain of Westernization, a 2005 UNESCO report showed that cultural exchange is becoming mutual. In 2002, China was the third largest exporter of cultural goods, after the UK and US. Between 1994 and 2002, both North America's and the European Union's shares of cultural exports declined, while Asia's cultural exports grew to surpass North America.

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Anti-globalization (mundialism)

Anti-globalization is a pejorative term used to describe the political stance of people and groups who oppose the neoliberal version of **globalization**.

“Anti-globalization” may involve the process or actions taken by a state in order to demonstrate its sovereignty and practice democratic decision-making. Anti-globalization may occur in order to put brakes on the international transfer of people, goods and ideology, particularly those determined by the organizations such as the IMF or the WTO in imposing the radical deregulation program of free market fundamentalism on local governments and populations. Moreover, as Canadian journalist Naomi Klein argues in her book *No Logo: Taking Aim at the Brand Bullies* (also subtitled *No Space, No Choice, No Jobs*) anti-globalism can denote either a single social movement or an umbrella term that encompasses a number of separate social movements such as nationalists and socialists. In either case, participants stand in opposition to the unregulated political power of large, multi-national corporations, as the corporations exercise power through leveraging trade agreements which damage in some instances the democratic rights of citizens, the environment particularly air quality index and rain forests, as well as national governments sovereignty to determine labor rights including the right to unionize for better pay, and better working conditions, or laws as they may otherwise infringe on cultural practices and traditions of developing countries.

Most people who are labeled "anti-globalization" consider the term to be too vague and inaccurate Podobnik states that "the vast majority of groups that participate in these protests draw on international networks of support, and they generally call for forms of globalization that enhance democratic representation, human rights, and egalitarianism."

Joseph Stiglitz and Andrew Charlton write:

“ The anti-globalization movement developed in opposition to the perceived negative aspects of globalization. The term 'anti-globalization' is in many ways a misnomer, since the group represents a wide range of interests and issues and many of the people involved in the anti-globalization movement do support closer ties between the various peoples and cultures of the world through, for example, aid, assistance for refugees, and global environmental issues. ”

Members aligned with this viewpoint prefer instead to describe themselves as the **Global Justice Movement**, the **Anti-Corporate-Globalization Movement**, the **Movement of Movements** (a popular term in Italy), the "**Alter-globalization**" movement (popular in France), the "**Counter-Globalization**" movement, and a number of other terms.

Critiques of the current wave of economic globalization typically look at both the damage to the planet, in terms of the perceived unsustainable harm done to the biosphere, as well as the perceived human costs, such as increased poverty, inequality, miscegenation, injustice and the erosion of traditional culture which, the critics contend, all occur as a result of the economic transformations related to globalization. They challenge directly the metrics, such as GDP, used to measure progress promulgated by institutions such as the World Bank, and look to other measures, such as the Happy Planet Index, created by the New Economics Foundation. They point to a "multitude of interconnected fatal consequences--social disintegration, a breakdown of democracy, more rapid and extensive deterioration of the environment, the spread of new diseases, increasing poverty and alienation" which they claim are the unintended but very real consequences of globalization.

The terms globalization and anti-globalization are used in various ways. Noam Chomsky states that

- “ The term "globalization" has been appropriated by the powerful to refer to a specific form of international economic integration, one based on investor rights, with the interests of people incidental. That is why the business press, in its more honest moments, refers to the "free trade agreements" as "free investment agreements" (Wall St. Journal). Accordingly, advocates of other forms of globalization are described as "anti-globalization"; and some, unfortunately, even accept this term, though it is a term of propaganda that should be dismissed with ridicule. No sane person is opposed to globalization, that is, international integration. Surely not the left and the workers movements, which were founded on the principle of international solidarity - that is, globalization in a form that attends to the rights of people, not private power systems. ”
- “ "The dominant propaganda systems have appropriated the term "globalization" to refer to the specific version of international economic integration that they favor, which privileges the rights of investors and lenders, those of people being incidental. In accord with this usage, those who favour a different form of international integration, which privileges the rights of human beings, become "anti-globalist." This is simply vulgar propaganda, like the term "anti-Soviet" used by the most disgusting commissars to refer to dissidents. It is not only vulgar, but idiotic. Take the World Social Forum, called "anti-globalization" in the propaganda system -- which happens to include the media, the educated classes, etc., with rare exceptions. The WSF is a paradigm example of globalization. It is a gathering of huge numbers of people from all over the world, from just about every corner of life one can think of, apart from the extremely narrow highly privileged elites who meet at the competing World Economic Forum, and are called "pro-globalization" by the propaganda system. An observer watching this farce from Mars would collapse in hysterical laughter at the antics of the educated classes." ”

Critics argue that:

- ■ **Poorer countries** are sometimes at **disadvantage**: While it is true that globalization encourages free trade among countries on an international level, there are also negative consequences because some countries try to save their national markets. The main export of poorer countries is usually agricultural goods. It is difficult for these countries to compete with stronger countries that subsidize their own farmers. Because the farmers in the poorer countries cannot compete, they are forced to sell their crops at much lower price than what the market is paying.
- **Exploitation** of foreign impoverished workers: The deterioration of protections for weaker nations by stronger industrialized powers has resulted in the exploitation of the people in those nations to become cheap labor. Due to the lack of protections, companies from powerful industrialized nations are able to offer workers enough salary to entice them to endure extremely long hours and unsafe working conditions. The abundance of cheap labor is giving the countries in power incentive not to rectify the inequality between nations. If these nations developed into industrialized nations, the army of cheap labor would slowly disappear alongside development. With the world in this current state, it is impossible for the exploited workers to escape poverty. It is true that the workers are free to leave their jobs, but in many poorer countries, this would mean starvation for the worker, and possible even his/her family.
- The shift to **service work**: The low cost of offshore workers have enticed corporations to move production to foreign countries. The laid off unskilled workers are forced into the service sector where wages and benefits are low, but turnover is high. This has contributed to the widening economic gap between skilled and unskilled workers. The loss of these jobs has also contributed greatly to the slow decline of the middle class which is a major factor in the increasing economic inequality in the United States. Families that were once part of the middle class are forced into lower positions by massive layoffs and outsourcing to another country. This also means that people in the lower class have a much harder time

climbing out of poverty because of the absence of the middle class as a stepping stone.

- **Weak labor unions:** The surplus in cheap labor coupled with an ever growing number of companies in transition has caused a weakening of labor unions in the United States. Unions lose their effectiveness when their membership begins to decline. As a result unions hold less power over corporations that are able to easily replace workers, often for lower wages, and have the option to not offer unionized jobs anymore.

In December 2007, World Bank economist Branko Milanovic has called much previous empirical research on global poverty and inequality into question because, according to him, improved estimates of purchasing power parity indicate that developing countries are worse off than previously believed. Milanovic remarks that "literally hundreds of scholarly papers on convergence or divergence of countries' incomes have been published in the last decade based on what we know now were faulty numbers. With the new data, economists will revise calculations and possibly reach new conclusions" moreover noting that "implications for the estimates of global inequality and poverty are enormous. The new numbers show global inequality to be significantly greater than even the most pessimistic authors had thought. Until the last month, global inequality, or difference in real incomes between all individuals of the world, was estimated at around 65 Gini points – with 100 denoting complete inequality and 0 denoting total equality, with everybody's income the same – a level of inequality somewhat higher than that of South Africa. But the new numbers show global inequality to be 70 Gini points – a level of inequality never recorded anywhere."

The critics of globalization typically emphasize that globalization is a process that is mediated according to corporate interests, and typically raise the possibility of alternative global institutions and policies, which they believe address the moral claims of poor and working classes throughout the globe, as well as environmental concerns in a more equitable way.

The movement is very broad, including church groups, national liberation factions, peasant unionists, intellectuals, artists, protectionists, anarchists, those in support of relocalization and others. Some are reformist, (arguing for a more humane form of capitalism) while others are more revolutionary (arguing for what they believe is a more humane system than capitalism) and others are reactionary, believing globalization destroys national industry and jobs.

One of the key points made by critics of recent economic globalization is that income inequality, both between and within nations, is increasing as a result of these processes. One article from 2001 found that significantly, in 7 out of 8 metrics, income inequality has increased in the twenty years ending 2001. Also, "incomes in the lower deciles of world income distribution have probably fallen absolutely since the 1980s". Furthermore, the World Bank's figures on absolute poverty were challenged. The article was skeptical of the World Bank's claim that the number of people living on less than \$1 a day has held steady at 1.2 billion from 1987 to 1998, because of biased methodology.

A chart that gave the inequality a very visible and comprehensible form, the so-called 'champagne glass' effect, was contained in the 1992 United Nations Development Program Report, which showed the distribution of global income to be very uneven, with the richest 20% of the world's population controlling 82.7% of the world's income.

+ Distribution of world GDP, 1989	
Quintile of Population	Income
Richest 20%	82.7%

Second 20%	11.7%
Third 20%	2.3%
Fourth 20%	1.4%
Poorest 20%	1.2%

SOURCE: United Nations Development Program. 1992 Human Development Report

Economic arguments by fair trade theorists claim that unrestricted free trade benefits those with more financial leverage (i.e. the rich) at the expense of the poor.

Americanization related to a period of high political American clout and of significant growth of America's shops, markets and object being brought into other countries. So globalization, a much more diversified phenomenon, relates to a multilateral political world and to the increase of objects, markets and so on into each others countries.

Some opponents of globalization see the phenomenon as the promotion of corporatist interests. They also claim that the increasing autonomy and strength of corporate entities shapes the political policy of countries.

Social

International Social Forums

See main articles: European Social Forum, the Asian Social Forum, World Social Forum (WSF).

The first WSF was an initiative of the administration of Porto Alegre in Brazil.

The slogan of the World Social Forum was "Another World Is Possible". It was here that the WSF's Charter of Principles was adopted to provide a framework for the forums.

The WSF became a periodic meeting: in 2002 and 2003 it was held again in Porto Alegre and became a rallying point for worldwide protest against the American invasion of Iraq. In 2004 it was moved to Mumbai (formerly known as Bombay, in India), to make it more accessible to the populations of Asia and Africa. This last appointment saw the participation of 75,000 delegates.

In the meantime, regional forums took place following the example of the WSF, adopting its Charter of Principles. The first European Social Forum (ESF) was held in November 2002 in Florence. The slogan was "Against the war, against racism and against neo-liberalism". It saw the participation of 60,000 delegates

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and ended with a huge demonstration against the war (1,000,000 people according to the organizers). The other two ESFs took place in Paris and London, in 2003 and 2004 respectively.

Recently there has been some discussion behind the movement about the role of the social forums. Some see them as a "popular university", an occasion to make many people aware of the problems of globalization. Others would prefer that delegates concentrate their efforts on the coordination and organization of the movement and on the planning of new campaigns. However it has often been argued that in the dominated countries (most of the world) the WSF is little more than an 'NGO fair' driven by Northern NGOs and donors most of which are hostile to popular movements of the poor.

Reversion

Rising petroleum prices can reverse globalization and are leading to world inflation crisis. Higher energy prices are impacting transport costs at an unprecedented rate. So much so, that the cost of moving goods, not the cost of tariffs, is the largest barrier to global trade today. In fact, in tariff-equivalent terms, the explosion in global transport costs has effectively offset all the trade liberalization efforts of the last three decades.

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Gold standard

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The **gold standard** is a monetary system in which a region's common media of exchange are paper notes which receive substantial premia because they are normally freely convertible into fixed quantities of gold. Under a gold standard, money issuers normally stand willing to redeem their notes, upon demand, for pre-set, intertemporally constant, fixed amounts of gold. The gold standard is not currently used by any government, having been replaced completely by fiat currency, and private currencies backed by gold are rare.

Gold standards should not be confused with their historical predecessor, "gold-coin standards," wherein taxes are payable in either gold coins or overvalued, government-minted, less expensive, coins.

The main purpose of either government money system has historically been to provide seigniorage, or money-creation profit, to governmental leaders in order to provide them with general purchasing power during emergencies, especially those leaders who are legislatively constrained and therefore unable to raise taxes in order to execute the defense commitments that are required for the survival of their states (Thompson, 1974.)

Gold standards replaced gold-coin standards in the 17th-19th centuries in the West as the extent of defensive warfare expanded to where the gold-coin standards were no longer sufficient to the task. A similar history generated a gold standard in China from the 9th through the early 17th century.

Early gold-coin standards



Gold coin of Alexander the Great,
ca. 330 BC

Government-minted gold and silver coins were first used in ancient Lydia in the late 7th century B.C. The burgeoning democratic city-states of Classical Greece soon thereafter introduced similar gold-coin standards, which rapidly spread Westward to most of the city-states republics, including Rome. In the heyday of the Athenian empire, the city's silver tetradrachm was the first coin to achieve "international standard" status in Mediterranean trade. Silver remained the most common monetary metal used in ordinary transactions until the 20th century.

The Persian Empire collected taxes in gold and minted its own gold coin, known in the West as the *δαρεικός*, *dareikos* in Greek, or *daricus* in Latin. When Persia was conquered by Alexander the Great, this gold became the basis for the gold coinage of Alexander's Macedon empire and those of his Diadochi. The vast gold hoard of the Persian kings was put into monetary circulation, triggering the first known "worldwide" inflation event.



Solidus of Justinian II, ca. 705

Ancient Rome minted two important gold coins: the aureus, which was ~7 grams of gold alloyed with silver, and the smaller solidus, which weighed 4.4 grams, of which 4.2 was gold. Roman and Byzantine coins were frequently alloyed with other metals of much lower value to create the seigniorage necessary for a rational system of government money.

After the Roman Emperor Gallienus, who ruled from 253 to 268 introduced a monetary reform in which surface-overvalued coins were no longer accepted for tax payments, war inflation became symptomatic of the Empire's new and fatal flaw. For the surface overvaluation of an emergency coinage would soon degenerate to where the coinage simply traded for its metallic value, thereby eliminating the ability of the senate-constrained government to collect seigniorage at critical times. Remarkably, the flaw was not repaired until after the fall of the Empire and the times of Justinian in the East and Theodoric the Great, the first of the Germanic (Ostrogothic) emperors in the West.

The dinar and dirham were gold and silver coins, respectively, originally minted by the Persians. The Caliphates in the Islamic world adopted these coins, starting with Caliph Abd al-Malik (685–705).

In 1284 the Republic of Venice coined the ducat, its first solid gold coin. Other coins, the florin, noble, grosh, złoty, and guinea, were also introduced at this time by other European states to facilitate growing trade.

Beginning with the conquest of the Aztec and Inca Empires, Spain had access to stocks of new gold for coinage in addition to silver. The wide availability of milled and cob gold coins made it possible for the West Indies to make gold the only legal tender in 1704. The circulation of Spanish coins was later to create the unit of account for the United States, the "dollar", based on the Spanish silver *real*, and Philadelphia's currency market was to trade in Spanish colonial coins.



Sequin (Venetian ducat), 1382



Aureus minted in 193 by Septimius Severus

Establishment of the international gold standard

When Germany became a unified country following the Franco-Prussian War; it established the mark. Rapidly most other nations followed suit. Gold became a transportable, universal and stable unit of valuation, and the world's dominant economy, the United Kingdom, had a longstanding commitment to the gold standard. See Globalization.

Dates of adoption of a gold standard

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- 1695: United Kingdom at £1 to 113 grains (7.32g) of gold.
- 1818: Netherlands at 1 guilder to 0.60561g gold
- 1854: Portugal at 1000 réis to 1.62585g gold
- 1871: Germany at 2790 Goldmarks to 1kg gold
- 1873: Latin Monetary Union (Belgium, Italy, Switzerland, France) at 31 francs to 9g gold
- 1873: United States *de facto* at 20.67 dollars to 1 troy oz
- 1875: Scandinavian monetary union: (Denmark, Norway and Sweden) at 2480 kroner to 1kg gold
- 1876: France internally
- 1876: Spain at 31 pesetas to 9g gold
- 1878: Finland at 31 marks to 9g gold
- 1879: Austria (see Austrian florin and Austrian crown)
- 1893: Russia at 31 roubles to 24g gold
- 1897: Japan at 1 yen to 1.5g gold
- 1898: India (see Indian rupee)
- 1900: United States *de jure*.

Throughout the post-Civil War decade of the 1870s deflationary and depressionary economics created periodic demands for silver currency. However, such attempts generally failed, and continued the general pressure towards a gold standard. By 1879, only gold coins were accepted through the Latin Monetary Union, composed of France, Italy, Belgium, Switzerland and later Greece, even though silver was, in theory, a circulating medium.

Gold standard from peak to crisis (1901–1932)

Suspending gold payments to fund the war

As in previous major wars under its gold standard, the British government suspended the convertibility of Bank of England notes to gold in 1914 to fund military operations during World War I. By the end of the war Britain was on a series of fiat currency regulations, which monetized Postal Money Orders and Treasury Notes. The government later called these notes banknotes, which are different from US Treasury notes. The United States government took similar measures. After the war, Germany, having lost much of its gold in reparations, could no longer coin gold "Reichsmarks" and moved to paper currency, although the Weimar Republic later introduced the "rentenmark" and later the gold-backed reichsmark in an effort to control hyperinflation.

Also as in previous major wars under the gold standard, the UK was returned to the gold standard in 1925, by a somewhat reluctant Winston Churchill. Although a higher gold price and significant inflation had followed the wartime suspension, Churchill similarly followed tradition by resuming conversion payments at the pre-war gold price. For five years prior to 1925 the gold price was managed downward to the pre-war level, causing deflation throughout those countries of the British Empire and Commonwealth using the Pound Sterling. But the rise in demand for gold for conversion payments that followed the similar European resumptions from 1925 to 1928 meant a further rise in demand for gold relative to goods and therefore the need for a lower price of goods because of the fixed rate of conversion from money to goods. Because of these price declines and predicatable depressionary effects, the British government finally

abandoned the standard September 20, 1931. Sweden abandoned the gold standard in October 1931; and other European nations soon followed. Even the U.S. government, which possessed most of the world's gold, moved to cushion the effects of the Great Depression by raising the official price of gold (from about \$20 to \$35 per ounce) and thereby substantially raising the equilibrium price level in 1933-4.

Depression and World War II

British hesitate to return to gold standard

During the 1939–1942 period, the UK depleted much of its gold stock in purchases of munitions and weaponry on a "cash and carry" basis from the U.S. and other nations. This depletion of the UK's reserve convinced Winston Churchill of the impracticality of returning to a pre-war style gold standard. John Maynard Keynes, who had argued against such a gold standard, became increasingly influential. Nevertheless, his theories were rejected in 1944 Bretton Woods Agreement, which established the IMF and an international gold standard based on convertibility of the various national currencies into a U.S. dollar that was in turn convertible into gold.

Post-war international gold standard (1946–1971)

Advantages

The history of money consists of three phases: commodity money, in which actual valuable objects are bartered; then representative money, in which paper notes (often called 'certificates') are used to represent real commodities stored elsewhere; and finally fiat money, in which paper notes are backed only by use of "lawful force and legal tender laws" of the government, in particular by its acceptability for payments of debts to the government (usually taxes).

Commodity money is inconvenient to store and transport and is subject to hoarding. It also does not allow the government to control or regulate the flow of commerce within their dominion with the same ease that a standardized currency does. As such, commodity money gave way to representative money, and gold and other specie were retained as its backing.

Gold was a common form of representative money due to its rarity, durability, divisibility, fungibility, and ease of identification, often in conjunction with silver. Silver was typically the main circulating medium, with gold as the metal of monetary reserve. The primary advantage of gold or silver backed currency is it self regulates. Therefore there is no government tinkering with the boom and bust cycles that accompany fiat-based currency.

The Gold Standard variously specified how the gold backing would be implemented, including the amount of specie per currency unit. The currency itself is just paper and so has no *innate* value, but is accepted by traders because it can be redeemed any time for the equivalent specie. A US silver certificate, for example, could be redeemed for an actual piece of silver.

Representative money and the Gold Standard protect citizens from hyperinflation and other abuses of monetary policy, as were seen in some countries during the Great Depression. However, they were not without their problems and critics, and so were partially abandoned via the international adoption of the Bretton Woods System. That system eventually collapsed in 1971, at which time all nations had switched to full fiat money.

Former US Federal Reserve Chairman Alan Greenspan once argued, before the advent of monetarism, that

"under the gold standard, a free banking system stands as the protector of an economy's stability and balanced growth... The abandonment of the gold standard made it possible for the welfare statist to use the banking system as a means to an unlimited expansion of credit... In the absence of the gold standard, there is no way to protect savings from confiscation through inflation."

Disadvantages and Rebuttals

- The total amount of gold that has ever been mined has been estimated at around 142,000 tons. Assuming a gold price of US\$1,000 per ounce, or \$32,500 per kilogram, the total value of all the gold ever mined would be around \$4 trillion. This is less than the value of circulating money in the U.S. alone, where more than \$7.6 trillion is in circulation or in deposit (although international banking currently practices fractional reserves). Therefore, a return to



Without a gold standard, governments can print as much money as they want, destroying wealth through inflation. A German woman in 1924 feeding a stove with currency notes, which burn longer than the amount of firewood they can buy.

the gold standard would result in a significant increase in the current value of gold, which may limit its use in current applications. For example, instead of using the ratio of \$1,000 per ounce, the ratio can be defined as \$2,000 per ounce (or \$1,000 per 1/2 ounce) effectively raising the value of gold to \$8 trillion dollars. Gold standard advocates consider this to be an acceptable and necessary risk.

- Fluctuations in the amount of gold that is mined could cause inflation, if there is an increase, or deflation if there is a decrease. Some hold the view that this contributed to the Great Depression.
 - However, the rate of inflation/deflation was much lower under the gold standard than under the current fiat monetary systems. For example, despite the huge quantities of gold mined during the gold rushes in California and Australia between 1850 and 1855, inflation in wholesale prices only reached 5% - which is not uncommon with fiat currencies. It has been suggested that an increased value in gold has traditionally resulted in increased mining, including in places that would have been previously uneconomical, whereas decreased value resulted in reduced mining. It has been argued that this automatic adjustment in the growth of the money supply makes gold even more appealing over fiat currencies. Finally, the money supply grew twice as much as it did during World War I.
- It is difficult to manipulate a gold standard to tailor to an economy's demand for money, giving central banks fewer options to respond to economic crises.
 - However, some gold standard advocates, preferring a free market to government controls on the economy, would argue that restricting the power of central banks is an advantage.
- Some have contended that the gold standard may be susceptible to speculative attacks when a government's financial position appears weak. For example, some believe the United States was forced to raise its interest rates in the middle of the Great Depression to defend the credibility of its currency.
- If a country wanted to devalue their currency, it would produce sharper changes than the smooth declines seen in fiat currencies.

Theory

The theory of the gold standard rests on the idea that maximal increases in governmental purchasing power during wartime emergencies require post-war deflations, which would not occur without monetary institutions like the gold standard, which insist upon return to pre-war price-levels and therefore deflationary wartime expectations (Thompson, 1995).

Differing definitions of gold standard

If the monetary authority holds sufficient gold to convert all circulating money, then this is known as a 100% reserve gold standard, or a full gold standard. In some cases it is referred to as the *Gold Specie Standard* to more easily separate it from the other forms of gold standard that have existed at various times. The 100% reserve standard is generally considered unworkable because the quantity of gold in the world is too small a quantity of money to sustain current worldwide economic activity and the "right" quantity of money (i.e. one that avoids either inflation or deflation) is not a fixed quantity, but varies continuously with the level of commercial activity. The currencies or banknotes having Gold standard are the old German Reichsmarks, Yugoslavia Dinars, Turkish Liras, Brazil Cruzeiros, Croatia Dinars, Poland Zlotych, Argentina Peso Leys, Angola Kwanzas reajastodos, Zaire Zaires and Bolivia Bolivianos.

In an international gold-standard system, which may exist in the absence of any internal gold standard, gold or a currency that is convertible into gold at a fixed price is used as a means of making international payments. Under such a system, when exchange rates rise above or fall below the fixed mint rate by more than the cost of shipping gold from one country to another, large inflows or outflows occur until the rates return to the official level. International gold standards

often limit which entities have the right to redeem currency for gold. Under the Bretton Woods system, these were called "SDRs" for Special Drawing Rights.

Stability offered by gold standard

The gold standard limits the power of governments to inflate prices through excessive issuance of paper currency. It is also supposed to create certainty in international trade by providing a fixed pattern of exchange rates. Under the classical international gold standard, disturbances in the price level in one country would be wholly or partly offset by an automatic balance-of-payment adjustment mechanism called the "price specie flow mechanism." At the time of the Bretton Woods agreement, it was believed that markets were always internally clear; Say's Law. However, in practice, wages, not capital, depreciate in price first.

Mundell-Fleming model

According to modern neo-classical synthesis economics, the Mundell-Fleming Model describes the behaviour of currencies under a gold standard. Since the value of the currencies is fixed by the par value of each currency to gold, the remaining freedom of action is distributed between free movement of capital, and effective monetary and fiscal policy. One reason that most modern macro-economists do not support a return to gold is the fear that this remaining amount of freedom would be insufficient to combat large downturns or deflation.

Advocates of a renewed gold standard

The return to the gold standard is supported by many followers of the Austrian School of Economics, objectivists and libertarians largely because they object to the role of the government in issuing fiat currency through central banks.

U.S. Congressman Ron Paul is perhaps the leading advocate of a return to the gold standard (or at least the legalization of competing currencies which would include gold and silver) in the Western world.

Few lawmakers today advocate a return to the gold standard, other than adherents of the Austrian school and some supply-siders. However, many prominent economists have expressed sympathy with a hard currency basis, and have argued against fiat money, including former US Federal Reserve Chairman Alan Greenspan (himself a former objectivist) and macro-economist Robert Barro. Greenspan famously argued the case for returning to a gold standard in his 1966 paper "Gold and Economic Freedom", in which he described supporters of fiat currencies as "welfare statist" hell-bent on using monetary printing presses to finance deficit spending. He has argued that the fiat money system of today has retained the favorable properties of the gold standard because central bankers have pursued monetary policy as if a gold standard were still in place.

The current monetary system relies on the US Dollar as an "anchor currency" by which major transactions, such as the price of gold itself, are measured. Currency instabilities, inconvertibility and credit access restriction are a few reasons why the current system has been criticized. A host of alternatives have been suggested, including energy-based currencies, market baskets of currencies or commodities; gold is merely one of these alternatives.

In 2001 Malaysian Prime Minister Mahathir bin Mohamad proposed a new currency that would be used initially for international trade between Muslim nations. The currency he proposed was called the Islamic gold dinar and it was defined as 4.25 grams of 24 carat (100%) gold. Mahathir Mohamad promoted the concept on the basis of its economic merits as a stable unit of account and also as a political symbol to create greater unity between Islamic nations. The purported purpose of this move would be to reduce dependence on the United States dollar as a reserve currency, and to establish a non-debt-backed currency in accord with Islamic law against the charging of interest. However, to date, Mahathir's proposed gold-dinar currency has failed to become an accomplished fact.

Gold as a reserve today

During the 1990s Russia liquidated much of the former USSR's gold reserves, while several other nations accumulated gold in preparation for the Economic and Monetary Union. The Swiss Franc left a full gold-convertible backing. However, gold reserves are held in significant quantity by many nations as a means of defending their currency, and hedging against the U.S. Dollar, which forms the bulk of liquid currency reserves. Weakness in the U.S. Dollar tends to be offset by strengthening of gold prices. Gold remains a principal financial asset of almost all central banks alongside foreign currencies and government bonds. It is also held by central banks as a way of hedging against loans to their own governments as an "internal reserve". Approximately 25% of all above-ground gold is held in reserves by central banks.

Both gold coins and gold bars are widely traded in deeply liquid markets, and therefore still serve as a private store of wealth. Some privately issued currencies, such as digital gold currency, are backed by gold reserves.

In 1999, to protect the value of gold as a reserve, European Central Bankers signed the "Washington Agreement," which stated that they would not allow gold leasing for speculative purposes, nor would they "enter the market as sellers" except for sales that had already been agreed upon.

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Great Depression

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The **Great Depression** (also known as the **Great Slump**) was a dramatic, worldwide economic downturn beginning in some countries as early as 1928. The beginning of the Great Depression in the United States is associated with the stock market crash on October 29, 1929, known as Black Tuesday and the end is associated with the onset of the war economy of World War II, beginning around 1939.

The depression had devastating effects in both the industrialized countries and those which exported raw materials. International trade declined sharply, as did personal incomes, tax revenues, prices, and profits. Cities all around the world were hit hard, especially those dependent on heavy industry. Construction was virtually halted in many countries. Farming and rural areas suffered as crop prices fell by 40 to 60 percent. Facing plummeting demand with few alternate sources of jobs, areas dependent on primary sector industries such as farming, mining and logging suffered the most. At the time, Herbert Hoover was President of the United States. Even shortly after the Wall Street Crash of 1929, optimism persisted. John D. Rockefeller said that "These are days when many are discouraged. In the 93 years of my life, depressions have come and gone. Prosperity has always returned and will again."

The Great Depression ended at different times in different countries; for subsequent history see Home front during World War II. The majority of countries set up relief programs, and most underwent some sort of political upheaval, pushing them to the left or right. In some states, the desperate citizens turned toward nationalist demagogues - the most infamous being Adolf Hitler - , setting the stage for World War II in 1939.

The downward spiral

The Great Depression was not a sudden total collapse. The stock market turned upward in early 1930, returning to early 1929 levels by April, though still almost 30 percent below the peak of September 1929. Together government and business actually spent more in the first half of 1930 than in the corresponding period of the previous year. But consumers, many of whom had suffered severe losses in the stock market the prior year, cut back their expenditures by ten percent, and a severe drought ravaged the agricultural heartland of the USA beginning in the northern summer of 1930.

In early 1930, credit was ample and available at low rates, but people were reluctant to add new debt by borrowing. By May 1930, auto sales had declined to below the levels of 1928. Prices in general began to decline, but wages held steady in 1930, then began to drop in 1931. Conditions were worst in farming areas where commodity prices plunged, and in mining and logging areas where unemployment was high and there were few other jobs. The decline in the American economy was the motor that pulled down most other countries at first, then internal weaknesses or strengths in each country made conditions worse or better. Frantic attempts to shore up the economies of individual nations through protectionist policies, like the 1930 U.S. Smoot-Hawley Tariff Act and retaliatory tariffs in other countries, helped to strangle global trade. By late in 1930, a steady decline set in which reached bottom by March 1933.

Causes

Recession cycles are thought to be a normal part of living in a world of inexact balances between supply and demand. What turns a usually mild and short recession or "ordinary" business cycle into a great depression is a subject of debate and concern. Scholars have not agreed on the exact causes and their relative importance. The search for causes is closely connected to the question of how to avoid a future depression, and so the political and policy viewpoints of scholars are mixed into the analysis of historic events eight decades ago. The even larger question is whether it was largely a failure on the part of free markets or largely a failure on the part of governments to not exacerbate widespread bank failures and the resulting panics and reduction in the money supply. Those who believe in a large role for governments in the economy believe it was mostly a failure of the free markets and those who believe in free markets believe it was mostly a failure of government that expounded the problem.

Current theories may be broadly classified into three main points of view. First, there is orthodox classical economics: monetarist, Austrian Economics and neoclassical economic theory, all which focus on the macroeconomic effects of money supply and the supply of gold which backed many currencies before the Great Depression, including production and consumption.



Dorothea Lange's *Migrant Mother* depicts destitute pea pickers in California, centering on Florence Owens Thompson, a mother of seven children, age 32, in Nipomo, California, March 1936.

Second, there are structural theories, most importantly Keynesian, but also including those of institutional economics, that point to underconsumption and overinvestment (economic bubble), malfeasance by bankers and industrialists or incompetence by government officials. Another theory revolves around the surplus of products and the fact that many Americans were not purchasing but saving. The only consensus viewpoint is that there was a large scale lack of confidence. Unfortunately, once panic and deflation set in, many people believed they could make more money by keeping clear of the markets as prices got lower and lower and a given amount of money bought ever more goods.

Third, there is the Marxist critique of political economy. This emphasizes contradictions within capital itself (which is viewed as a social relation involving the appropriation of surplus value) as giving rise to an inherently unbalanced dynamic of accumulation resulting in an overaccumulation of capital, culminating in periodic crises of devaluation of capital. The origin of crisis is thus located firmly in the sphere of production, though economic crisis can be aggravated by problems of disproportionality between spheres of production and the underconsumption of the masses.

There were multiple causes for the first downturn in 1929, including the structural weaknesses and specific events that turned it into a major depression and the way in which the downturn spread from country to country. In terms of the 1929 small downturn, historians emphasize structural factors like massive bank failures and the stock market crash, while economists (such as Peter Temin and Barry Eichengreen) point to Britain's decision to return to the Gold Standard at pre-World War I parities (US\$4.86:£1).

Debt

Debt is seen as one of the causes of the Great Depression. (What follows relates to the USA).

Macroeconomists including Ben Bernanke, the current chairman of the U.S. Federal Reserve Bank, have revived the debt-deflation view of the Great Depression originated by Arthur Cecil Pigou and Irving Fisher: in the 1920s, American consumers and businesses relied on cheap credit, the former to purchase consumer goods such as automobiles and furniture and the latter for capital investment to increase production. This fueled strong short-term growth but created consumer and commercial debt. People and businesses who were deeply in debt when price deflation occurred or demand for their product decreased often risked default. Many drastically cut current spending to keep up time payments, thus lowering demand for new products. Businesses began to fail as construction work and factory orders plunged.

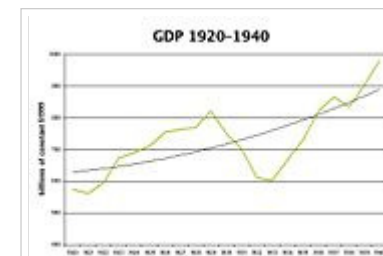
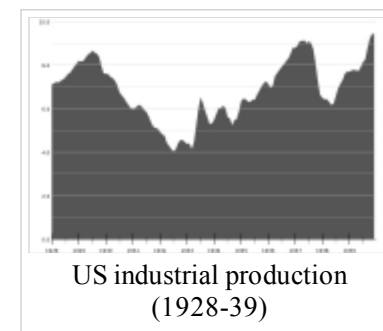


Chart 1: USA GDP annual pattern and long-term trend, 1920-40, in billions of constant dollars



US industrial production (1928-39)

Massive layoffs occurred, resulting in unemployment rates of over 25%. (US) Banks which had financed this debt began to fail as debtors defaulted on debt and depositors became worried about their deposits and began massive withdrawals. Government guarantees and Federal Reserve banking regulations to prevent these types of panics were ineffective or not used. Bank failures led to the loss of billions of dollars in assets.

The debt became heavier, because prices and incomes fell 20–50% but the debts remained at the same dollar amount. After the panic of 1929, and during the first 10 months of 1930, 744 US banks failed. (In all, 9,000 banks failed during the 1930s). By 1933, depositors had lost \$140 billion in deposits.

Bank failures snowballed as desperate bankers called in loans which the borrowers did not have time or money to repay. With future profits looking poor, capital investment and construction slowed or completely ceased. In the face of bad loans and worsening future prospects, the surviving banks became even more conservative in their lending. Banks built up their capital reserves and made fewer loans, which intensified deflationary pressures. A vicious cycle developed and the downward spiral accelerated. This kind of self-aggravating process may have turned a 1930 recession into a 1933 great depression.



Crowd at New York's American Union Bank during a bank run early in the Great Depression.

Trade decline and the U.S. Smoot-Hawley Tariff Act

Many economists have argued that the sharp decline in international trade after 1930 helped to worsen the depression, especially for countries significantly dependent on foreign trade. Most historians and economists assign the American Smoot-Hawley Tariff Act (enacted June 17, 1930) part of the blame for worsening the depression by seriously reducing international trade and causing retaliatory tariffs (i.e., a tax increase) in other countries. Foreign trade was a small part of overall economic activity in the United States and was concentrated in a few businesses like farming; it was a much larger factor in many other countries. The average *ad valorem* rate of duties on dutiable imports for 1921–1925 was 25.9% but under the new tariff it jumped to 50% in 1931–1935.

In dollar terms, American exports declined from about \$5.2 billion in 1929 to \$1.7 billion in 1933; but prices also fell, so the physical volume of exports only fell in half. Hardest hit were farm commodities such as wheat, cotton, tobacco, and lumber. According to this theory, the collapse of farm exports caused many American farmers to default on their loans leading to the bank runs on small rural banks that characterized the early years of the Great Depression.

U.S. Federal Reserve and money supply

Monetarists, including Milton Friedman and current Federal Reserve System chairman Ben Bernanke, argue that the Great Depression was caused by monetary contraction, which was the consequence of poor policy making by the American Federal Reserve System and continuous crisis in the banking system. By not acting, the Federal Reserve allowed the money supply as measured by the M2 to shrink by one-third from 1929 to 1933. Friedman argued the downward turn in the economy starting with the stock market crash would have been just another recession. The problem was that some large, public bank failures, particularly the Bank of the United States, produced panic and widespread runs on local banks, and that the Federal Reserve sat idly by while banks fell. He claimed if the Fed had provided emergency lending to these key banks, or simply bought government bonds on the open market to provide liquidity and increase the quantity

of money after the key banks fell, all the rest of the banks would not have fallen after the large ones did and the money supply would not have fallen to the extent and at the speed that it did. With significantly less money to go around, businessmen could not get new loans and could not even get their old loans renewed, forcing many to stop investing. This interpretation blames the Federal Reserve for inaction, especially the New York branch, which was owned and controlled by Wall Street bankers.

The Federal Reserve, by design, is not controlled by the President or the U.S. Treasury; it is primarily controlled and owned by its member banks and the chairman of the Federal Reserve.

One reason why the Federal Reserve did not act to limit the decline of the money supply was regulation. At that time the amount of credit that the Federal Reserve could issue was limited due to laws which required partial gold backing of that credit. By the late 1920's the Federal Reserve had almost hit the limit of allowable credit that could be backed by the gold in its possession. This credit was in the form of Federal Reserve demand notes. Since a "promise of gold" is not as good as "gold in the hand", during the bank panics a portion of those demand notes were redeemed for Federal Reserve gold. Since the Federal Reserve had hit its limit on allowable credit, any reduction in gold in its vaults had to be accompanied by a greater reduction in credit. Several years into the Great Depression the private ownership of gold was declared illegal and reduced the pressure on Federal Reserve gold.

Austrian School explanations

Another explanation comes from the Austrian School of economics. Austrian theorists who wrote about the Depression include Hayek and Murray Rothbard, who wrote "America's Great Depression" in 1963. In their view, the key cause of the Depression was the expansion of the money supply in the 1920s that led to an unsustainable credit driven boom. In their view, the Federal Reserve, which was created in 1913, shoulders much of the blame.

In fact, Hayek, writing for the Austrian Institute of Economic Research Report in February 1929 predicted the economic downturn, stating that "the boom will collapse within the next few months."

Ludwig von Mises also expected this financial catastrophe, and is quoted as stating "A great crash is coming, and I don't want my name in any way connected with it," when he turned down an important job at the Kreditanstalt Bank in early 1929.

One reason for the monetary inflation was to help Great Britain, which, in the 1920s, was struggling with its plans to return to the gold standard at pre-war (World War I) parity. Returning to the gold standard at this rate meant that the British economy was facing deflationary pressure. According to Rothbard, the lack of price flexibility in Britain meant that unemployment shot up, and the American government was asked to help. The United States was receiving a net inflow of gold and inflated further in order to help Britain return to the gold standard. Montagu Norman, head of the Bank of England, had an especially good relationship with Benjamin Strong, the *de facto* head of the Federal Reserve. Norman pressured the heads of the central banks of France and Germany to inflate as well, but unlike Strong, they refused. Rothbard says American inflation was meant to allow Britain to inflate as well, because under the gold standard, Britain could not inflate on its own.

In the Austrian view it was this inflation of the money supply that led to an unsustainable boom in both asset prices (stocks and bonds) and in capital goods. By the time the Fed belatedly tightened in 1928, it was far too late and, in the Austrian view, a depression was inevitable.

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The artificial interference in the economy was a disaster prior to the Depression, and government efforts to prop up the economy after the crash of 1929 only made things worse. According to Rothbard, government intervention delayed the market's adjustment and made the road to complete recovery more difficult.

Furthermore, Rothbard criticizes Milton Friedman's assertion that the central bank failed to inflate the supply of money. Rothbard asserts that the Federal Reserve purchased \$1.1 billion of government securities from February to July 1932 which raised its total holding to \$1.8 billion. Total bank reserves only rose by \$212 million, but Rothbard argues that this was because the American populace lost faith in the banking system and began hoarding more cash, a factor very much beyond the control of the Central Bank. The potential for a run on the banks caused local bankers to be more conservative in lending out their reserves, and, Rothbard argues, was the cause of the Federal Reserve's inability to inflate.



Power farming displaces tenants from the land in the western dry cotton area. Childress County, Texas, 1938

Business

Franklin D. Roosevelt, elected in 1932, primarily blamed the excesses of big business for causing an unstable bubble-like economy. Democrats believed the problem was that business had too much power, and the New Deal was intended as a remedy, by empowering labor unions and farmers and by raising taxes on corporate profits. Regulation of the economy was a favorite remedy. Some New Deal regulation (the NRA and AAA) was declared unconstitutional by the U.S. Supreme Court. Most New Deal regulations were abolished or scaled back in the 1970s and 1980s in a bipartisan wave of deregulation. However the Securities and Exchange Commission, Federal Reserve, and Social Security won widespread support.

Lack of government deficit spending

British economist John Maynard Keynes argued in *General Theory of Employment Interest and Money* that lower aggregate expenditures in the economy contributed to a massive decline in income and employment that was well below the average. In this situation, the economy might have reached a perfect balance, at a cost of high unemployment. Keynesian economists called for governments during times of economic crisis to pick up the slack by increasing government spending and/or cutting taxes.

Massive increases in deficit spending, new banking regulation, and boosting farm prices did start turning the U.S. economy around in 1933, but it was a slow and painful process. The U.S. had not returned to 1929's GNP for over a decade and still had an unemployment rate of about 15% in 1940—down from 25% in 1932. The unemployment problem was not solved until the post-World War II decontrolling of the command wartime economy in 1946. The advent of World War II, when about 12 million men were forcibly drafted into the army and taken out of the labor market wasn't a true long-term "solution" to massive unemployment in the civilian marketplace, or to create real wealth for the masses with consumer goods. Multiple war good production programs reduced unemployment technically to under 2% and brought in millions of new workers to the labor markets, although as noted before it was strictly to making war goods (armaments) which only benefitted the war-making sector of the economy.

Inequality of wealth and income

Marriner S. Eccles who served as Franklin D. Roosevelt's Chairman of the Federal Reserve from November, 1934 to February, 1948 detailed what he believed

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caused the Depression in his memoirs, *Beckoning Frontiers* (New York, Alfred A. Knopf, 1951):

As mass production has to be accompanied by mass consumption, mass consumption, in turn, implies a distribution of wealth -- not of existing wealth, but of wealth as it is currently produced -- to provide men with buying power equal to the amount of goods and services offered by the nation's economic machinery. [Emphasis in original.] Instead of achieving that kind of distribution, a giant suction pump had by 1929-30 drawn into a few hands an increasing portion of currently produced wealth. This served them as capital accumulations. But by taking purchasing power out of the hands of mass consumers, the savers denied to themselves the kind of effective demand for their products that would justify a reinvestment of their capital accumulations in new plants. In consequence, as in a poker game where the chips were concentrated in fewer and fewer hands, the other fellows could stay in the game only by borrowing. When their credit ran out, the game stopped.

That is what happened to us in the twenties. We sustained high levels of employment in that period with the aid of an exceptional expansion of debt outside of the banking system. This debt was provided by the large growth of business savings as well as savings by individuals, particularly in the upper-income groups where taxes were relatively low. Private debt outside of the banking system increased about fifty per cent. This debt, which was at high interest rates, largely took the form of mortgage debt on housing, office, and hotel structures, consumer installment debt, brokers' loans, and foreign debt. The stimulation to spending by debt-creation of this sort was short-lived and could not be counted on to sustain high levels of employment for long periods of time. Had there been a better distribution of the current income from the national product -- in other words, had there been less savings by business and the higher-income groups and more income in the lower groups -- we should have had far greater stability in our economy. Had the six billion dollars, for instance, that were loaned by corporations and wealthy individuals for stock-market speculation been distributed to the public as lower prices or higher wages and with less profits to the corporations and the well-to-do, it would have prevented or greatly moderated the economic collapse that began at the end of 1929.

The time came when there were no more poker chips to be loaned on credit. Debtors thereupon were forced to curtail their consumption in an effort to create a margin that could be applied to the reduction of outstanding debts. This naturally reduced the demand for goods of all kinds and brought on what seemed to be overproduction, but was in reality underconsumption when judged in terms of the real world instead of the money world. This, in turn, brought about a fall in prices and employment.

Unemployment further decreased the consumption of goods, which further increased unemployment, thus closing the circle in a continuing decline of prices. Earnings began to disappear, requiring economies of all kinds in the wages, salaries, and time of those employed. And thus again the vicious circle of deflation was closed until one third of the entire working population was unemployed, with our national income reduced by fifty per cent, and with the aggregate debt burden greater than ever before, not in dollars, but measured by current values and income that represented the ability to pay. Fixed charges, such as taxes, railroad and other utility rates, insurance and interest charges, clung close to the 1929 level and required such a portion of the national income to meet them that the amount left for consumption of goods was not sufficient to support the population.

This then, was my reading of what brought on the depression.

Literature

The U.S. Depression has been the subject of much writing, as the country has sought to re-evaluate an era that dumped financial as well as emotional catastrophe on its people. Perhaps the most noteworthy and famous novel written on the subject is *The Grapes of Wrath*, published in 1939 and written by John

Steinbeck, who was awarded both the Nobel Prize for literature and the Pulitzer Prize for the work. The novel focuses on a poor family of sharecroppers who are forced from their home as drought, economic hardship, and changes in the agricultural industry occur during the Great Depression. Steinbeck's *Of Mice and Men* is another important novel about a journey during the Great Depression. *The Great Depression* is a novella written by Alon Bershader about a sad, disgruntled temporary worker, making the title both a homage to the historical event and a pun. Additionally, Harper Lee's *To Kill a Mockingbird* was set during the Great Depression.

Effects

Australia

Australia's extreme dependence on agricultural and industrial exports meant it was one of the hardest-hit countries in the Western world, amongst the likes of Canada and Germany. Falling export demand and commodity prices placed massive downward pressures on wages. Further, unemployment reached a record high of almost 32% in 1932, with incidents of civil unrest becoming common. After 1932, an increase in wool and meat prices led to a gradual recovery.

Canada

Harshly impacted by both the global economic downturn and the Dust Bowl, Canadian industrial production had fallen to only at 58% of the 1929 level by 1932, the second lowest level in the world after the United States, and well behind nations such as Britain, which only saw it fall to 83% of the 1929 level. Total national income fell to 55% of the 1929 level, again worse than any nation other than the United States.

East Asia

The **Great Depression in East Asia** was of minor impact. The Japanese economy shrank by 8% 1929-31. However, with the invasion and subjugation of Manchuria into a Japanese puppet-state in September 1931, thus providing Japan with raw materials and energy, the Japanese economy was able to recover by 1932 and continued to grow.

France

The Depression began to affect France from about 1931. France's relatively high degree of self-sufficiency meant the damage was considerably less than nations like Germany. However, hardship and unemployment were high enough to lead to rioting and the rise of the socialist Popular Front.

Germany



Unemployed men march in Toronto, Canada

Germany's Weimar Republic was hit hard by the depression, as American loans to help rebuild the German economy now stopped. Unemployment soared, especially in larger cities, and the political system veered toward extremism. Repayment of the war reparations due by Germany were suspended in 1932 following the Lausanne Conference of 1932. By that time Germany had repaid 1/8th of the reparations. Hitler's Nazi Party came to power in January 1933. In 1934 the economy was still not balanced enough for Germany to work on its own.

Latin America

Because of high levels of United States investment in Latin American economies, they were severely damaged by the Depression. Within the region, Chile, Bolivia and Peru were particularly badly affected. One result of the Depression in this area was the rise of fascist movements.

Netherlands

From roughly 1931 until 1937, the Netherlands suffered a deep and exceptionally long depression. This depression was partly caused by the after-effects of the Stock Market Crash of 1929 in the United States, and partly by internal factors in the Netherlands. Government policy, especially the very late dropping of the Gold Standard, played a role in prolonging the depression. The Great Depression in the Netherlands led to some political instability and riots, and can be linked to the rise of the Dutch national-socialistic party NSB. The depression in the Netherlands lessened somewhat in force at the end of 1936, when the government finally dropped the Gold Standard, but real economic stability did not return until after World War II.

South Africa

Soviet Union

Having removed itself from the capitalist world system both by choice and as a result of efforts of the capitalist powers to isolate it, the Great Depression had little effect on the Soviet Union. This was a period of industrial expansion for the Soviet Union as it recovered from Revolution and Civil War, and the apparent immunity of the Soviet Union to the Great Depression seemed to validate the theory of Marxism and contributed to Socialist and Communist agitation in affected nations. This in turn increased fears of Communist revolution in the West, strengthening support for anti-Communists, both moderate and extreme.

United Kingdom

United States

Early response

Secretary of the Treasury Andrew Mellon advised President Hoover that shock treatment would be the best response: "Liquidate labor, liquidate stocks, liquidate the farmers, liquidate real estate.... That will purge the rottenness out of the system. High costs of living and high living will come down. People will

work harder, live a more moral life. Values will be adjusted, and enterprising people will pick up the wrecks from less competent people." Hoover rejected this advice, not believing government should directly aid the people, but insisted instead on "voluntary cooperation" between business and government.

The New Deal

Shortly after President Roosevelt was inaugurated in 1933, drought and erosion combined to cause the Dust Bowl, shifting hundreds of thousands of displaced persons off of their farms in the midwest. From his inauguration onward, Roosevelt argued a restructuring of the economy would be needed to prevent another or avoid prolonging the current depression. New Deal programs sought to stimulate demand and provide work and relief for the impoverished through increased government spending, by:

- Reforming the financial system, especially the banks and Wall Street. The Securities Act of 1933 comprehensively regulated the securities industry. This was followed by the Securities Exchange Act of 1934 which created the Securities and Exchange Commission. (Though amended, the key provisions of both Acts are still in force as of 2008). Federal insurance of bank deposits was provided by the FDIC (still operating as of 2008), and the Glass-Steagal Act (which remained in effect for 50 years). The institution of the National Recovery Administration remains a controversial act to this day. Although it only lasted until 1935, it made a number of sweeping changes to the American economy until it was declared unconstitutional by the Supreme Court.
- Instituting regulations which ended what was called "cut-throat competition," which kept forcing down prices for everyone (done by the NRA).
- Setting minimum prices and wages and competitive conditions in all industries (done by the NRA).
- Encouraging unions that would raise wages, to increase the purchasing power of the working class (done by the NRA).
- Cutting farm production so as to raise prices and make it possible to earn a living in farming (done by the AAA and successor farm programs).
- Forcing businesses to work with government to set price codes (done by the NRA).
- Creating the NRA board to set labor codes and standards (done by the NRA).

These reforms (together with relief and recovery measures) are called by historians the First New Deal. It was centered around the use of an alphabet soup of agencies set up in 1933 and 1934, along with the use of previous agencies such as the Reconstruction Finance Corporation, to highly regulate and stimulate the economy but the two concepts were incompatible, as the economy continued to stagnate. By 1935, the "Second New Deal" added Social Security, a national relief agency (the Works Progress Administration, WPA) and, through the National Labor Relations Board, a strong stimulus to the growth of labor unions. Unemployment fell by two-thirds in Roosevelt's first term (from 25% to 14.3%, 1933 to 1937), but faster than the economic upturn came 1938's "recession within a depression" and unemployment zoomed to 19% and only until the draft to fight World War II, and then post-war 1946's vast decontrol of the (wartime) command economy that included a sharp reduction of taxes and regulations finally allowed consumer goods to be created, and unemployment finally fell to normal levels.

In 1929, federal expenditures constituted only 3% of the GDP. Between 1933 and 1939, they tripled, funded primarily by a growth in the national debt. The debt as proportion of GNP rose under Hoover from 20% to 40%. Roosevelt kept it at 40% until the war began, when it soared to 128%. After the Recession of 1937, conservatives were able to form a bipartisan conservative coalition to stop further expansion of the New Deal and, by 1943, had abolished all of the relief programs.

Recession of 1937

In 1937, the American economy took an unexpected nosedive, lasting through most of 1938. Production declined sharply, as did profits and employment. Unemployment jumped from 14.3% in 1937 to 19.0% in 1938. The Roosevelt administration reacted by launching a rhetorical campaign against monopoly power, which was cast as the cause of the depression, and appointing Thurman Arnold to act; Arnold's effectiveness ended once World War II began and corporate energies had to be directed to winning the war.

The administration's other response to the 1937 deepening of the Great Depression had more tangible results. Ignoring the pleas of the Treasury Department, Roosevelt embarked on an antidote to the depression, reluctantly abandoning his efforts to balance the budget and launching a \$5 billion spending program in the spring of 1938, an effort to increase mass purchasing power. Business-oriented observers explained the recession and recovery in very different terms from the Keynesians. They argued the New Deal had been very hostile to business expansion in 1935–37, had encouraged massive strikes which had a negative impact on major industries such as automobiles, and had threatened massive antitrust legal attacks on big corporations. All those threats diminished sharply after 1938. For example, the antitrust efforts fizzled out without major cases. The CIO and AFL unions started battling each other more than corporations, and tax policy became more favorable to long-term growth.

On the other hand, according to economist Robert Higgs, when looking only at the supply of consumer goods, significant GDP growth resumed only in 1946 (Higgs does not estimate the value to consumers of collective, intangible goods like victory in war). To Keynesians, the war economy showed just how large the fiscal stimulus required to end the downturn of the Depression was, and it led, at the time, to fears that as soon as America demobilized, it would return to Depression conditions and industrial output would fall to its pre-war levels. That incorrect Keynesian prediction that a new depression would start after the war failed to take into account massive savings and pent-up consumer demand along with the decontrolling of the restrictive wartime regulations in most consumer industries and cutting the high-tax rates starting in 1946.

Keynesian models

In the early 1930s, before John Maynard Keynes wrote *The General Theory*, he was advocating public works programs and deficits as a way to get the British economy out of the Depression. Although Keynes never mentions fiscal policy in *The General Theory*, and instead advocates the need to socialize investments, Keynes ushered in more of a theoretical revolution than a policy one. His basic idea was simple: to keep people fully employed, governments have to run deficits when the economy is slowing because the private sector will not invest enough to increase production and reverse the recession.

As the Depression wore on, Roosevelt tried public works, farm subsidies, and other devices to restart the economy, but never completely gave up trying to balance the budget. According to the Keynesians, he had to spend much more money; they were unable to say how much more. With fiscal policy, however, government could provide the needed Keynesian spending by decreasing taxes, increasing government spending, increasing individuals' incomes. As incomes increased, they would spend more. As they spent more, the multiplier effect would take over and expand the effect on the initial spending. The Keynesians did not estimate what the size of the multiplier was. Keynesian economists assumed poor people would spend new incomes; in reality they saved much of the new money; that is, they paid back debts owed to landlords, grocers and family. Keynesian ideas of the consumption function have been challenged, most notably in the 1950s by Milton Friedman and Franco Modigliani.

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Neoclassical approach

Recent work from a neoclassical perspective focuses on the decline in productivity that caused the initial decline in output and a prolonged recovery due to policies that affected the labor market. This work, collected by Kehoe and Prescott, decomposes the economic decline into a decline in the labor force, capital stock, and the productivity with which these inputs are used. This study suggests that theories of the Great Depression have to explain an initial severe decline but rapid recovery in productivity, relatively little change in the capital stock, and a prolonged depression in the labor force. This analysis rejects theories that focus on the role of savings and posit a decline in the capital stock.

Gold standard

Great Britain departed from the gold standard in September 1931, allowing the pound sterling to float internationally. The value of the pound then dropped significantly and British exports became cheaper. In April 1933, Roosevelt issued Executive Order 6102 prohibiting citizens of the U.S. from owning other-than-token amounts of gold and from using gold as money. Citizens were forced to sell all gold holdings (apart from jewelry and "coins of special collector value") to the federal government at a price of \$20.67 per ounce. In January 1934, Roosevelt raised the official price of gold to \$35 per ounce, thereby devaluing the U.S. dollar by 41%.

Rearmament and recovery

The massive rearmament policies to counter the threat from Nazi Germany helped stimulate the economies in Europe in 1937-39. By 1937, unemployment in Britain had fallen to 1.5 million. The mobilization of manpower following the outbreak of war in 1939 finally ended unemployment.

In the United States, the massive war spending doubled the GNP, masking the effects of the Depression. Businessmen ignored the mounting national debt and heavy new taxes, redoubling their efforts for greater output to take advantage of generous government contracts. Most people worked overtime and gave up leisure activities to make money after so many hard years. People accepted rationing and price controls for the first time as a way of expressing their support for the war effort. Cost-plus pricing in munitions contracts guaranteed businesses a profit no matter how many mediocre workers they employed or how inefficient the techniques they used. The demand was for a vast quantity of war supplies as soon as possible, regardless of cost. Businesses hired every person in sight, even driving sound trucks up and down city streets begging people to apply for jobs. New workers were needed to replace the 11 million working-age men serving in the military. These events magnified the role of the federal government in the national economy. In 1929, federal expenditures accounted for only 3% of GNP. Between 1933 and 1939, federal expenditure tripled, and Roosevelt's critics charged that he was turning America into a socialist state. However, spending on the New Deal was far smaller than on the war effort.

Political consequences

The crisis had many political consequences, among which was the abandonment of classic economic liberal approaches, which Roosevelt replaced in the United

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :393 of 626.

States with Keynesian policies. It was a main factor in the implementation of social democracy and planned economies in European countries after the war. Although Austrian economists had challenged Keynesianism since the 1920s, it was not until 1974, when the Nobel Prize in Economic Sciences was awarded to Friedrich Hayek notably for being *one of the few economists who gave warning of the possibility of a major economic crisis before the great crash came in the autumn of 1929*", and the beginning of monetarism, that the Keynesian approach was politically questioned, leading the way to neoliberalism.

Other Great Depressions

The Great Depression was not unique in magnitude or duration. Several Latin American countries faced similar events in the 1980s. Finnish economists refer to the Finnish economic decline around the breakup of the Soviet Union (1989-1994) as a great depression. Kehoe and Prescott define a great depression to be a period of diminished economic output with at least one year where output is 20% below the trend. By this definition Argentina, Brazil, Chile, and Mexico experienced great depressions in the 1980s, and Argentina experienced another in 1998-2002. This definition also includes the economic performance of New Zealand from 1974-1992 and Switzerland from 1973-present, although this designation for Switzerland has been controversial.

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Gross domestic product

2008/9 Schools Wikipedia Selection. Related subjects: Economics

The **gross domestic product (GDP)** or **gross domestic income (GDI)** is one of the measures of national income and output for a given country's economy. GDP is defined as the total market value of all final goods and services produced within the country in a given period of time (usually a calendar year). It is also considered the sum of value added at every stage of production (the intermediate stages) of all final goods and services produced within a country in a given period of time, and it is given a money value.

The most common approach to measuring and understanding GDP is the expenditure method:

$$GDP = \text{consumption} + \text{gross investment} + \text{government spending} + (\text{exports} - \text{imports}), \text{ or,}$$

$$GDP = C + I + G + (X - M)$$

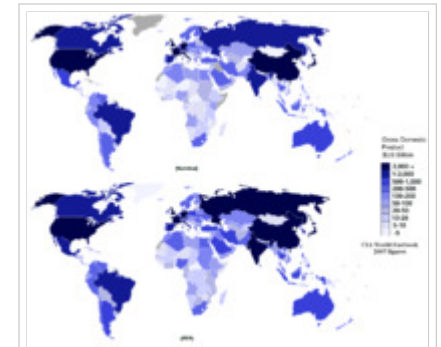
"Gross" means depreciation of capital stock is not subtracted. If net investment (which is gross investment minus depreciation) is substituted for gross investment in the equation above, then the formula for net domestic product is obtained. Consumption and investment in this equation are expenditure on final goods and services. The exports-minus-imports part of the equation (often called **net exports**) adjusts this by subtracting the part of this expenditure not produced domestically (the imports), and adding back in domestic area (the exports).

Economists (since Keynes) have preferred to split the general consumption term into two parts; private consumption, and public sector (or government) spending. Two advantages of dividing total consumption this way in theoretical macroeconomics are:

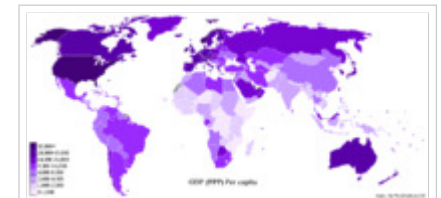
- **Private consumption** is a central concern of welfare economics. The private investment and trade portions of the economy are ultimately directed (in mainstream economic models) to increases in long-term private consumption.
- If separated from endogenous private consumption, **government consumption** can be treated as exogenous, so that different government spending levels can be considered within a meaningful macroeconomic framework.

GDP vs GNP

GDP can be contrasted with **gross national product (GNP, or gross national income, GNI)**, which the United States used in its national accounts until 1992. The difference is that GNP includes net foreign income (the current account) rather than net exports (the balance of trade). Put simply, GNP adds net foreign



CIA World Factbook 2007 figures of total nominal GDP (top) compared to PPP-adjusted GDP (bottom).



World map showing GDP (PPP) per capita.

investment income compared to GDP.

GDP is concerned with the region in which income is generated. It is the market value of all the output produced in a nation in one year. GDP focuses on where the output is produced rather than who produced it. GDP measures all, disregarding the firms' nationality.

In contrast, GNP is a measure of the value of the output produced by the "nationals" of a region. GNP focuses on who owns the production. For example, in the United States, GNP measures the value of output produced by American firms, regardless of where the firms are located.

Measuring GDP

The components of GDP

Each of the variables **C**, **I**, **G** and **XM** (where $\text{GDP} = \text{C} + \text{I} + \text{G} + (\text{X}-\text{M})$ as above)

(Note: * **GDP** is sometimes also referred to as **Y** in reference to a GDP graph)

- **C** is **private** consumption in the economy. This includes most personal expenditures of households such as food, rent, medical expenses and so on but does not include new housing.
- **I** is defined as investments by business or households in capital. Examples of investment by a business include construction of a new mine, purchase of software, or purchase of machinery and equipment for a factory. Spending by households on new houses is also included in Investment. In contrast to its colloquial meaning, 'Investment' in GDP does not mean purchases of financial products. Buying financial products is classed as 'saving', as opposed to **investment**. The distinction is (in theory) clear: if money is converted into goods or services, it *is* investment; but, if you buy a bond or a share of stock, this transfer payment is excluded from the GDP sum. That is because the stocks and bonds affect the financial capital which in turn affects the production and sales which in turn affects the investments. So stocks and bonds indirectly affect the GDP. Although such purchases would be called *investments* in normal speech, from the total-economy point of view, this is simply swapping of deeds, and not part of real production or the GDP formula.
- **G** is the sum of government expenditures on final goods and services. It includes salaries of public servants, purchase of weapons for the military, and any investment expenditure by a government. It does not include any transfer payments, such as social security or unemployment benefits.
- **X** is gross exports. GDP captures the amount a country produces, including goods and services produced for other nations' consumption, therefore exports are added.
- **M** is gross imports. Imports are subtracted since imported goods will be included in the terms **G**, **I**, or **C**, and must be deducted to avoid counting foreign supply as domestic.

It is important to understand the meaning of each variable *precisely* in order to:

- Read national accounts.
- Understand either Keynesian or neoclassical macroeconomics.

Examples of GDP component variables

Examples of **C**, **I**, **G**, and **NX**: If you spend money to renovate your hotel so that occupancy rates increase, that is private investment, but if you buy shares in a consortium to do the same thing it is saving. The former is included when measuring GDP (in **I**), the latter is not. However, when the consortium conducted its own expenditure on renovation, that expenditure would be included in GDP.

For example, if a hotel is a private home then renovation spending would be measured as **Consumption**, but if a government agency is converting the hotel into an office for civil servants the renovation spending would be measured as part of public sector spending (**G**).

If the renovation involves the purchase of a chandelier from abroad, that spending would *also* be counted as an increase in imports, so that **NX** would fall and the total GDP is affected by the purchase. (This highlights the fact that GDP is intended to measure domestic production rather than total consumption or spending. Spending is really a convenient means of estimating production.)

If the manufacture of a chandelier to hang in a foreign hotel the situation would be reversed, and the payment received would be counted in **NX** (positively, as an export). Again, GDP is attempting to measure production through the means of expenditure; if the chandelier produced had been bought domestically it would have been included in the GDP figures (in **C** or **I**) when purchased by a consumer or a business, but because it was exported it is necessary to 'correct' the amount consumed domestically to give the amount produced domestically. (As in Gross Domestic **Product**.)

Types of GDP and GDP growth

1. **Current GDP** is GDP expressed in the current prices of the period being measured
2. **Nominal GDP growth** is GDP growth in nominal prices (unadjusted for price changes).
3. **Real GDP growth** is GDP growth adjusted for price changes.

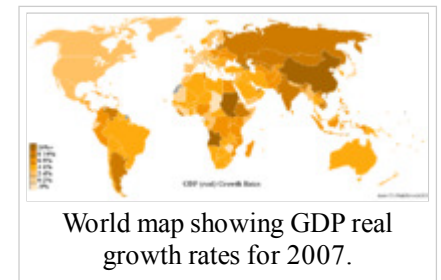
Calculating the real GDP growth allows economists to determine if production increased or decreased, regardless of changes in the purchasing power of the currency.

The GDP income account

Another way of measuring GDP is to measure the total income payable in the GDP income accounts. In this situation, Gross Domestic Income (GDI) is sometimes used rather than Gross Domestic Product. This should provide the same figure as the expenditure method described above. (By definition, $GDI = GDP$. In practice, however, measurement errors will make the two figures slightly off when reported by national statistical agencies.)

The formula for GDP measured using the income approach, called GDP(I), is:

$$GDP = \text{Compensation of employees} + \text{Gross operating surplus} + \text{Gross mixed income} + \text{Taxes less subsidies on production and imports}$$



- **Compensation of employees (COE)** measures the total remuneration to employees for work done. It includes wages and salaries, as well as employer contributions to social security and other such programs.
- **Gross operating surplus (GOS)** is the surplus due to owners of incorporated businesses. Often called profits, although only a subset of total costs are subtracted from gross output to calculate GOS.
- **Gross mixed income (GMI)** is the same measure as GOS, but for unincorporated businesses. This often includes most small businesses.

The sum of **COE**, **GOS** and **GMI** is called total factor income, and measures the value of GDP at factor (basic) prices. The difference between basic prices and final prices (those used in the expenditure calculation) is the total taxes and subsidies that the Government has levied or paid on that production. So adding taxes less subsidies on production and imports converts GDP at factor cost to GDP(I).

Another formula can be written as this:

$$\text{GDP} = \text{R} + \text{I} + \text{P} + \text{SA} + \text{W}$$

where R = rents

I = interests

P = profits

SA = statistical adjustments (corporate income taxes, dividends, undistributed corporate profits)

W = wages

Measurement

International standards

The international standard for measuring GDP is contained in the book *System of National Accounts* (1993), which was prepared by representatives of the International Monetary Fund, European Union, Organization for Economic Co-operation and Development, United Nations and World Bank. The publication is normally referred to as SNA93 to distinguish it from the previous edition published in 1968 (called SNA68).

SNA93 provides a set of rules and procedures for the measurement of national accounts. The standards are designed to be flexible, to allow for differences in local statistical needs and conditions.

National measurement

Within each country GDP is normally measured by a national government statistical agency, as private sector organizations normally do not have access to the information required (especially information on expenditure and production by governments).

Interest rates

Net interest expense is a transfer payment in all sectors except the financial sector. Net interest expenses in the financial sector is seen as production and value added and is added to GDP.

Cross-border comparison

The level of GDP in different countries may be compared by converting their value in national currency according to *either*

- **current currency exchange rate:** GDP calculated by exchange rates prevailing on international currency markets
- **purchasing power parity exchange rate:** GDP calculated by purchasing power parity (PPP) of each currency relative to a selected standard (usually the United States dollar).

The relative ranking of countries may differ dramatically between the two approaches.

- The *current exchange rate method* converts the value of goods and services using global currency exchange rates. This can offer better indications of a country's international purchasing power and relative economic strength. For instance, if 10% of GDP is being spent on buying hi-tech foreign arms, the number of weapons purchased is entirely governed by *current exchange rates*, since arms are a traded product bought on the international market (there is no meaningful 'local' price distinct from the international price for high technology goods).
- The *purchasing power parity method* accounts for the relative effective domestic purchasing power of the average producer or consumer within an economy. This can be a better indicator of the living standards of less-developed countries because it compensates for the weakness of local currencies in world markets. (For example, India ranks 13th by GDP but 4th by PPP). The PPP method of GDP conversion is most relevant to non-traded goods and services.

There is a clear pattern of the *purchasing power parity method* decreasing the disparity in GDP between high and low income (GDP) countries, as compared to the *current exchange rate method*. This finding is called the Penn effect.

For more information see Measures of national income and output.

Standard of living and GDP

GDP per capita is often used as an indicator of standard of living in an economy, the rationale being that all citizens would benefit from their country's increased economic production.

The major advantages to using GDP per capita as an indicator of standard of living are that it is measured frequently, widely and consistently; frequently in that most countries provide information on GDP on a quarterly basis (which allows a user to spot trends more quickly), widely in that some measure of GDP is available for practically every country in the world (allowing crude comparisons between the standard of living in different countries), and consistently in that the technical definitions used within GDP are relatively consistent between countries, and so there can be confidence that the same thing is being measured in each country.

The major disadvantage of using GDP as an indicator of standard of living is that it is not, strictly speaking, a measure of standard of living. GDP is intended to be a measure of particular types of economic activity within a country. Nothing about the definition of GDP suggests that it is necessarily a measure of standard of living. For instance, in an extreme example, a country which exported 100 per cent of its production and imported nothing would still have a high GDP, but a very poor standard of living.

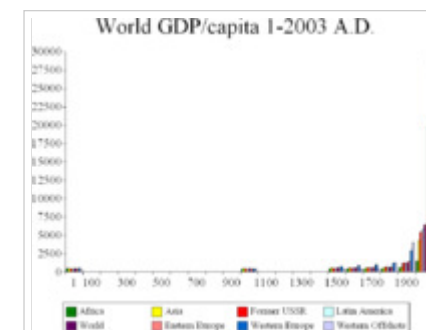
The argument in favour of using GDP is not that it is a good indicator of standard of living, but rather that (all other things being equal) standard of living tends to increase when GDP per capita increases. This makes GDP a proxy for standard of living, rather than a direct measure of it. GDP per capita can also be seen as a proxy of labor productivity. As the productivity of the workers increases, employers must compete for them by paying higher wages. Conversely, if productivity is low, then wages must be low or the businesses will not be able to make a profit.

There are a number of controversies about this use of GDP.

Limitations of GDP to judge the health of an economy

GDP is widely used by economists to gauge the health of an economy, as its variations are relatively quickly identified. However, its value as an indicator for the standard of living is considered to be limited. Criticisms of how the GDP is used include:

- **Wealth distribution** - GDP does not take disparity in incomes between the rich and poor into account. See income inequality metrics for discussion of a variety of complementary economic measures.
- **Voluntary work** - GNP ignores voluntary work, such as domestic work. Free and Open Source Software (such as Linux) contribute nothing to GDP, but it was estimated that it would have cost more than a billion US dollars for a commercial company to develop. Also, if Free and Open Source Software became identical to its proprietary software counterparts, and the nation producing the propriety software stops buying proprietary software and switches to Free and Open Source Software, then the GDP of this nation would reduce, however there would be no reduction in economic production or standard of living. The work of New Zealand economist Marilyn Waring has highlighted that if a concerted attempt to factor in unpaid work were made, then it



World GDP per capita changed very little for most of human history before the industrial revolution. (Note the empty areas mean no data, not very low levels. There are data for the years 1, 1000, 1500, 1600, 1700, 1820, 1900, and 2003.)

would in part, undo the injustices of unpaid (and in some cases, slave) labour, and also provide the political transparency and accountability necessary for democracy.

GDP also ignores subsistence production.

- **What is being produced** - GDP counts work that produces no net change or that results from repairing harm. For example, rebuilding after a natural disaster or war may produce a considerable amount of economic activity and thus boost GDP, but it would have been far better if the disaster had never occurred in the first place. The economic value of health care is another classic example — it may raise GDP if many people are sick and they are receiving expensive treatment, but it is not a desirable situation. Alternative economic measures, such as the standard of living or discretionary income per capita better measure the human utility of economic activity. See uneconomic growth.
 - **Quality of goods** - People may buy cheap, low-durability goods over and over again, or they may buy high-durability goods less often. It is possible that the monetary value of the items sold in the first case is higher than that in the second case, in which case a higher GDP is simply the result of greater inefficiency and waste. (This is not always the case; durable goods are often more difficult to produce than flimsy goods, and consumers have a financial incentive to find the cheapest long-term option. With goods that are undergoing rapid change, such as in fashion or high technology, the short lifespan may increase customer satisfaction by allowing them to have newer products.)
- **Externalities** - GDP ignores externalities such as damage to the environment. GDP even views externalities as positive if work/production is required in response to the externalities.
- **Sustainability of growth** - GDP does not measure the sustainability of growth. A country may achieve a temporarily high GDP by over-exploiting natural resources or by misallocating investment. For example, the large deposits of phosphates gave the people of Nauru one of the highest per capita incomes on earth, but since 1989 their standard of living has declined sharply as the supply has run out. Oil-rich states can sustain high GDPs without industrializing, but this high level would no longer be sustainable if the oil runs out. Economies experiencing an economic bubble, such as a housing bubble or stock bubble, or a low private-saving rate tend to appear to grow faster owing to higher consumption, mortgaging their futures for present growth. Economic growth at the expense of environmental degradation can end up costing dearly to clean up; GDP does not account for this.
- **Black market** - Official GDP estimates may not take into account the black market, where the money spent is not registered, and the non-monetary economy, where no money comes into play at all, resulting in inaccurate or abnormally low GDP figures. For example, in countries with major business transactions occurring informally, portions of local economy are not easily registered. Bartering may be more prominent than the use of money, even extending to services (I helped you build your house ten years ago, so now you help me).

- One main problem in estimating GDP growth over time is that the purchasing power of money varies in different proportion for different goods, so when the GDP figure is deflated over time, GDP growth can vary greatly depending on the basket of goods used and the relative proportions used to deflate the GDP figure. For example, in the past 80 years the GDP per capita of the United States if measured by purchasing power of potatoes, did not grow significantly. But if it is measured by the purchasing power of eggs, it grew several times.
- Very often different calculations of GDP are confused among each other. For cross-border comparisons one should especially regard whether it is calculated by purchasing power parity (PPP) method or current exchange rate method. Using the latter method to compare living standards is problematic, since it does not always reflect the real wealth of the citizens, ie. how much they are able purchase *locally* in relation to their income (see Penn effect).
- Cross-border comparisons of GDP can be inaccurate as they do not take into account local differences in the quality of goods, even when adjusted for

purchasing power parity. This type of adjustment to an exchange rate is controversial because of the difficulties of finding comparable baskets of goods to compare purchasing power across countries. For instance, people in country A may consume the same number of locally produced apples as in country B, but apples in country A are of a more tasty variety. This difference in material well being will not show up in GDP statistics. This is especially true for goods that are not traded globally, such as housing.

- Cross border trade within companies distorts the GDP and is done frequently to escape high taxation. Examples include the German Ebay that evades German tax by doing business in Switzerland, and American companies that have founded holdings in the Republic of Ireland to "buy" their own products for cheap from their continental factories (without shipping) and selling them for profit via Ireland - thereby reducing their taxes and increasing the GDP of the Republic of Ireland.
- As a measure of actual sale prices, GDP does not capture the economic surplus between the price paid and subjective value received, and can therefore underestimate aggregate utility.
- The annual growth of real GDP is adjusted by using the "GDP deflator", which tends to underestimate the objective differences in the quality of manufactured output over time. (The deflator is explicitly based on subjective experience when measuring such things as the consumer benefit received from improvements in computing power since the early 1980s). Therefore the GDP figure may underestimate the degree to which improving technology and quality-level are increasing the real standard of living.
- GDP is often incorrectly used in (often unscientific and unrealistic) comparisons where net national worth (or national wealth) would be a more correct point of reference. For example, "person X could buy country Y, because his/her wealth is more than the GDP of that country". Net national worth is often equal to several years cumulative GDP.

The limits of GDP (or GNP, a slightly different notion) can be summed up in the words of two critics. Robert Kennedy said:

The gross national product includes air pollution and advertising for cigarettes and ambulances to clear our highways of carnage. It counts special locks for our doors and jails for the people who break them. GNP includes the destruction of the redwoods and the death of Lake Superior. It grows with the production of napalm, and missiles and nuclear warheads... it does not allow for the health of our families, the quality of their education, or the joy of their play. It is indifferent to the decency of our factories and the safety of our streets alike. It does not include the beauty of our poetry or the strength of our marriages, or the intelligence of our public debate or the integrity of our public officials. It measures everything, in short, except that which makes life worthwhile.

The second critic, Simon Kuznets the inventor of the GDP, in his very first report to the US Congress in 1934 said:

...the welfare of a nation [can] scarcely be inferred from a measure of national income...

In 1962, Kuznets stated:

Distinctions must be kept in mind between quantity and quality of growth, between costs and returns, and between the short and long run. Goals for more growth should specify more growth of what and for what.

Alternatives to GDP

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :402 of 626.

- Human Development Index (HDI)

HDI uses GDP as a part of its calculation and then factors in indicators of life expectancy and education levels.

- Genuine Progress Indicator (GPI) or Index of Sustainable Economic Welfare (ISEW)

The GPI and the similar ISEW attempt to address many of the above criticisms by taking the same raw information supplied for GDP and then adjust for income distribution, add for the value of household and volunteer work, and subtract for crime and pollution.

- Wealth Estimates

The World Bank has developed a system for combining monetary wealth with intangible wealth (institutions and human capital) and environmental capital.

Some people have looked beyond standard of living at a broader sense of quality of life or well-being.

- European Quality of Life Survey

This survey, the first wave of which was published in 2005, assessed quality of life across European countries through a series of questions on overall subjective life satisfaction, satisfaction with different aspects of life, and sets of questions used to calculate deficits of time, loving, being and having.

- Gross National Happiness

The Centre for Bhutanese Studies in Bhutan is currently working on a complex set of subjective and objective indicators to measure 'national happiness' in various domains (living standards, health, education, eco-system diversity and resilience, cultural vitality and diversity, time use and balance, good governance, community vitality and psychological well-being). This set of indicators would be used to assess progress towards Gross National Happiness, which they have already identified as being the nation's priority, above GDP.

- Human height

Scientists have posted a theory that uses human height as a reflection of how well (or badly) a country is doing in terms of diet, wealth, quality of housing, pollution, disease, and stress. They believe that a higher average height indicates a higher standard of living. The evidence for this has been outlined in the Time Magazine article "A Tall Story for Our Time," October 14, 1996.

- Happy Planet Index

The Happy Planet Index (HPI) is an index of human well-being and environmental impact, introduced by the New Economics Foundation (NEF), in July 2006. It measures the environmental efficiency with which human well-being is achieved within a given country or group. Human well-being is defined in terms of subjective life satisfaction and life expectancy.

Lists of countries by their GDP

- List of countries by GDP (nominal), (per capita)
- List of countries by GDP (PPP), (per capita), (per hour)
- List of countries by GDP (real) growth rate, (per capita)
- List of countries by GDP sector composition
- List of countries by future GDP estimates (PPP), (per capita), (nominal)
- List of countries by past GDP (PPP), (nominal)

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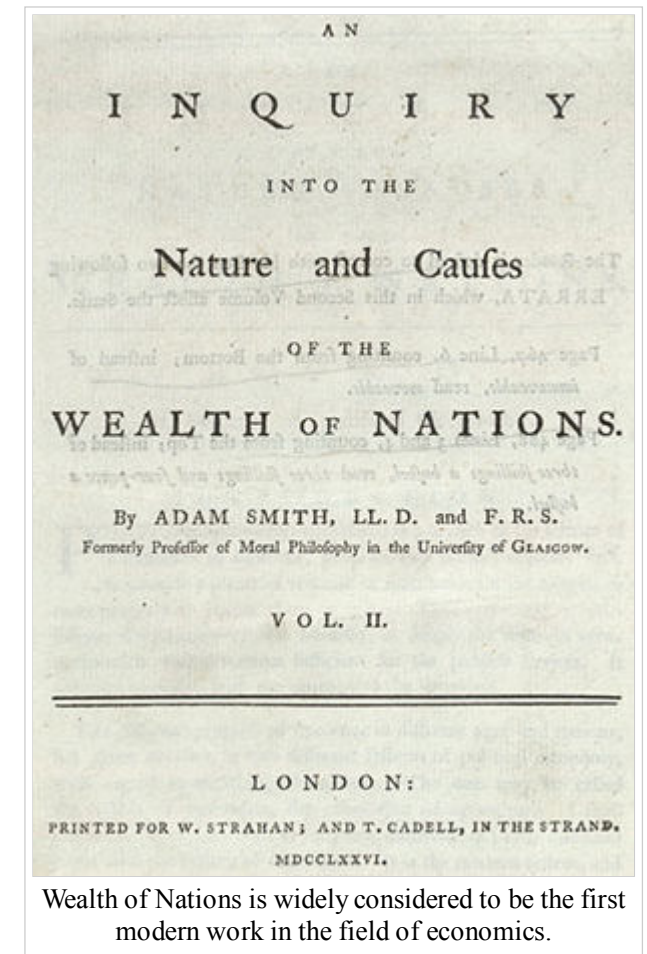
History of economic thought

2008/9 Schools Wikipedia Selection. Related subjects: Economics

The **history of economic thought** deals with different thinkers and theories in the field of political economy and economics from the ancient world right up to the present day. Although the British philosopher Adam Smith is generally considered the father of economics, his ideas built upon a considerable body of work from predecessors in the eighteenth century. They in turn were grappling with wisdom received from centuries before and attempting to apply it to a modern setting.

Economics was not considered a separate discipline until the nineteenth century. Aristotle, the ancient Greek philosopher, grappled with the "art" of wealth acquisition, and whether property is best left in private, or public, hands in his works on politics and ethics. In medieval times, scholars like Thomas Aquinas argued that it was a moral obligation of businesses to sell goods at a just price. Economic thought evolved from feudalism in the Middle Ages to mercantilist theory in the renaissance, when the prevailing wisdom advocated that trade policy be structured in order to further the national interest. The modern political economy of Adam Smith appeared during the industrial revolution, when technological advancement, global exploration, and material opulence that had previously been unimaginable was becoming a reality. Changes in economic thought have always accompanied changes in the economy, just as changes in economic thought can propel change in economic policy.

Following Adam Smith's *Wealth of Nations*, classical economists such as David Ricardo and John Stuart Mill examined the ways the landed, capitalist and labouring classes produced and distributed national riches. In the midst of the London slums, Karl Marx castigated the capitalist system of exploitation and alienation he saw around him, before neo-classical economics in a new Imperial era sought to erect a positive, mathematical and scientifically grounded field above normative politics. After the wars of the early twentieth century, John Maynard Keynes led a reaction against governmental abstention from economic affairs, advocating interventionist fiscal policy to stimulate economic demand, growth and prosperity. But with a world divided between the capitalist first world, the communist second world, and the poor of the third world, the post-war consensus broke down. Men like Milton Friedman and Friedrich von Hayek caught the imagination of western leaders, warning of *The Road to Serfdom* and socialism, focusing their theory on what could be achieved through better monetary policy and deregulation. However the reaction of governments through the 1980s has been challenged, and development economists like Amartya Sen and information economists like Joseph Stiglitz are bringing a new light to economic thought in the twenty first century.



Early economic thought

"A monk travelling back to Germany from a pilgrimage to Rome joined a band of merchants. He showed them a silver chalice he had purchased for his cathedral at home and told them what he paid for it. They laughed with astonishment and congratulated him, because he had made a killer of a bargain and they mused that an unworldly monk was able to drive an even better deal than any of them. The monk so was horrified at their reaction that he left immediately, and went back to Rome to pay more to the chalice maker for what should have been the just price."

The Parable of the Monk

politics, justice and ethics. With the collapse of the Ancient world and the end of Roman civilization, economic discussion in Europe flagged as societies were cast under the shadow of the Dark Ages. The Middle Ages were intensely religious, under a feudal order as the crusades went underway. The signs that the Dark Ages had passed were found in the increase in trade across the continent, and the development of the *lex mercatoria*. Many worried that the economic changes embodied a threat to old attachments to a moral order, which are represented by the *Parable of the Monk*. This story illustrated the tension between old attitudes and an increasingly commercial world.

Aristotle

The earliest know treatise on economic principles was the Arthashastra by Chanakya, in ancient India. In Ancient Greece, Socrates and Plato discussed the natural process of specialisation of labour and production in *The Republic*. Plato's pupil, Aristotle, deepened the discussion from the point of view of a slave owning society, but also a city-state that produced a primitive democracy. He examined household spending, market exchanges, and motivations for human action. Aristotle spoke, as was done until relatively recently, about "economic" subjects as a part of

History of science



Background

Theories/sociology
 Historiography
 Pseudoscience

By era

In early cultures
 in Classical Antiquity
 In the Middle Ages
 In the Renaissance
 Scientific Revolution

By topic

Natural sciences

Astronomy
 Biology
 Chemistry
 Ecology
 Geography
 Geology
 Paleontology
 Physics

Social sciences

Economics
 Linguistics
 Political science



Plato and his pupil, Aristotle, have had an unparalleled effect on the modern world

Aristotle was an Ancient Greek philosopher. He was educated by Plato, who in turn was taught by the philosopher and orator Socrates. Aristotle was Plato's most important critic, especially on the topic of what a perfect or ideal state might be. In *Politics* (c.a. 350 BC) Aristotle examined different examples of a state (monarchy, aristocracy, constitutional government; tyranny, oligarchy, democracy) partly as a critique of Plato's book, the *Republic*. Whereas Plato had advocated a state run by an educated class of "philosopher-kings", specially trained in management of the country and based on the common ownership of resources, Aristotle viewed this model as an oligarchical anathema. In *Politics*, Book II, Part V, he argued that,

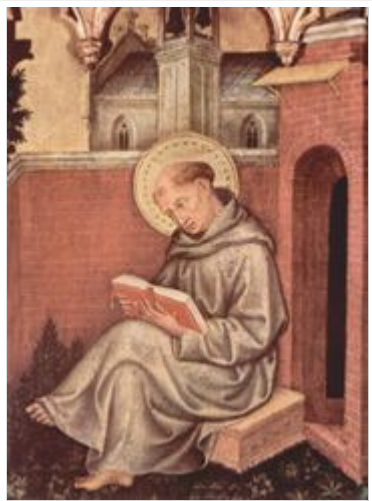
"Property should be in a certain sense common, but, as a general rule, private; for, when everyone has a distinct interest, men will not complain of one another, and they will make more progress, because every one will be attending to his own business... And further, there is the greatest pleasure in doing a kindness or service to friends or guests or companions, which can only be rendered when a man has private property. These advantages are lost by excessive unification of the state."

Though Aristotle certainly advocated there be many things held in common, he argued that not everything could be, simply because of the "wickedness of human nature". "It is clearly better that property should be private," wrote Aristotle, "but the use of it common; and the special business of the legislator is to create in men this benevolent disposition." In *Politics* Book I,

Aristotle discusses the general nature of households and market exchanges. For him there is a certain "art of acquisition" or "wealth-getting". "Of everything which we possess," writes Aristotle, foreshadowing Karl Marx's theory of use and exchange value, "there are two uses... a shoe is used to wear, and is used for exchange." Money itself has the sole purpose of being a medium of exchange, which means on its own "it is worthless... not useful as a means to any of the necessities of life". Nevertheless, points out Aristotle, because the "instrument" of money is the same many people are obsessed with the simple accumulation of money. "Wealth-getting" for one's household is "necessary and honourable", while exchange on the retail trade for simple accumulation is "justly censured, for it is dishonourable". Aristotle disapproved highly of usury and also cast scorn on making money through monopoly. In *Nicomachean Ethics* (c.a. 350 BC) Aristotle discusses further the use of money as a medium of exchange, and its reflection of the demand for goods and services.

Thomas Aquinas

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St Thomas Aquinas taught that raising prices in response to high demand was a type of theft

Thomas Aquinas (1225-1274) was an Italian theologian and one of the earliest writers on the topic of economic issues. He taught in both Cologne and Paris was part of a group of Catholic scholars known as the Schoolmen who first moved their enquiries beyond theology to philosophical and scientific debates. In his treatise *Summa Theologica* Aquinas dealt with the concept of a just price, which was one necessary for the reproduction of the social order. Bearing many similarities with the modern concept of long run equilibrium a just price was supposed to be one just sufficient to cover the costs of production, including the maintenance of a worker and his family. He argued it was immoral for sellers to raise their prices simply because buyers were in pressing need for a product.

"If someone would be greatly helped by something belonging to someone else, and the seller not similarly harmed by losing it, the seller must not sell for a higher price: because the usefulness that goes to the buyer comes not from the seller, but from the buyer's needy condition: no one ought to sell something that doesn't belong to him."

Aquinas discusses a number of topics in the format of questions and replies, substantial tracts dealing with Aristotle's theory. Questions 77 and 78 concerned economic issues, mainly relate to what a just price is, and the fairness of a seller dispensing faulty goods. Aquinas argued against any form of cheating and recommended compensation always be paid in lieu of good service. Whilst human laws might not impose sanctions for unfair dealing, divine law did.

John Duns Scotus

One of Aquinas' main critics was Duns Scotus (1265-1308) in his work *Sententiae* (1295). Originally from Duns, Scotland he taught in Oxford, Cologne and Paris. Duns Scotus thought it possible to be more precise than Thomas in calculating a just price, emphasising the costs of labour and expenses - though he recognised that the latter might be inflated by exaggeration. Because buyer and seller usually have different ideas of what a just price comprises, he thought an agreed price usually contains a 'gift' element on either side, an early forerunner to the idea of trade being a "win-win" situation. If people did not benefit from a transaction, in Scotus' view, they would not trade. Scotus defended merchants as performing a necessary and useful social role, transporting goods and making them available to the public.

Mercantilists and nationalism



A painting of a French seaport from 1638, at the height of mercantilism.

From the localism of the Middle Ages, the waning feudal lords, new national economic frameworks began to be strengthened. From 1492 and explorations like Christopher Columbus' voyages, new opportunities for trade with the New World and Asia were opening. New powerful monarchies wanted a powerful state in order to boost their status. Mercantilism was a political movement and an economic theory that advocated the use of the state's military power to ensure local markets and supply sources were protected. Tariffs could be used to encourage exports (meaning more money comes into the country) and discourage imports (sending wealth abroad). In other words a positive balance of trade ought to be maintained, with a surplus of exports. The term mercantilism was not in fact coined until the late 1763 by Victor de Riqueti, marquis de Mirabeau and popularised by Adam Smith, who vigorously opposed its ideas.

Thomas Mun

English businessman Thomas Mun (1571-1641) represents early mercantile policy in his book *England's Treasure by Foreign Trade*. Although it was not published until 1663 it was widely circulated as a manuscript before then. He was a member of the East India Company and also wrote about his experiences there in *A Discourse of Trade from England unto the East Indies* (1621). According to Mun, trade was the only way to increase England's treasure (i.e., national wealth) and in pursuit of this end he suggested several courses of action. Important were frugal consumption in order to increase the amount of goods available for export, increased utilisation of land and other domestic natural resources to reduce import requirements, lowering of export duties on goods produced domestically from foreign materials, and the export of goods with inelastic demand because more money could be made from higher prices.

Philipp von Hörnigk

Philipp von Hörnigk (1640-1712, sometimes spelt *Hornick* or *Horneck*) was born in Frankfurt am Main and became an Austrian civil servant writing in a time when his country was constantly threatened by Turkish invasion. In *Österreich Über Alles, Wenn Sie Nur Will* (1684, *Austria Over All, If She Only Will*) he laid out one of the clearest statements of mercantile policy. He listed nine principal rules of national economy.

"To inspect the country's soil with the greatest care, and not to leave the agricultural possibilities of a single corner or clod of earth unconsidered... All commodities found in a country, which cannot be used in their natural state, should be worked up within the country... Attention should be given to the population, that it may be as large as the country can support... gold and silver once in the country are under no circumstances to be taken out for any purpose... The inhabitants should make every effort to get along with their domestic products... [Foreign commodities] should be obtained not for gold or silver, but in exchange for other domestic wares... and should be imported in unfinished form, and worked up within the country... Opportunities should be sought night and day for selling the country's superfluous goods to these foreigners in manufactured form... No importation should be allowed under any circumstances of which there is a sufficient supply of suitable quality at home."

Nationalism, self-sufficiency and national power were the basic policies proposed.

Jean Baptiste Colbert

Jean Baptiste Colbert (1619-1683) was Minister of Finance under King Louis XIV of France. He set up national guilds to regulate major industries. Silk, linen, tapestry, furniture manufacture and wine were examples of the crafts in which France specialised, all of which came to require membership of a guild to operate in. These remained until the French revolution. According to Colbert, "It is simply, and solely, the abundance of money within a state [which] makes the difference in its grandeur and power."

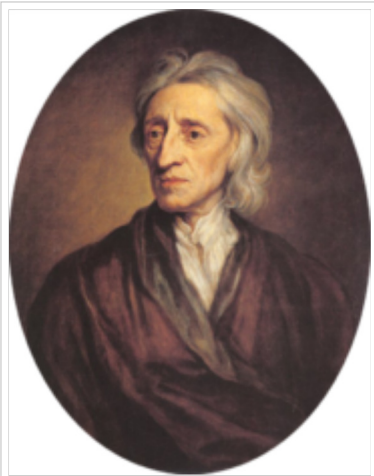
British enlightenment

Britain had gone through some of its most troubling times through the 17th century, enduring not only political and religious division in the English Civil War, King Charles I's execution and the Cromwellian dictatorship, but also the plagues and fires. The monarchy was restored under Charles II, who had catholic sympathies, but his successor King James II was swiftly ousted. Invited in his place were Protestant William of Orange and Mary, who assented to the Bill of Rights 1689 ensuring that the Parliament was dominant in what became known as the Glorious revolution. The upheaval had seen a number huge scientific advances, including Robert Boyle's discovery of the gas pressure constant (1660) and Sir Isaac Newton's publication of *Philosophiae Naturalis Principia Mathematica* (1687), which described the three laws of motion and his law of universal gravitation. All these factors spurred the advancement of economic thought. For instance, Richard Cantillon (1680-1734) consciously imitated Newton's forces of inertia and gravity in the natural world with human reason and market competition in the economic world. In his *Essay on the Nature of Commerce in General*, he argued rational self interest in a system of freely adjusting markets would lead to order and mutually compatible prices. Unlike the mercantilist thinkers however, wealth was found not in trade but in human labour. The first person to tie these ideas into a political framework was John Locke.



The title page to Philipp von Hörnigk statement of mercantilist philosophy

John Locke



John Locke combined philosophy, politics and economics into one coherent framework

John Locke (1632-1704) was born near Bristol and educated in London and Oxford. He is considered one of the most significant philosophers of his era mainly for his critique of Thomas Hobbes' defence of absolutism and the development of social contract theory in *Leviathan* (1651). Locke believed that people contracted into society which was bound to protect their rights of property. He defined property broadly to include people's lives and liberties, as well as their wealth. When people combined their labour with their surroundings, then that created property rights. In his words from his *Second Treatise on Civil Government* (1689),

"God hath given the world to men in common... Yet every man has a property in his own person. The labour of his body and the work of his hands we may say are properly his. Whatsoever, then, he removes out of the state that nature hath provided and left it in, he hath mixed his labour with, and joined to it something that is his own, and thereby makes it his property."

Locke was arguing that not only should the government cease interference with people's property (or their "lives, liberties and estates") but also that it should positively work to ensure their protection. His views on price and money were laid out in a letter to a Member of Parliament in 1691 entitled *Some Considerations on the Consequences of the Lowering of Interest and the Raising of the Value of Money* (1691). Here Locke argued that the "price of any commodity rises or falls, by the proportion of the number of buyers and sellers," a rule which "holds universally in all things that are to be bought and sold."

Dudley North

Dudley North (1641-1691) was a wealthy merchant and landowner. He worked as an official for the Treasury and was opposed to most mercantile policy. In his *Discourses upon trade* (1691), which he published anonymously, he argued that the assumption of needing a favourable trade balance was wrong. Trade, he argued, benefits both sides, it promotes specialisation, the division of labour and produces an increase in wealth for everyone. Regulation of trade interfered with these benefits by reducing the flow of wealth.

David Hume

David Hume (1711-1776) agreed with North's philosophy and denounced mercantile assumptions. His contributions were set down in *Political Discourses* (1752), later consolidated in his *Essays, Moral, Political, Literary* (1777). Added to the fact that it was undesirable to strive for a favourable balance of trade it is, said Hume, in any case impossible. Hume held that any surplus of exports that might be achieved would be paid for by imports of gold and silver. This would increase the money supply, causing prices to rise. That in turn would cause a decline in exports until the balance with imports is restored.

The circular flow



Dudley North argued that the results of Mercantile policy would be undesirable



Pierre Samuel du Pont de Nemours, a prominent Physiocrat, emigrated to the US and his son founded DuPont, the world's second biggest chemicals company. In his book *la Physiocratie* du Pont advocated low tariffs and free trade

Similarly disenchanted with regulation on trademarks inspired by mercantilism, a Frenchman name Vincent de Gournay (1712-1759) is reputed to have asked why it was so hard to *laissez faire, laissez passer* (free trade, free enterprise). He was one of the early physiocrats, a word from Greek meaning "government of nature", who held that agriculture was the source of wealth. As historian David B. Danbom wrote, the Physiocrats "damned cities for their artificiality and praised more natural styles of living. They celebrated farmers." Over the end of the seventeenth and beginning of the eighteenth century big advances in natural science and anatomy were being made, including the discovery of blood circulation through the human body. This concept was mirrored in the physiocrats' economic theory, with the notion of a circular flow of income throughout the economy.

François Quesnay

François Quesnay (1694-1774) was the court physician to King Louis XV of France. He believed that trade and industry were not sources of wealth, and instead in his book, *Tableau économique* (1758, Economic Table) argued that agricultural surpluses, by flowing through the economy in the form of rent, wages and purchases were the real economic movers. Firstly, said Quesnay, regulation impedes the flow of income throughout all social classes and therefore economic development. Secondly, taxes on the productive classes, such as farmers, should be reduced in favour of rises for unproductive classes, such as landowners, since their luxurious way of life distorts the income flow.

Jacques Turgot

Jacques Turgot (1727-1781) was born in Paris and from an old Norman family. His best known work, *Réflexions sur la formation et la distribution des richesses* (1766, *Reflections on the Formation and Distribution of Wealth*) developed Quesnay's theory that land is the only source of wealth. Turgot viewed society in terms of three classes: the productive agricultural class, the salaried artisan class (*classe stipendice*) and the landowning class (*classe disponible*). He argued that

only the net product of land should be taxed and advocated the complete freedom of commerce and industry. In August of 1774, Turgot was appointed to be Minister of Finance and in the space of two years introduced many anti-mercantile and anti-feudal measures supported by the King. A statement of his guiding principles, given to the King were "no bankruptcy, no tax increases, no borrowing." Turgot's ultimate wish was to have a single tax on land and abolish all other indirect taxes, but measures he introduced before that were met with overwhelming opposition from landed interests. Two edicts in particular, one suppressing *corvées* (charges from farmers to aristocrats) and another renouncing privileges given to guilds inflamed influential opinion. He was forced from office in 1776.

The Wealth of Nations

Adam Smith (1723-1790) is popularly seen as the father of modern political economy. His publication of the *An Inquiry Into the Nature and Causes of the Wealth of Nations* in 1776 happened to coincide not only with the American Revolution, shortly before the Europe wide upheavals of the French Revolution, but also the dawn of a new industrial revolution that allowed more wealth to be created on a larger scale than ever before. Smith was a Scottish moral philosopher, whose first break was *The Theory of Moral Sentiments* (1759). He argued in this that people's ethical systems develop through personal relations with other individuals, that right and wrong are sensed through others' reactions to one's behaviour. This gained Smith more popularity than his next famous work, *The Wealth of Nations*, which the general public ignored. Yet Smith's political economic magnum opus was successful in circles that mattered.

Context

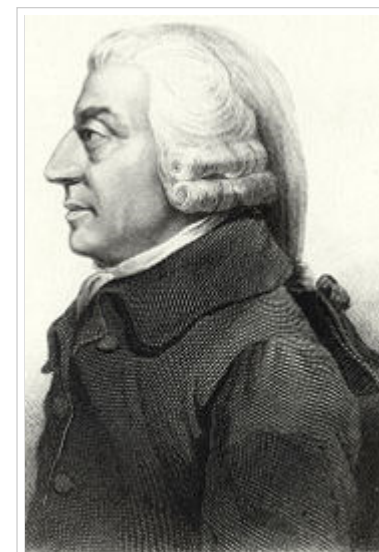


Edmund Burke was a Member of Parliament who Adam Smith agreed with

William Pitt, the Tory Prime Minister in the late 1780s based his tax proposals on Smith's ideas and advocated free trade as a devout disciple of *The Wealth of Nations*. Smith was appointed a commissioner of customs and within twenty years Smith had a following of new generation writers who were intent on building the science of political economy. Smith expressed an affinity himself to the opinions of Edmund Burke, known widely as a political philosopher, a Member of Parliament.

"Burke is the only man I ever knew who thinks on economic subjects exactly as I do without any previous communication having passed between us".

Burke was an established political economist himself, with his book *Thoughts and Details on Scarcity*. He was widely critical of liberal politics, and condemned the French Revolution which began in 1789. In *Reflections on the Revolution in France* (1790) he wrote that the "age of chivalry is dead, that of sophisters, economists and calculators has succeeded, and the glory of Europe is extinguished forever." Smith's contemporary influences included Francois Quesnay and Jacques Turgot who he met on a stay in Paris, and David Hume, his Scottish compatriot. The times produced a common need among thinkers to explain social upheavals of the Industrial revolution taking place, and in the seeming chaos without the feudal and monarchical structures of Europe, show there was order still.



The father of modern political economy

The invisible hand

Smith argued for a "system of natural liberty" where individual effort was the producer of social good. Smith believed even the selfish within society were kept under restraint and worked for the good of all when acting in a competitive market. Prices are often unrepresentative of the true value of goods and services. Following John Locke Smith thought true value of things derived from the amount of labour invested in them.

"It is not from the benevolence of the butcher, the brewer or the baker, that we expect our dinner, but from their regard to their own self interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantages."

"Every man is rich or poor according to the degree in which he can afford to enjoy the necessaries, conveniences, and amusements of human life. But after the division of labour has once thoroughly taken place, it is but a very small part of these with which a man's own labour can supply him. The far greater part of them he must derive from the labour of other people, and he must be rich or poor according to the quantity of that labour which he can command, or which he can afford to purchase. The value of any commodity, therefore, to the person who possesses it, and who means not to use or consume it himself, but to exchange it for other commodities, is equal to the quantity of labour which it enables him to purchase or command. Labour, therefore, is the real measure of the exchangeable value of all commodities. The real price of every thing, what every thing really costs to the man who wants to acquire it, is the toil and trouble of acquiring it."

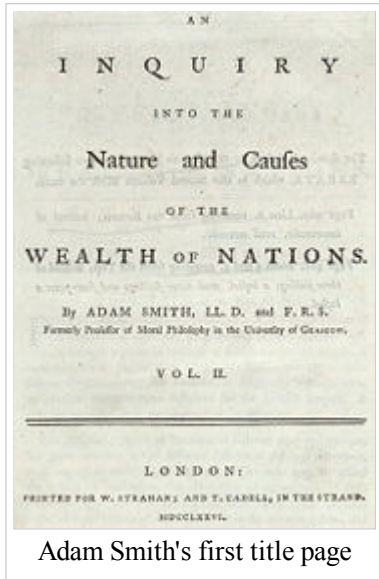
Adam Smith's famous statement on self interest

When the butchers, the brewers and the bakers acted under the restraint of an open market economy, their pursuit of self interest, thought Smith, paradoxically drives the process to correct real life prices to their just values. His classic statement on competition goes as follows.

"When the quantity of any commodity which is brought to market falls short of the effectual demand, all those who are willing to pay... cannot be supplied with the quantity which they want... Some of them will be willing to give more. A competition will begin among them, and the market price will rise... When the quantity brought to market exceeds the effectual demand, it cannot be all sold to those who are willing to pay the whole value of the rent, wages and profit, which must be paid in order to bring it thither... The market price will sink..."

Smith believed that a market produced what he dubbed the "progress of opulence". This involved a chain of concepts, that the division of labour is the driver of economic efficiency, yet it is limited to the widening process of markets. Both labour division and market widening requires more intensive accumulation of capital by the entrepreneurs and leaders of business and industry. The whole system is underpinned by maintaining the security of property rights.

Limitations



Adam Smith's first title page

Smith's vision of a free market economy, based on secure property, capital accumulation, widening markets and a division of labour contrasted with the mercantilist tendency to attempt to "regulate all evil human actions." Smith believed there were precisely three legitimate functions of government. The first function was...

"...erecting and maintaining certain public works and certain public institutions, which it can never be for the interest of any individual or small number of individuals, to erect and maintain... Every system which endeavours... to draw towards a particular species of industry a greater share of the capital of the society than what would naturally go to it... retards, instead of accelerating, the progress of the society toward real wealth and greatness."

In addition to the necessity of public leadership in certain sectors Smith argued, secondly, that cartels were bad because of their potential to limit production and quality of goods and services. Thirdly, Smith criticised government support of any kind of monopoly which always charges the highest price "which can be squeezed out of the buyers" However, in both cases, Smith believed it was governments' encouragement of monopolies that needed to end, rather than the need for active intervention to prevent them. The existence of monopoly and the potential for cartels, which would later form the core of competition law policy, could distort the benefits of free markets to the advantage of businesses at the expense of consumer sovereignty.

Classical political economy

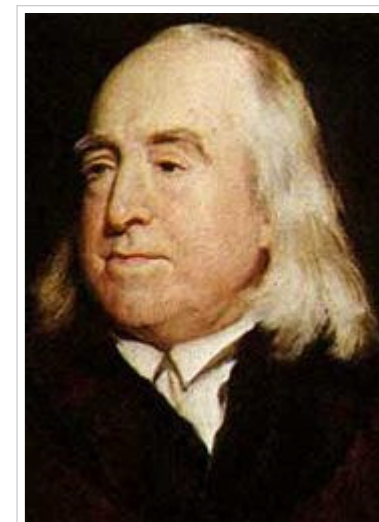
The classical economists were referred to as a group for the first time by Karl Marx. One unifying part of their theories was the labour theory of value, contrasting to value deriving from a general equilibrium of supply and demand.

Jeremy Bentham

Jeremy Bentham (1748-1832) was perhaps the most radical thinker of his time, and developed the concept of utilitarianism. Bentham was an atheist, a prison reformer, animal rights activist, believer in universal suffrage, free speech, free trade and health insurance at a time when few dared to argue for any. He was schooled rigorously from an early age, finishing university and being called to the bar at 18. His first book, *Fragment of Government* (1776) published anonymously was a trenchant critique of William Blackstone's *Commentaries of the laws of England*. This gained wide success until it was found that the young Bentham, and not a revered Professor had penned it. In *The Principles of Morals and Legislation* (1791) Bentham set out his theory of utility.

"Nature has placed mankind under the governance of two sovereign masters, pain and pleasure... On the one hand the standard of right and wrong, on the other the chain of causes and effects, are fastened to their throne... In words a man may pretend to abjure their empire: but in reality he will remain subject to it all the while. The principle of utility recognizes this subjection, and assumes it for the foundation of that system, the object of which is to rear the fabric of felicity by the hands of reason and of law."

The aim of legal policy must be to decrease misery and suffering so far as possible while producing the greatest happiness for the greatest number. Bentham even designed a comprehensive methodology for the calculation of aggregate happiness in society that a particular law produced, a felicific calculus. Society, argued Bentham, is nothing more than the total of individuals, so that if one aims to produce net social good then one need only to ensure that more pleasure is experienced across the board than pain, regardless of numbers. For example, a law is proposed to make every bus in the city wheel chair accessible, but slower moving as a result than its predecessors because of the new design. Millions of bus users will therefore experience a small amount of displeasure (or "pain") in increased traffic and journey times, but a minority of people using wheel chairs will experience a huge amount of pleasure at being able to catch public transport, which outweighs the aggregate displeasure of other users. Interpersonal comparisons of utility were allowed by Bentham, the idea that one person's vast pleasure can count more than many others' pain. Much criticism later showed how this could be twisted, for instance, would the felicific calculus allow a vastly happy dictator to outweigh the dredging misery of his exploited populace? Despite Bentham's methodology there were severe obstacles in measuring people's happiness.



Jeremy Bentham believed in the greatest good for the greatest number

Jean-Baptiste Say



Say's law, that supply always equalled demand was gospel until the 20th century

Jean-Baptiste Say (1767-1832) was a Frenchman, born in Lyon who helped to popularise Adam Smith's work in France. His book, *A Treatise on Political Economy* (1803) contained a brief passage, which later became orthodoxy in political economics until the Great Depression and known as Say's Law of markets. Say argued that there could never be a general deficiency of demand or a general glut of commodities in the whole economy. People produces things, said Say, to fulfill their own wants, rather than those of others. Production is therefore not a question of supply, but an indication of producers demanding goods. Production *is* demand, so it is impossible for production to outrun demand, or for there to be a "general glut" of supply. At most, there will be different economic sectors whose demands are not fulfilled. But over time supplies will shift, businesses will retool for different production and the market will correct itself. An example of a "general glut" could be unemployment, in other words, too great a supply of workers, and too few jobs. Say's Law advocates would suggest that this necessarily means there is an excess demand for other products that will correct itself. This remained a foundation of economic theory until the 1930s. Say's Law was first put forward by James Mill (1773-1836) in English, and was advocated by David Ricardo, Henry Thornton and John Stuart Mill. However one political economist, Thomas Malthus, was unconvinced.

Thomas Malthus

Thomas Malthus (1766-1834) was a Tory minister in the United Kingdom Parliament who, contrasting to Bentham, believed in strict government abstention from social ills. Malthus devoted the last chapter of his book *Principles of Political Economy* (1820) to rebutting Say's law, and argued that the economy could stagnate with a lack of "effectual demand". In other words, wages if less than the total costs of production cannot purchase the total output of industry and that this would cause prices to fall. Price falls cause incentives to invest, and the spiral could continue indefinitely. Malthus is more notorious however for his earlier work, *An Essay on the Principle of Population*. This argued that intervention was impossible because of two factors. "Food is necessary to the existence of man," wrote Malthus. "The passion between the sexes is necessary and will remain nearly in its present state," he added, meaning that the "power of the population is infinitely greater than the power in the Earth to produce subsistence for man." Nevertheless growth in population is checked by "misery and vice". Any increase in wages for the masses would cause only a temporary growth in population, which given the constraints in the supply of the Earth's produce would lead to misery, vice and a corresponding readjustment to the original population. However more labour could mean more economic growth, either one of which was able to be produced by an accumulation of capital.

David Ricardo



Malthus cautioned law makers on the effects of poverty reduction policies

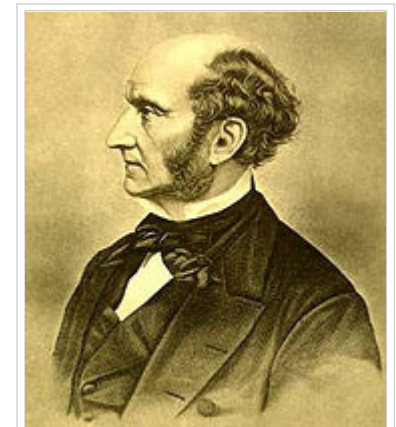


Ricardo is renowned for his law of comparative advantage

David Ricardo (1772-1823) was born in London, and by the age of 26 had become a wealthy stock market trader. He bought himself a constituency seat in Ireland to gain a platform in the House of Commons in the Parliament of the United Kingdom. Ricardo's best known work is his *Principles of Political Economy and Taxation*, which contains his critique of barriers to international trade. The Corn Laws of the UK had been passed in 1815, setting a fluctuating system of tariffs to stabilise the price of wheat in the domestic market. Ricardo argued that raising tariffs, despite being intended to benefit the incomes of farmers, would merely produce a rise in the prices of rents that went into the pockets of landowners. Furthermore, extra labour would be employed leading to an increase in the cost of wages across the board, and therefore reducing exports and profits coming from overseas business. Economics for Ricardo was all about the relationship between the three "factors of production" - land, labour and capital. Ricardo demonstrated mathematically that the gains from trade would outweigh the perceived advantages of protectionist policy. The law of comparative advantage suggests that even if one country is inferior at producing all of its goods than another, it may still benefit from opening its borders since the inflow of good produced more cheaply than at home produces a gain for domestic consumers. Say that in two days in England an average worker produces a bushel of wheat and in one day a yard of cloth, while the average French worker can do either in just a day. If England swaps the wheat it produces (one day's production) for French cloth (while English cloth takes two days) then both sides can strike a bargain between the margin that is mutually beneficial. England by selling its wheat can get its cloth in a day, rather than two days, and France can get an extra bushel of wheat for selling its more efficiently produced cloth. This would lead to a shift in prices so that eventually England would be producing goods in which its comparative advantages were the highest.

John Stuart Mill

John Stuart Mill (1806-1873) was the dominant figure of political economic thought of his time, as well as being a Member of Parliament for the seat of Westminster, and a leading political philosopher. Mill was a child prodigy, reading Ancient Greek from the age of 3, and being vigorously schooled by his father James Mill. Jeremy Bentham was a close mentor and family friend, and Mill was heavily influenced by David Ricardo. Mill's textbook, first published in 1848 and titled *Principles of Political Economy* was essentially a summary of the economic wisdom of the mid nineteenth century. It was used as the standard texts by most universities well into the beginning of the twentieth century. On the question of economic growth Mill tried to find a middle ground between Adam Smith's view of ever expanding opportunities for trade and technological innovation and Thomas Malthus' view of the inherent limits of population. In his fourth book Mill set out a number of possible future outcomes, rather than predicting one in particular. The first followed the Malthusian line that population grew quicker than supplies, leading to falling wages and rising profits. The second, per Smith, said if capital accumulated faster than population grew then real wages would rise. Third, echoing David Ricardo, should capital accumulate and population increase at the same rate, yet technology stay stable, there would be no change in real wages because supply and demand for labour would be the same. However growing populations would require more land use, increasing food production costs and therefore decreasing profits. The fourth alternative was that technology advanced faster than population and capital stock increased. The result would be a prospering economy. Mill felt the third scenario most likely, and he assumed technology advanced would have to end at some point. But on the prospect of continuing economic growth, Mill was more ambivalent.

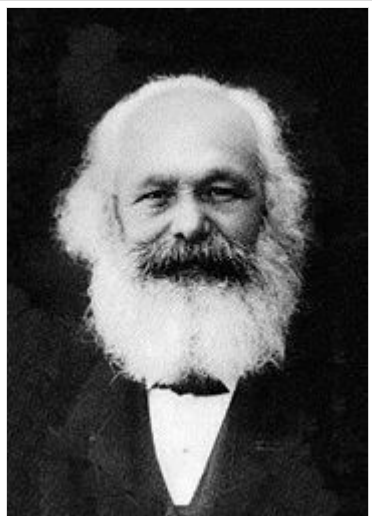


Mill, brought up on the philosophy of Jeremy Bentham, wrote the most authoritative economics text of the time

"I confess I am not charmed with the ideal of life held out by those who think that the normal state of human beings is that of struggling to get on; that the trampling, crushing, elbowing, and treading on each other's heels, which form the existing type of social life, are the most desirable lot of human kind, or anything but the disagreeable symptoms of one of the phases of industrial progress.

Mill is also credited with being the first person to speak of supply and demand as a relationship rather than mere quantities of goods on markets, the concept of opportunity cost and the rejection of the wage fund doctrine.

Capitalism



Karl Marx provided a fundamental critique of classical economics, based on the labour theory of value

Just as the term "mercantilism" had been coined and popularised by its critics, like Adam Smith, so was the term "capitalism" or *Kapitalismus* used by its dissidents, primarily Karl Marx. Karl Marx (1818-1883) was, and in many ways still remains the pre-eminent socialist economist. His combination of political theory represented in the *Communist Manifesto* and the dialectic theory of history inspired by Friedrich Hegel provided a revolutionary critique of capitalism as he saw it in the nineteenth century. The socialist movement that he joined had emerged in response to the conditions of people in the new industrial era and the classical economics which accompanied it. A political exile from his native Germany, Marx himself had lived until 1855 in the inner-London slum of Soho, before his wife Jenny inherited money enough to move to the north London suburb of Kentish Town, then still in development. He wrote his magnum opus *Das Kapital* at the British Museum's library.

Context

Movement for reform of the conditions in which working class people lived was present long before either Marx or the notion of capitalism. Saint Thomas More as early as 1516 had used his satire name *Utopia* to criticise the displacement of the peasantry for sheep rearing of the landed gentry. Charles Dickens in the early nineteenth century was becoming popular for books where he had observed and shamed the nineteenth century business ethic in *Hard Times*, the levels of poverty and crime in *Oliver Twist* and the institutions of justice in *Bleak House*. Robert Owen (1771-1858) was one industrialist who determined to improve the conditions of his workers. He bought textile mills in New Lanark, Scotland where he forbade children under ten to work, set the workday from 6am to 7pm and provided evening schools for children when they finished. Such meagre measures were still substantial improvements and his business remained solvent through higher productivity, though his pay rates were lower than the national average. He published his vision in *The New View of Society* (1816) during the passage of the Factory Acts, but his attempt from 1824 to begin a new utopian community in New Haven, Indiana ended in failure. One of Marx's own influences was the French philosopher Pierre Proudhon, who concluded in his book *What is Property?* (1840) that property is theft. Compared to the classical Mill, who had written that "partial taxation is a mild form of robbery", this strain of thought represented important and radical criticism. Marx had been a friend of Proudhon. But when Proudhon made a political economic attack on the classical "iron law of wages", among other things, in his book *The Philosophy of Poverty* (1846) Marx replied with a cynically titled article, *The Poverty of Philosophy*. Legend has it that they never spoke again. That same year the Revolutions of 1848 took place and Marx, along with Friedrich Engels published the *Communist Manifesto*, calling for the workers of the world to unite and fear the loss of nothing but their chains. Engels himself was a published radical author. He released a book titled *The Condition of the Working Class in England in 1844* describing people's positions as "the most unconcealed pinnacle of social misery in our day." Engels himself was heir to a Manchester factory, and though he detested the business, used his profits to help finance Marx's work. After Marx died, it was Engels that completed the second volume of *Das Kapital* from Marx's notes.



With Marx, Friedrich Engels coauthored the Communist Manifesto, and the second volume of *Das Kapital*

Das Kapital



The title page of the first edition of *Capital* in German

Karl Marx begins *Das Kapital* with the concept of commodities. Before capitalist societies, says Marx, the mode of production was based on slavery (e.g. in ancient Rome) before moving to feudal serfdom (e.g. in mediaeval Europe). As society has advanced, economic bondage has become looser, but the current nexus of labour exchange has produced an equally erratic and unstable situation allowing the conditions for revolution. People buy and sell their labour in the same way as people buy and sell goods and services. People themselves are disposable commodities. As he wrote in the *Communist Manifesto*,

"The history of all hitherto existing society is the history of class struggles. Freeman and slave, patrician and plebeian, lord and serf, guildmaster and journeyman, in a word, oppressor and oppressed, stood in constant opposition to one another... The modern bourgeois society that has sprouted from the ruins of feudal society has not done away with class antagonisms. It has but established new classes, new conditions of oppression, new forms of struggle in place of the old ones."

And furthermore from the first page of *Das Kapital*,

"The wealth of those societies in which the capitalist mode of production prevails, presents itself as "an immense accumulation of commodities," its unit being a single commodity. Our investigation must therefore begin with the analysis of a commodity.

Marx's use of the word "commodity" is tied into an extensive metaphysical discussion of the nature of material wealth, how the objects of wealth are perceived and how they can be used. The concept of a commodity contrasts to objects of the natural world. When people mix their labour with an object it becomes a "commodity". In the natural world there are trees, diamonds, iron ore and people. In the economic world they become chairs, rings, factories and workers. However, says Marx, commodities have a dual nature, a dual value. He distinguishes the use value of a thing from its exchange value, which can be entirely different. The use value of a thing derives from the amount of labour used to produce it, says Marx, following the classical economists in the labour theory of value. However, Marx did not believe labour only was the source of use value in things. He believed value can derive too from natural goods and refined his definition of use value to "socially necessary labour time" (the time people need to produce things when they are not lazy or inefficient). Furthermore, people subjectively inflate the value of things, for instance because there's a commodity fetish for glimmering diamonds, and oppressive power relations involved in commodity production. These two factors mean exchange values differ greatly. An oppressive power relation, says Marx applying the use/exchange distinction to labour itself, in work-wage bargains derives from the fact that employers pay their workers less in "exchange value" than the workers produce in "use value". The difference makes up the capitalist's profit, or in Marx's terminology, "surplus value". Therefore, says Marx, capitalism is a system of exploitation.

Marx's work turned the labour theory of value, as the classicists used it, on its head. His dark irony goes deeper by asking what is the socially necessary labour time for the production of labour (i.e. working people) itself. Marx answers that this is the bare minimum for people to subsist and to reproduce with skills necessary in the economy. People are therefore alienated from both the fruits of production and the means to realise their potential, psychologically, by their oppressed position in the labour market. But the tale told alongside exploitation and alienation is one of capital accumulation and economic growth. Employers are constantly under pressure from market competition to drive their workers harder, and at the limits invest in labour displacing technology (e.g. an assembly line packer for a robot). This raises profits and expands growth, but for the sole benefit of those who have private property in these means of production. The working classes meanwhile face progressive immiseration, having had the product of their labour exploited from them, having been alienated from the tools of production. And having been fired from their jobs for machines, they end unemployed. Marx believed that a reserve army of the unemployed would grow and grow, fuelling a downward pressure on wages as desperate people accept work for less. But this would produce a deficit of demand as the people's power to purchase products lagged. There would be a glut in unsold products, production would be cut back, profits decline until capital accumulation halts in an economic depression. When the glut clears, the economy again starts to boom before the next cyclical bust begins. With every boom and bust, with every capitalist crisis, thought Marx, tension and conflict between the increasingly polarised classes of capitalists and workers heightens. Moreover smaller firms are being gobbled by larger ones in every business cycle, as power is concentrated in the hands of the few and away from the many. Ultimately, led by the Communist party, Marx envisaged a revolution and the creation of a classless society. How this may work, Marx never suggested. His primary contribution was not in a blue print for how society would be, but a criticism of what he saw it was.



Marx explained the booms and busts, like the Panic of 1873, as part of an inherent instability in capitalist economies

After Marx



Beatrice Webb helped establish the London School of Economics

The first volume of *Das Kapital* was the only one Marx alone published. The second and third volumes were done with the help of Friedrich Engels and Karl Kautsky, who had become a friend of Engels, saw through the publication of volume four. When the World War I and then the Russian Revolution broke out, Kautsky opposed the course of both. He was a member of the Sozialdemokratische Partei Deutschlands and condemned Vladimir Lenin's vision for the Soviet Union. As he wrote in 1934 in *Marxism and Bolshevism: Democracy and Dictatorship*,

"The Bolsheviks under Lenin's leadership, however, succeeded in capturing control of the armed forces in Petrograd and later in Moscow and thus laid the foundation for a new dictatorship in place of the old Tsarist dictatorship."

Marx had begun a tradition of economists who concentrated equally on political affairs. Also in Germany, Rosa Luxemburg was a member of the SPD, who later turned towards the Communist Party because of their stance against the First World War. Beatrice Webb in England was a socialist, who helped found both the London School of Economics (LSE) and the Fabian Society. She was married to Sidney Webb, who worked as a minister for Ramsay Macdonald's government. Her political support in Britain was for gradual change through Parliamentary democracy, rather than a Marxian revolution. Yet unlike Kautsky she supported Soviet Russia. Two more

English theorists associated with the LSE were John A. Hobson (1858-1940) and Richard H. Tawney (1880-1963). Hobson argued for better social legislation, in terms of wider powers for trade unions, health and safety standards and a more egalitarian distribution of wealth. Tawney was primarily an economic historian, and was critical of the haphazard method of wealth allocation in the modern world. In his book *The Acquisitive Society* (1920) he wrote, "It is foolish to maintain property rights for which no service is performed... for payment without service is waste." In his later book, *Equality* (1931) he wrote "the pooling of surplus resources by means of taxation, and the use of the funds thus obtained to make accessible to all, irrespective of their income, occupation or social position, the conditions of civilization".

The new classical assumptions

In the years immediately following Karl Marx's publication of *Das Kapital*, a revolution took place in economics. Marx's development of a theory of exploitation from the labour theory of value, which had been taken as fundamental by economists since John Locke coincided with labour theory's abandonment. The new orthodoxy became the theory of marginal utility. Writing simultaneously and independently, a Frenchman, an Austrian and an Englishman were reviving the idea. Instead of the value of a good or service reflecting the labour that has produced it, it reflects the usefulness (utility) of the last purchase (before the "margin" at which people find things useful no longer). This meant that an equilibrium of people's preferences determined prices, including the price of labour, so there was no question of exploitation. In a competitive economy, said the marginalists, people get what they had paid, or worked for.

Marginal utility

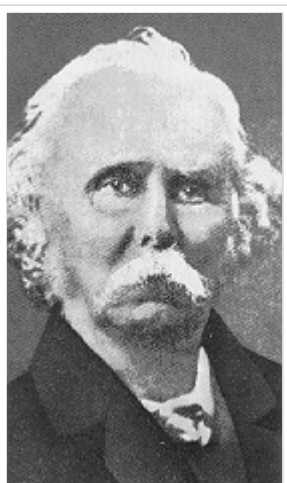
Carl Menger (1840-1921), an Austrian economist stated the basic principle of marginal utility in *Grundsätze der Volkswirtschaftslehre* (1871, *Principles of Economics*). Consumers act rationally by seeking to maximise satisfaction of all their preferences. People allocate their spending so that the last unit of a commodity bought creates no more than a last unit bought of something else. Stanley Jevons (1835-1882) was his English counterpart, and worked at University College, London. He emphasised in the *Theory of Political Economy* (1871) that at the margin, the satisfaction of goods and services decreases. An example of the theory of diminishing returns is that for every orange one eats, the less pleasure one gets from the last orange (until one stops eating). Then Leon Walras (1834-1910), again working independently, generalised marginal theory across the economy in *Elements of Pure Economics* (1874). Small changes in people's preferences, for instance shifting from beef to mushrooms, would lead to a mushroom price rise, and beef price fall. This stimulates producers to shift production, increasing mushrooming investment, which would increase market supply leading to a new lower mushroom price and a new price equilibrium between the products. For many products across the economy the same would go, *if* one assumes markets are competitive, people choose on self interest and no cost in shifting production. Early attempts to explain away the periodical crises of which Marx had spoken were not initially as successful. After finding a statistical correlation of sunspots and business fluctuations and commenting on Mill's assertion of crisis being "the destruction of belief and hope in the minds of merchants and bankers", Stanley Jevons wrote,



William Stanley Jevons helped popularise marginal utility theory

"when we know that there is a cause, the variation of the solar activity, which is just of the nature to affect the produce of agriculture, and which does vary in the same period, it becomes almost certain that the two series of phenomena— credit cycles and solar variations—are connected as effect and cause.

Mathematical analysis



Alfred Marshall wrote the main alternative textbook to John Stuart Mill of the day, *Principles of Economics* (1882)

Vilfredo Pareto (1848-1923) was an Italian economist, best known for developing the concept of the circumstance under which nobody need be made worse off, and nobody better off through wealth redistribution. When this situation exists, the economy is said to be "Pareto efficient". Pareto devised mathematical representations for this optimal resource allocation, which when represented on a graph would yield a curve. Different points along the curve represent different allocations, but each would be optimally efficient. Rather than using the persuasive language of classical economists like Mill, the Pareto efficient curve could be represented with a precise mathematical formula:

$$P(Y) = \{y' \in Y : \{y'' \in Y : y'' \succ y', y'' \neq y'\} = \emptyset\}.$$

Alfred Marshall is also credited with an attempt to put economics on a more mathematical footing. He was the first Professor of Economics at the University of Cambridge and his work, *Principles of Economics* coincided with the transition of the subject from "political economy" to his favoured term, "economics". He viewed maths as a way to simplify economic reasoning, though had reservations, revealed in a letter to his student Arthur Cecil Pigou.

"(1) Use mathematics as shorthand language, rather than as an engine of inquiry. (2) Keep to them till you have done. (3) Translate into English. (4) Then illustrate by examples that are important in real life. (5) Burn the mathematics. (6) If you can't succeed in 4, burn 3. This I do often."

Coming after the marginal revolution, Marshall concentrated on reconciling the classical labour theory of value, which had concentrated on the supply side of the market, with the new marginalist theory that concentrated on the consumer demand side.

Marshall's graphical representation is the famous supply and demand graph, the "Marshallian cross". He insisted it is the intersection of *both* supply *and* demand that produce an equilibrium of price in a competitive market. Over the long run, argued Marshall, the costs of production and the price of goods and services tend towards the lowest point consistent with continued production.

Collapse and reconstruction

Alfred Marshall was still working on his last revisions of his *Principles of Economics* at the outbreak of the First World War (1914-1918). The new twentieth century's climate of optimism was soon violently dismembered in the trenches of the Western front, as the civilised world tore itself apart. For four years the production of Britain, Germany and France was geared entirely towards the war economy's industry of death. In 1917 Russia crumbled into revolution led by Vladimir Lenin's Bolshevik party. They carried Marxist theory as their saviour, and promised a broken country "peace, bread and land" by collectivising the means of production. Also in 1917, the United States of America entered the war on the side of France and Britain, President Woodrow Wilson carrying the

slogan of "making the world safe for democracy". He devised a peace plan of Fourteen Points. In 1918 Germany launched a spring offensive which failed, and as the allies counter-attacked and more millions were slaughtered, Germany slid into revolution, its interim government suing for peace on the basis of Wilson's Fourteen Points. Europe lay in ruins, financially, physically, psychologically, and its future with the arrangements of the Versailles conference in 1919. John Maynard Keynes was the representative of Her Majesty's Treasury at the conference and the most vocal critic of its outcome.

John Maynard Keynes



John Maynard Keynes (right) with his American counterpart at the Bretton Woods conference

John Maynard Keynes (1883-1946) was born in Cambridge, educated at Eton and supervised by both A. C. Pigou and Alfred Marshall at Cambridge University. He began his career as a lecturer, before working in the British government during the Great War, and rose to be the British government's financial representative at the Versailles conference. His observations were laid out in his book *The Economic Consequences of the Peace* (1919) where he documented his outrage at the collapse of the Americans' adherence to the Fourteen Points and the mood of vindictiveness that prevailed towards Germany. Keynes quit from the conference and using extensive economic data provided by the conference records, Keynes argued that if the victors forced reparations to be paid by the defeated Axis, then a world financial crisis would ensue, leading to a second world war. Keynes finished his treatise by advocating, first, a reduction in reparation payments by Germany to a realistically manageable level, increased intra-governmental management of continental coal production and a free trade union through the League of Nations; second, an arrangement to set off debt repayments between the Allied countries; third, complete reform of international currency exchange and an international loan fund; and fourth, a reconciliation of trade relations with Russia and Eastern Europe.

The book was an enormous success, and though it was criticised for false predictions by a number of people, without the changes he advocated, Keynes' dark forecasts matched the world's experience through the Great Depression which ensued in 1929, and the descent into a new outbreak of war in 1939. World War One had been the "war to end all wars", and the absolute failure of the peace settlement generated an even greater determination to not repeat the same mistakes. With the defeat of fascism, the Bretton Woods conference was held to establish a new economic order. Keynes was again to play a leading role.

The General Theory

During the Great Depression, Keynes had published his most important work, *The General Theory of Employment, Interest, and Money* (1936). The depression had been sparked by the Wall Street Crash of 1929, leading to massive rises in unemployment in the United States, leading to debts being recalled from European borrowers, and an economic domino effect across the world. Orthodox economics called for a tightening of spending, until business confidence and profit levels could be restored. Keynes by contrast, had argued in *A Tract on Monetary Reform* (1923) that a variety of factors determined economic activity, and that it was not enough to wait for the long run market equilibrium to restore itself. As Keynes famously remarked,

"...this long run is a misleading guide to current affairs. In the long run we are all dead. Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us that when the storm is long past the ocean is flat again."

On top of the supply of money, Keynes identified the propensity to consume, inducement to invest, the marginal efficiency of capital, liquidity preference and the multiplier effect as variables which determine the level of the economy's output, employment and level of prices. Much of this esoteric terminology was invented by Keynes especially for his *General Theory*, though some simple ideas lay behind. Keynes argued that if savings were being kept away from investment through financial markets, total spending falls. Falling spending leads to reduced incomes and unemployment, which reduces savings again. This continues until the desire to save becomes equal to the desire to invest, which means a new "equilibrium" is reached and the spending decline halts. This new "equilibrium" is a depression, where people are investing less, have less to save and less to spend.

Keynes argued that employment depends on total spending, which is composed of consumer spending and business investment in the private sector. Consumers only spend "passively", or according to their income fluctuations. Businesses, on the other hand are induced to invest by the expected rate of return on new investments (the benefit) and the rate of interest paid (the cost). So, said Keynes, if business expectations remained the same, and government reduces interest rates (the costs of borrowing), investment would increase, and would have a multiplied effect on total spending. Interest rates, in turn, depend on the quantity of money and the desire to hold money in bank accounts (as opposed to investing). If not enough money is available to match how much people want to hold, interest rates rise until enough people are put off. So if the quantity of money were increased, while the desire to hold money remained stable, interest rates would fall, leading to increased investment, output and employment. For both these reasons, Keynes therefore advocated low interest rates and easy credit, to combat unemployment.

But Keynes believed in the 1930s, conditions necessitated public sector action. Deficit spending, said Keynes, would kick-start economic activity. This he had advocated in an open letter to President Franklin Delano Roosevelt in the *New York Times* (1933). The New Deal programme in the US had been well underway by the publication of the *General Theory*. It provided conceptual reinforcement for policies already pursued. Keynes also believed in a more egalitarian distribution of income, and taxation on unearned income arguing that high rates of savings (to which richer folk are prone) are not desirable in a developed economy. Keynes therefore advocated both monetary management and an active fiscal policy.

Keynesian economics



Piero Sraffa

During the Second World War, Keynes acted as advisor to HM Treasury again, negotiating major loans from the US. He helped formulate the plans for the International Monetary Fund, the World Bank and an International Trade Organisation at the Bretton Woods conference, a package designed to stabilise world economy fluctuations that had occurred in the 1920s and create a level trading field across the globe. Keynes passed away little more than a year later, but his ideas had already shaped a new global economic order, and all Western governments followed the Keynesian prescription of deficit spending to avert crises and maintain full employment. One of Keynes' pupils at Cambridge was Joan Robinson, who contributed to the notion that competition is seldom perfect in a market, an indictment of the theory of markets setting prices. In *The Production Function and the Theory of Capital* (1953) Robinson tackled what she saw to be some of the circularity in orthodox economics. Neoclassicists assert that a competitive market forces producers to minimise the costs of production. Robinson said that costs of production are merely the prices of inputs, like capital. Capital goods get their value from the final products. And if the price of the final products determines the price of capital, then it is, argued Robinson, utterly circular to say that the price of capital determines the price of the final products. Goods cannot be priced until the costs of inputs are determined. This would not matter if everything in the economy happened instantaneously, but in the real world, price setting takes time - goods are priced before they are sold. Since capital cannot be adequately valued in independently measurable units, how can one show that capital earns a return equal to the contribution to production? Piero Sraffa came to England from fascist Italy in the 1920s, and worked with Keynes in Cambridge. In 1960 he published a small book called *Production of Commodities by Means of Commodities*, which explained how technological relationships are the basis for production of goods and services. Prices

result from wage-profit tradeoffs, collective bargaining, labour and management conflict and the intervention of government planning. Like Robinson, Sraffa was showing how the major force for price setting in the economy was not necessarily market adjustments.

The American way

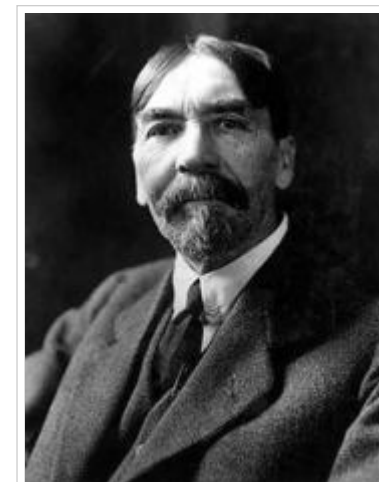
The Wall Street Crash of 1929 was the dramatic end of what had been referred to as the "roaring twenties" in America. Many people, in particular Thorstein Veblen, had warned of the tendency for wasteful consumption and the necessity of creating sound financial institutions. Veblen was a leader in a critical strand of American politics, which cautioned against the excesses of "the American way". While these authors spread over a long period, the common theme running through the work is a critique of typically American social, financial and business institutions.

Thorsten Veblen

Thorsten Veblen (1857-1929) wrote his first and most influential book while he was at the University of Chicago, on *The Theory of the Leisure Class* (1899). In it he criticised materialistic culture and wealthy people who conspicuously consumed their riches as a way of demonstrating success. Conspicuous leisure was another focus of Veblen's critique. In *The Theory of Business Enterprise* (1904) Veblen distinguished production for people to use things and production for pure profit, arguing that the former is often hindered because businesses pursue the latter. Output and technological advance are restricted by business practices and the creation of monopolies. Businesses protect their existing capital investments and employ excessive credit, leading to depressions and increasing military expenditure and war through business control of political power. These two books, focusing on criticism first of consumerism, and second of profiteering, did not advocate change.

John R. Commons

John R. Commons (1862-1945) also came from mid-Western America. Underlying his ideas, consolidated in *Institutional Economics* (1934) was the concept that the economy is a web of relationships between people with diverging interests. There are monopolies, large corporations, labour disputes and fluctuating business cycles. They do however have an interest in resolving these disputes. Government, thought Commons, ought to be the mediator between the conflicting groups. Commons himself devoted much of his time to advisory and mediation work on government boards and industrial commissions.



Thorsten Veblen came from rural Mid-western America and Norwegian immigrant family

Adolf Berle



Adolf Augustus Berle, Jr.

Adolf A. Berle (1895-1971) was one of the first authors to combine legal and economic analysis, and his work stands as a founding pillar of thought in modern corporate governance. Like Keynes, Berle was at the Paris Peace Conference, 1919, but subsequently resigned from his diplomatic job dissatisfied with the Versailles Treaty terms. In his book with Gardiner C. Means, *The Modern Corporation and Private Property* (1932), he detailed the evolution in the contemporary economy of big business, and argued that those who controlled big firms should be better held to account. Directors of companies are held to account to the shareholders of companies, or not, by the rules found in company law statutes. This might include rights to elect and fire the management, require for regular general meetings, accounting standards, and so on. In 1930s America, the typical company laws (e.g. in Delaware) did not clearly mandate such rights. Berle argued that the unaccountable directors of companies were therefore apt to funnel the fruits of enterprise profits into their own pockets, as well as manage in their own interests. The ability to do this was supported by the fact that the majority of shareholders in big public companies were single individuals, with scant means of communication, in short, divided and conquered. Berle served in President Franklin Delano Roosevelt's administration through the depression, and was a key member of the so called "Brain trust" developing many of the New Deal policies. In 1967, Berle and Means issued a revised edition of their work, in which the preface added a new dimension. It was not only the separation of controllers of companies from the owners as shareholders at stake. They posed the question of what the corporate structure was really meant to achieve.

“Stockholders toil not, neither do they spin, to earn [dividends and share price increases]. They are beneficiaries by position only. Justification for their

inheritance... can be founded only upon social grounds... that justification turns on the distribution as well as the existence of wealth. Its force exists only in direct ratio to the number of individuals who hold such wealth. Justification for the stockholder's existence thus depends on increasing distribution within the American population. Ideally the stockholder's position will be impregnable only when every American family has its fragment of that position and of the wealth by which the opportunity to develop individuality becomes fully actualized."

John Kenneth Galbraith

John Kenneth Galbraith (1908-2006) worked in the New Deal administration of Franklin Delano Roosevelt. Galbraith remained a leading critic of orthodox economics throughout the late twentieth century. In *The Affluent Society* (1958), Galbraith argues that voters reaching a certain material wealth begin to vote against the common good. He coins the term "conventional wisdom" to refer to the orthodox ideas that underpin the resulting conservative consensus. In an age of big business, it is unrealistic to think of markets of the classical kind. Big businesses set their own terms in the marketplace, and use their combined resources for advertising programmes to support demand for their own products. As a result, individual preferences actually reflect the preferences of entrenched corporations, a "dependence effect", and the economy as a whole is geared to irrational goals. In *The New Industrial State* Galbraith argues that economic decisions are planned by a private-bureaucracy, a technostructure of experts who manipulate marketing and public relations channels. This hierarchy is self serving, profits are no longer the prime motivator, and even managers are not in control. Because they are the new planners, corporations detest risk, require steady economic and stable markets. They recruit governments to serve their interests with fiscal and monetary policy, for instance adhering to monetarist policies which enrich money-lenders in the City through increases in interest rates. While the goals of an affluent society and complicit government serve the irrational technostructure, public space is simultaneously impoverished. Galbraith paints the picture of stepping from penthouse villas onto unpaved streets, from landscaped gardens to unkempt public parks. In *Economics and the Public Purpose* (1973) Galbraith advocates a "new socialism" as the solution, nationalising military production and public services such as health care, introducing disciplined salary and price controls to reduce inequality.

By the textbooks

After the second world war, and the death of John Maynard Keynes, a group of mostly American economists worked to combine Keynes' economic theory with statistic method mathematical representations. Introductory university economics courses began with the same approach that pulled the divergent strands of economic thought together and present economic theory as a unified whole. This development of a new orthodoxy is referred to as the neoclassical synthesis. "Positive economics" is the term created to describe certain trends and "laws" of economics that be objectively observed and described in a value free way, separate from "normative economic" evaluations and judgments. Policy solutions based on Keynesian theory were routinely implemented by Western governments. One example was the "discovery" by A. W. Phillips of a correlative relationship between inflation and unemployment. The workable policy conclusion that securing full employment could be traded-off against higher inflation. In 1969 the Swedish Central Bank began awarding a prize in economics, as an analogy to the Nobel prizes awarded in Chemistry, Physics, Medicine as well as Literature and Peace (despite Alfred Nobel never having endorsed this in his will). The prize's institution coincided with Richard Nixon's declaration in 1971 that "we are all Keynesians now". The irony was, this was the beginning of a new revolution in economic thought.

Paul Samuelson

<http://cd3wd.com/wikipedia-for-schools> <http://gutenberg.org> page :430 of 626.

In the aftermath of the Great Depression leading up to the second world war, Paul Samuelson wrote his Ph.D. in an attempt to show on how mathematical methods could represent a core of testable economic theory. It was published as *Foundations of Economic Analysis* in 1947. Samuelson started with two assumptions. First, people and firms will act to maximise their self interested goals. Second, markets tend towards an equilibrium of prices, where demand matches supply. He extended the mathematics to describe equilibrating behaviour of economic systems, including that of the then new macroeconomic theory of John Maynard Keynes. Whilst Richard Cantillon had imitated Isaac Newton's mechanical physics of inertia and gravity in competition and the market, the physiocrats had copied the body's blood system into circular flow of income models, William Jevons had found growth cycles to match the periodicity of sunspots, Samuelson adapted thermodynamics formulae to economic theory. Samuelson incorporated the idea of the Phillips curve into his work. His introductory textbook *Economics* was influential and widely adopted. Paul Samuelson was awarded the new Bank of Sweden Prize in 1970.



Paul Samuelson won the Bank of Sweden Prize for Economics in 1970 for his merging of maths and political economy

Kenneth Arrow



Kenneth Arrow used linear equations to show social consensus was impossible

Kenneth Arrow (b. 1921), Paul Samuelson's brother-in-law, was the youngest ever recipient of the Nobel Prize in 1972 with John Hicks. Arrow's first major work, forming his doctoral dissertation at Columbia University was *Social Choice and Individual Values* (1951), which brought economics into contact with political theory. His argument was that individuals can never reach social consensus, when deciding by preferences and presented with over three options. To prove this Arrow sets out five criteria, which he argues are reasonable, that must be fulfilled for lasting social consensus. First, consensus should account for everyone's preferences and not favour one person or group ("non-dictatorship"). Second, consensus must take account of everyone's preferences in unrestricted domain ("universality"). Third, consensus must be based on preferences unaltered by the addition of new options, so that if people choose A over B, if an option C were added, this would not lead people to express greater preference for B over A ("independence of irrelevant alternatives"). Fourth, social preference should have a positive relation with individual preferences, so that if individuals changed preference from A to B, social preference would reflect that and not show any opposite change from B to A ("monotonicity"). And last, any consensus through any combination of individual preferences should be allowed ("citizen sovereignty"). Arrow's impossibility theorem is that if one accepts these five working assumptions (especially the third one), as Arrow argues we should, then any more than three options given to two people or more with different preferences will make agreement

impossible. In 1971 Arrow with Frank Hahn co-authored *General Competitive Analysis* (1971), which reasserted a theory of general equilibrium of prices through the economy.

Chicago's conservationists

The interventionist monetary and fiscal policies that the orthodox post-war economics recommended came under attack in particular by a group of theorists working at the University of Chicago, which came to be known as the Chicago School. This more conservative strand of thought reasserted a "libertarian" view

of market activity, that people are best left to themselves, free to choose how to conduct their own affairs. More academics who have worked at the University of Chicago have been awarded the Bank of Sweden's prize in economics than those from any other university.

Friedrich von Hayek

Friedrich von Hayek (1899-1992) was born in an aristocratic Viennese background and an early follower of Carl Menger. He was awarded the Nobel Prize in 1974. Though a faculty member at the University of Chicago, his faculty position was unpaid and he is usually categorized not as a member of the Chicago School, but rather the Austrian School of economics that included Menger, Ludwig von Mises, and Murray Rothbard.

Ronald Coase

Ronald Coase (b. 1910) is the most prominent economic analyst of law and the 1991 Nobel Prize winner. His first major article, *The Nature of the Firm* (1937), argued that the reason for the existence of firms (companies, partnerships, etc.) is the existence of transaction costs. Rational individuals trade through bilateral contracts on open markets until the costs of transactions mean that using corporations to produce things is more cost-effective. His second major article, *The Problem of Social Cost* (1960), argued that if we lived in a world without transaction costs, people would bargain with one another to create the same allocation of resources, regardless of the way a court might rule in property disputes. Coase used the example of an old legal case about nuisance named *Sturges v. Bridgman*, where a noisy sweetmaker and a quiet doctor were neighbours and went to court to see who should have to move. Coase said that regardless of whether the judge ruled that the sweetmaker had to stop using his machinery, or that the doctor had to put up with it, they could strike a mutually beneficial bargain about who moves house that reaches the same outcome of resource distribution. Only the existence of transaction costs may prevent this. So the law ought to pre-empt what *would* happen, and be guided by the most efficient solution. The idea is that law and regulation are not as important or effective at helping people as lawyers and government planners believe. Coase and others like him wanted a change of approach, to put the burden of proof for positive effects on a government that was intervening in the market, by analysing the costs of action.



Friedrich von Hayek

Milton Friedman

Milton Friedman (1912-2006) stands as one of the most influential economists of the late twentieth century. He won the Nobel Prize in Economics in 1976, among other things, for *A Monetary History of the United States* (1963). Friedman argued that the Great Depression had been caused by the Federal Reserve's policies through the 1920s, and worsened in the 1930s. Friedman argues laissez-faire government policy is more desirable than government intervention in the economy. Governments should aim for a neutral monetary policy oriented toward long-run economic growth, by gradual expansion of the money supply. He advocates the quantity theory of money, that general prices are determined by money. Therefore active monetary (e.g. easy credit) or fiscal (e.g. tax and spend) policy can have unintended negative effects. In *Capitalism and Freedom* (1967) Friedman wrote,

"There is likely to be a lag between the need for action and government recognition of the need; a further lag between recognition of the need for action and the taking of action; and a still further lag between the action and its effects.

The slogan that "money matters" has come to be associated with Friedman, but Friedman has also levelled harsh criticism of his ideological opponents. Referring to Thorsten Veblen's assertion that economics unrealistically models people as "lightning calculator[s] of pleasure and pain", Friedman wrote,

"criticism of this type is largely beside the point unless supplemented by evidence that a hypothesis differing in one or another of these respects from the theory being criticized yields better predictions for as wide a range of phenomena."

Gary Becker

Gary Becker (b. 1930) is a Nobel prize winner from 1992 and is known in his work for applying economic methods of thinking to other fields, such as crime, sexual relationships and drugs, assuming that people act rationally. His work was originally focused in labour economics.

Global times

Amartya Sen

Amartya Sen (b. 1933) is a leading development economist and has expressed considerable scepticism on the validity of neo-classical assumptions.

Joseph E. Stiglitz



Milton Friedman's made his name as the archetypal enemy of big government



Gary Becker



Joseph Stiglitz

Joseph Stiglitz (b. 1943) won the Nobel Prize in 2001 for his work in information economics. He is a widely read popular and academic author, for instance for his textbook *Economics of the Public sector* (2000). He worked as the chief economist for the World Bank, and subsequently has become a chief critic of the way global economic institutions function.

"The typical advice of a visiting consultant making a hurried trip to one of the economies making a transition path is to repeatedly emphasize the importance of markets, a lesson seemingly by now well learned (though market advocates would say that it is a lesson that cannot be repeated too often, and as simple as it may seem, the full import of which seems difficult to absorb - even in economies long accustomed to markets). Indeed there seems to be a certain instant attraction between the old ideologues of the left and the ideologues of the right. Both are driven by a religious fervour, not by rational analysis."

"The fundamental problem with the neoclassical model and the corresponding model under market socialism is that they fail to take into account a variety of problems that arise from the absence of perfect information and the costs of acquiring information, as well as the absence or imperfections in certain key risk and capital markets. The absence or imperfection can, in turn, to a large extent be explained by problems of information.

Paul Krugman

Paul Krugman (b.1953) is the most widely read contemporary economist. His best selling text *International Economics* (2007) appears on most undergraduate courses.

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Inflation

2008/9 Schools Wikipedia Selection. Related subjects: Economics

Inflation is a rise in general level of prices of goods and services over time. Although "inflation" is sometimes used to refer to a rise in the prices of a specific set of goods or services, a rise in prices of one set (such as food) without a rise in others (such as wages) is not included in the original meaning of the word. Inflation can be thought of as a decrease in the value of the unit of currency. It is measured as the percentage rate of change of a price index but it is not uniquely defined because there are various price indices that can be used.

Mainstream economists believe that high rates of inflation are caused by high rates of growth of the money supply. Views on the factors that determine moderate rates of inflation are more varied: changes in inflation are sometimes attributed to fluctuations in real demand for goods and services or in available supplies (i.e. changes in scarcity), and sometimes to changes in the supply or demand for money. In the mid-twentieth century, two camps disagreed strongly on the main causes of inflation at moderate rates: the "monetarists" argued that money supply dominated all other factors in determining inflation, while "Keynesians" argued that real demand was often more important than changes in the money supply.

There are many measures of inflation. For example, different price indices can be used to measure changes in prices that affect different people. Two widely known indices for which inflation rates are reported in many countries are the Consumer Price Index (CPI), which measures consumer prices, and the GDP deflator, which measures price variations associated with domestic production of goods and services.

Related definitions

Related economic concepts include: **deflation**, a general falling in price level; **disinflation**, a decrease in the rate of inflation; **hyperinflation**, an out-of-control inflationary spiral; **stagflation**, a combination of inflation and slow economic growth and rising unemployment; and **reflation**, which is an attempt to raise prices to counteract deflationary pressures.

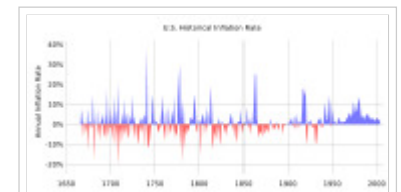
In classical political economy, **inflation** meant increasing the money supply, while **deflation** meant decreasing it (see *Monetary inflation*). Economists from some schools of economic thought (including some Austrian economists) still retain this usage. In contemporary economic terminology, these would usually be referred to as expansionary and contractionary monetary policies.

Measures of inflation

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Inflation rates around the world in 2007.



Annual inflation rates in the U.S., 1666-2004.

Inflation is measured by calculating the percentage rate of change of a price index, which is called the inflation rate. This rate can be calculated for many different price indices, including:

- **Consumer price indices** (CPIs) which measure the price of a selection of goods purchased by a "typical consumer." In the UK, an alternative index called the Retail Price Index (RPI) uses a slightly different market basket.
- **Cost-of-living indices** (COLI) are indices similar to the CPI which are often used to adjust fixed incomes and contractual incomes to maintain the real value of those incomes.
- **Producer price indices** (PPIs) which measure the prices received by producers. This differs from the CPI in that price subsidization, profits, and taxes may cause the amount received by the producer to differ from what the consumer paid. There is also typically a delay between an increase in the PPI and any resulting increase in the CPI. Producer price inflation measures the pressure being put on producers by the costs of their raw materials. This could be "passed on" as consumer inflation, or it could be absorbed by profits, or offset by increasing productivity. In India and the United States, an earlier version of the PPI was called the **Wholesale Price Index**.
- **Commodity price indices**, which measure the price of a selection of commodities. In the present commodity price indices are weighted by the relative importance of the components to the "all in" cost of an employee.
- The **GDP Deflator** is a measure of the price of all the goods and services included in Gross Domestic Product (GDP). The US Commerce Department publishes a deflator series for US GDP, defined as its nominal GDP measure divided by its real GDP measure.
- **Capital goods price Index**, although so far no attempt at building such an index has been made, several economists have recently pointed out the necessity of measuring capital goods inflation (inflation in the price of stocks, real estate, and other assets) separately. Indeed a given increase in the supply of money can lead to a rise in inflation (consumption goods inflation) and or to a rise in capital goods price inflation. The growth in money supply has remained fairly constant through since the 1970's however consumption goods price inflation has been reduced because most of the inflation has happened in the capital goods prices.

Other types of inflation measures include:

- **Regional Inflation** The Bureau of Labor Statistics breaks down CPI-U calculations down to different regions of the US.
- **Historical Inflation** Before collecting consistent econometric data became standard for governments, and for the purpose of comparing absolute, rather than relative standards of living, various economists have calculated imputed inflation figures. Most inflation data before the early 20th century is imputed based on the known costs of goods, rather than compiled at the time. It is also used to adjust for the differences in real standard of living for the presence of technology. This is equivalent to not adjusting the composition of baskets over time.

Issues in measuring inflation

Measuring inflation requires finding objective ways of separating out changes in nominal prices from other influences related to real activity. In the simplest possible case, if the price of a 10 oz. can of corn changes from \$0.90 to \$1.00 over the course of a year, with no change in quality, then this price change represents inflation. But we are usually more interested in knowing how the overall cost of living changes, and therefore instead of looking at the change in price of one good, we want to know how the price of a large 'basket' of goods and services changes. This is the purpose of looking at a price index, which is a weighted average of many prices. The weights in the Consumer Price Index, for example, represent the fraction of spending that typical consumers spend on

each type of goods (using data collected by surveying households).

Inflation measures are often modified over time, either for the relative weight of goods in the basket, or in the way in which goods from the present are compared with goods from the past. This includes hedonic adjustments and “reweighing” as well as using chained measures of inflation. As with many economic numbers, inflation numbers are often seasonally adjusted in order to differentiate expected cyclical cost increases, versus changes in the economy. Inflation numbers are averaged or otherwise subjected to statistical techniques in order to remove statistical noise and volatility of individual prices. Finally, when looking at inflation, economic institutions sometimes only look at subsets or *special indices*. One common set is inflation excluding food and energy, which is often called “core inflation”.

Effects of inflation

A small amount of inflation can be viewed as having a beneficial effect on the economy. One reason for this is that it can be difficult to renegotiate prices and wages. With generally increasing prices it is easier for relative prices to adjust.

Many prices are "sticky downward" and tend to creep upward, so that efforts to attain a zero inflation rate (a constant price level) punish other sectors with falling prices, profits, and employment. Efforts to attain complete price stability can also lead to deflation, which is generally viewed as a negative by Keynesians because of the downward adjustments in wages and output that are associated with it.

With inflation, the price of any given good is likely to increase over time, therefore both consumers and businesses may choose to make purchases sooner rather than later. This effect tends to keep an economy active in the short term by encouraging spending and borrowing, and in the long term by encouraging investments. But inflation can also reduce incentives to save, so the effect on gross capital formation in the long run is ambiguous.

Inflation is also viewed as a hidden risk pressure that provides an incentive for those with savings to invest them, rather than have the purchasing power of those savings erode through inflation. In investing, inflation risks often cause investors to take on more systematic risk, in order to gain returns that will stay ahead of expected inflation.

Inflation also gives central banks room to maneuver, since their primary tool for controlling the money supply and velocity of money is by setting the lowest interest rate in an economy - the discount rate at which banks can borrow from the central bank. Since borrowing at negative interest is generally ineffective, a positive inflation rate gives central bankers "ammunition", as it is sometimes called, to stimulate the economy. As central banks are controlled by governments, there is also often political pressure to increase the money supply to pay government services, this has the added effect of creating inflation and decreasing the net money owed by the government in previously negotiated contractual agreements and in debt.

For these reasons, many economists see moderate inflation as a benefit; some business executives see mild inflation as "greasing the wheels of commerce." But other economists have advocated reducing inflation to zero as a monetary policy goal - particularly in the late 1990s at the end of a long disinflationary period, when the policy seemed within reach; and some have even advocated deflation instead of inflation.

In general, high or unpredictable inflation rates are regarded as bad:

- *Uncertainty* about future inflation may discourage investment and saving.
- *Redistribution*
 - *Rent Seeking* - happens when resources are used to merely transfer wealth rather than produce it. e.g. a company tries to gauge and combat the costs of inflation.
 - inflation redistributes income from those on fixed incomes, such as pensioners, and shifts it to those who draw a variable income, for example from wages and profits which may keep pace with inflation.
 - Debtors may be helped by inflation due to reduction of the real value of debt burden.
 - Inflation redistributes wealth from those who lend a fixed amount of money to those who borrow. For example, where the government is a net debtor, as is usually the case, it will reduce this debt redistributing money towards the government. Thus inflation is sometimes viewed as similar to a hidden tax.
 - A particular form of inflation as a tax is *Bracket Creep* (also called *fiscal drag*). By allowing inflation to move upwards, certain sticky aspects of the tax code are met by more and more people. For example, income tax brackets, where the next dollar of income is taxed at a higher rate than previous dollars, tend to become distorted. Governments that allow inflation to "bump" people over these thresholds are, in effect, allowing a tax increase because the same real purchasing power is being taxed at a higher rate.
- *International trade*: Where fixed exchange rates are imposed, higher inflation than in trading partners' economies will make exports more expensive and tend toward a weakening balance of trade.
- *Shoe leather costs*: Because the value of cash is eroded by inflation, people will tend to hold less cash during times of inflation. This imposes real costs, for example in more frequent trips to the bank. (The term is a humorous reference to the cost of replacing shoe leather worn out when walking to the bank.)
- *Menu costs*: Firms must change their prices more frequently, which imposes costs, for example with restaurants having to reprint menus.
- *Relative Price Distortions*: Firms do not generally synchronize adjustment in prices. If there is higher inflation, firms that do not adjust their prices will have much lower prices relative to firms that do adjust them. This will distort economic decisions, since relative prices will not be reflecting relative scarcity of different goods.
- Rising inflation can prompt trade unions to demand higher wages, to keep up with consumer prices. Rising wages in turn can help fuel inflation. In the case of collective bargaining, wages will be set as a factor of price expectations, which will be higher when inflation has an upward trend. This can cause a wage spiral. In a sense, inflation begets further inflationary expectations.
- *Hoarding*: people buy consumer durables as stores of wealth in the absence of viable alternatives as a means of getting rid of excess cash before it is devalued, creating shortages of the hoarded objects.
- *Hyperinflation*: if inflation gets totally out of control (in the upward direction), it can grossly interfere with the normal workings of the economy, hurting its ability to supply.

Causes of inflation

In the long run inflation is generally believed to be a monetary phenomenon while in the short and medium term it is influenced by the relative elasticity of

wages, prices and interest rates. The question of whether the short-term effects last long enough to be important is the central topic of debate between monetarist and Keynesian schools. In monetarism prices and wages adjust quickly enough to make other factors merely marginal behaviour on a general trendline. In the Keynesian view, prices and wages adjust at different rates, and these differences have enough effects on real output to be "long term" in the view of people in an economy.

A great deal of economic literature concerns the question of what causes inflation and what effect it has. There are different schools of thought as to what causes inflation. Most can be divided into two broad areas: quality theories of inflation, and quantity theories of inflation. Many theories of inflation combine the two. The quality theory of inflation rests on the expectation of a seller accepting currency to be able to exchange that currency at a later time for goods that are desirable as a buyer. The quantity theory of inflation rests on the equation of the money supply, its velocity, and exchanges. Adam Smith and David Hume proposed a quantity theory of inflation for money, and a quality theory of inflation for production.

Keynesian economic theory proposes that money is transparent to real forces in the economy, and that visible inflation is the result of pressures in the economy expressing themselves in prices.

There are three major types of inflation, as part of what Robert J. Gordon calls the "**triangle model**":

- **Demand-pull inflation:** inflation caused by increases in aggregate demand due to increased private and government spending, etc. Demand inflation is constructive to a faster rate of economic growth since the excess demand and favourable market conditions will stimulate investment and expansion. The falling value of money, however, may encourage spending rather than saving and so reduce the funds available for investment.
- **Cost-push inflation:** presently termed "supply shock inflation," caused by drops in aggregate supply due to increased prices of inputs, for example. Take for instance a sudden decrease in the supply of oil, which would increase oil prices. Producers for whom oil is a part of their costs could then pass this on to consumers in the form of increased prices.
- **Built-in inflation:** induced by adaptive expectations, often linked to the "price/wage spiral" because it involves workers trying to keep their wages up (gross wages have to increase above the CPI rate to net to CPI after-tax) with prices and then employers passing higher costs on to consumers as higher prices as part of a "vicious circle." Built-in inflation reflects events in the past, and so might be seen as hangover inflation.

A major demand-pull theory centers on the supply of money: inflation may be caused by an increase in the quantity of money in circulation relative to the ability of the economy to supply (its potential output). This is most obvious when governments finance spending in a crisis, such as a civil war, by printing money excessively, often leading to hyperinflation, a condition where prices can double in a month or less. Another cause can be a rapid decline in the *demand* for money, as happened in Europe during the Black Plague.

The money supply is also thought to play a major role in determining moderate levels of inflation, although there are differences of opinion on how important it is. For example, Monetarist economists believe that the link is very strong; Keynesian economics, by contrast, typically emphasize the role of aggregate demand in the economy rather than the money supply in determining inflation. That is, for Keynesians the money supply is only one determinant of aggregate demand. Some economists consider this a 'hocus pocus' approach: They disagree with the notion that central banks control the money supply, arguing that central banks have little control because the money supply adapts to the demand for bank credit issued by commercial banks. This is the **theory of endogenous money**. Advocated strongly by post-Keynesians as far back as the 1960s, it has today become a central focus of Taylor rule advocates. But this position is not

universally accepted. Banks create money by making loans. But the aggregate volume of these loans diminishes as real interest rates increase. Thus, it is quite likely that central banks influence the money supply by making money cheaper or more expensive, and thus increasing or decreasing its production.

A fundamental concept in Keynesian analysis is the relationship between inflation and unemployment, called the Phillips curve. This model suggests that there is a trade-off between price stability and employment. Therefore, some level of inflation could be considered desirable in order to minimize unemployment. The Phillips curve model described the U.S. experience well in the 1960s but failed to describe the combination of rising inflation and economic stagnation (sometimes referred to as *stagflation*) experienced in the 1970s.

Thus, modern macroeconomics describes inflation using a Phillips curve that *shifts* (so the trade-off between inflation and unemployment changes) because of such matters as supply shocks and inflation becoming built into the normal workings of the economy. The former refers to such events as the oil shocks of the 1970s, while the latter refers to the price/wage spiral and inflationary expectations implying that the economy "normally" suffers from inflation. Thus, the Phillips curve represents only the demand-pull component of the triangle model.

Another Keynesian concept is the potential output (sometimes called the "natural gross domestic product"), a level of GDP, where the economy is at its optimal level of production given institutional and natural constraints. (This level of output corresponds to the Non-Accelerating Inflation Rate of Unemployment, NAIRU, or the "natural" rate of unemployment or the full-employment unemployment rate.) If GDP exceeds its potential (and unemployment is below the NAIRU), the theory says that inflation will *accelerate* as suppliers increase their prices and built-in inflation worsens. If GDP falls below its potential level (and unemployment is above the NAIRU), inflation will *decelerate* as suppliers attempt to fill excess capacity, cutting prices and undermining built-in inflation.

However, one problem with this theory for policy-making purposes is that the exact level of potential output (and of the NAIRU) is generally unknown and tends to change over time. Inflation also seems to act in an asymmetric way, rising more quickly than it falls. Worse, it can change because of policy: for example, high unemployment under British Prime Minister Margaret Thatcher might have led to a rise in the NAIRU (and a fall in potential) because many of the unemployed found themselves as structurally unemployed (also see unemployment), unable to find jobs that fit their skills. A rise in structural unemployment implies that a smaller percentage of the labor force can find jobs at the NAIRU, where the economy avoids crossing the threshold into the realm of accelerating inflation.

Monetarism

Monetarists assert that the empirical study of monetary history shows that inflation has always been a monetary phenomenon. The quantity theory of money, simply stated, says that the total amount of spending in an economy is primarily determined by the total amount of money in existence. From this theory the following formula is created:

$$P = \frac{D_C}{S_C}$$

where P is the general price level of consumer goods, D_C is the aggregate demand for consumer goods and S_C is the aggregate supply of consumer goods. The

idea is that the general price level of consumer goods will rise only if the aggregate supply of consumer goods falls relative to aggregate demand for consumer goods, or if aggregate demand increases relative to aggregate supply. Based on the idea that total spending is based primarily on the total amount of money in existence, the economists calculate aggregate demand for consumers' goods based on the total quantity of money. Therefore, they posit that as the quantity of money increases, total spending increases and aggregate demand for consumer goods increases too. For this reason, economists who believe in the Quantity Theory of Money also believe that the only cause of rising prices in a growing economy (this means the aggregate supply of consumer goods is increasing) is an increase of the quantity of money in existence, which is a function of monetary policies, generally set by central banks that have a monopoly on the issuance of currency, which is not pegged to a commodity, such as gold. The central bank of the United States is the Federal Reserve; the central bank backing the euro is the European Central Bank.

No one denies that inflation is associated with excessive money supply, but opinions differ as to whether excessive money supply is the cause.

Rational expectations

Rational expectations theory holds that economic actors look rationally into the future when trying to maximize their well-being, and do not respond solely to immediate opportunity costs and pressures. In this view, while generally grounded in monetarism, future expectations and strategies are important for inflation as well.

A core assertion of rational expectations theory is that actors will seek to “head off” central-bank decisions by acting in ways that fulfill predictions of higher inflation. This means that central banks must establish their credibility in fighting inflation, or have economic actors make bets that the economy will expand, believing that the central bank will expand the money supply rather than allow a recession.

Other theories about the causes of inflation

Austrian School

Austrian School economics falls within the general tradition of the quantity theory of money, but is notable for providing a theory of the process whereby, upon an increase of the money supply, a new equilibrium is pursued. More specifically, possessors of the additional money are held to react to their new purchasing power by changing their buying habits in a way that generally increases demand for goods and for services. Austrian School economists do not believe that production will simply rise to meet all this new demand, so that prices increase and the new purchasing power erodes. The Austrian School emphasizes that this process is not instantaneous, and that the changes in demand are not distributed uniformly, so that the process does not ultimately lead to an equilibrium identical to the old except for some proportionate increase in prices; that “nominal” values thus have real effects. Austrian economists tend to view fiat increases in the money supply as particularly pernicious in their real effects. This view typically leads to the support for a commodity standard of a very strict variety where all notes are convertible on demand to some commodity or basket of commodities. (The more popular of the Austrian economists unanimously favour a gold standard.)

Marxian theory

In Marxian economics value is based on the labor required to extract a given commodity versus the demand for that commodity by those with money. The fluctuations of price in money terms are inconsequential compared to the rise and fall of the labor cost of a commodity, since this determines the true cost of a good or service. In this, Marxist economics is related to other "classical" economic theories that argue that monetary inflation is caused solely by printing notes in excess of the basic quantity of gold. However, Marx argues that the real kind of inflation is in the cost of production measured in labor. Because of the classical labor theory of value, the only factor that is important is whether more or less labor is required to produce a given commodity at the rate it is demanded.

Supply-side economics

Supply-side economics asserts that inflation is caused by either an increase in the supply of money or a decrease in the demand for balances of money. Thus the inflation experienced during the Black Plague in medieval Europe is seen as being caused by a decrease in the demand for money, the money stock used was gold coin and it was relatively fixed, while inflation in the 1970s is regarded as initially caused by an increased supply of money that occurred following the U.S. exit from the Bretton Woods gold standard. Supply-side economics asserts that the money supply can grow without causing inflation as long as the demand for balances of money also grows.

Issues of classical political economy

While economic theory before the "marginal revolution" is no longer the basis for current economic theory, many of the institutions, concepts, and terms used in economics come from the "classical" period of political economy, including monetary policy, quantity and quality theories of economics, central banking, velocity of money, price levels and division of the economy into production and consumption. For this reason debates about present economics often reference problems of classical political economy, particularly the classical gold standard of 1871-1913, and the currency versus banking debates of that period.

Currency and banking schools

Within the context of a fixed specie basis for money, one important controversy was between the "Quantity Theory" of money and the Real Bills Doctrine, or RBD. Within this context, quantity theory applies to the level of fractional reserve accounting allowed against specie, generally gold, held by a bank. The RBD argues that banks should also be able to issue currency against bills of trading, which is "real bills" that they buy from merchants. This theory was important in the 19th century in debates between "Banking" and "Currency" schools of monetary soundness, and in the formation of the Federal Reserve. In the wake of the collapse of the international gold standard post 1913, and the move towards deficit financing of government, RBD has remained a minor topic, primarily of interest in limited contexts, such as currency boards. It is generally held in ill repute today, with Frederic Mishkin, a governor of the Federal Reserve going so far as to say it had been "completely discredited." Even so, it has theoretical support from a few economists, particularly those that see restrictions on a particular class of credit as incompatible with libertarian principles of laissez-faire, even though almost all libertarian economists are opposed to the RBD.

The debate between currency, or quantity theory, and banking schools in Britain during the 19th century prefigures current questions about the credibility of

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money in the present. In the 19th century the banking school had greater influence in policy in the United States and Great Britain, while the currency school had more influence "on the continent", that is in non-British countries, particularly in the Latin Monetary Union and the earlier Scandinavia monetary union.

Anti-classical or backing theory

Another issue associated with classical political economy is the anti-classical hypothesis of money, or "backing theory". The backing theory argues that the value of money is determined by the assets and liabilities of the issuing agency. Unlike the Quantity Theory of classical political economy, the backing theory argues that issuing authorities can issue money without causing inflation so long as the money issuer has sufficient assets to cover redemptions.

Controlling inflation

There are a number of methods that have been suggested to control inflation. Central banks such as the U.S. Federal Reserve can affect inflation to a significant extent through setting interest rates and through other operations (that is, using monetary policy). High interest rates and slow growth of the money supply are the traditional ways through which central banks fight or prevent inflation, though they have different approaches. For instance, some follow a symmetrical inflation target while others only control inflation when it rises above a target, whether express or implied.

Monetarists emphasize increasing interest rates (slowing the rise in the money supply, monetary policy) to fight inflation. Keynesians emphasize reducing demand in general, often through fiscal policy, using increased taxation or reduced government spending to reduce demand as well as by using monetary policy. Supply-side economists advocate fighting inflation by fixing the exchange rate between the currency and some reference currency such as gold. This would be a return to the gold standard. All of these policies are achieved in practice through a process of open market operations.

Another method attempted in the past have been wage and price controls ("incomes policies"). Wage and price controls have been successful in wartime environments in combination with rationing. However, their use in other contexts is far more mixed. Notable failures of their use include the 1972 imposition of wage and price controls by Richard Nixon. In general wage and price controls are regarded as a drastic measure, and only effective when coupled with policies designed to reduce the underlying causes of inflation during the wage and price control regime, for example, winning the war being fought. Many developed nations set prices extensively, including for basic commodities as gasoline. The usual economic analysis is that that which is under priced is overconsumed, and that the distortions that occur will force adjustments in supply. For example, if the official price of bread is too low, there will be too little bread at official prices.

Temporary controls may *complement* a recession as a way to fight inflation: the controls make the recession more efficient as a way to fight inflation (reducing the need to increase unemployment), while the recession prevents the kinds of distortions that controls cause when demand is high. However, in general the advice of economists is not to impose price controls but to liberalize prices by assuming that the economy will adjust and abandon unprofitable economic activity. The lower activity will place fewer demands on whatever commodities were driving inflation, whether labor or resources, and inflation will fall with total economic output. This often produces a severe recession, as productive capacity is reallocated and is thus often very unpopular with the people whose livelihoods are destroyed. See Creative destruction.

World inflation crisis

See:

- World food inflation
- World petroleum inflation

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Investment banking

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Investment banks help companies and governments and their agencies to raise money by issuing and selling securities in the primary market. They assist public and private corporations in raising funds in the capital markets (both equity and debt), as well as in providing strategic advisory services for mergers, acquisitions and other types of financial transactions.

Investment banks also act as intermediaries in trading for clients. Investment banks differ from commercial banks, which take deposits and make commercial and retail loans. In recent years, however, the lines between the two types of structures have blurred, especially as commercial banks have offered more investment banking services. In the US, the Glass-Steagall Act, initially created in the wake of the Stock Market Crash of 1929, prohibited banks from both accepting deposits and underwriting securities; Glass-Steagall was repealed by the Gramm-Leach-Bliley Act in 1999. Investment banks may also differ from brokerages, which in general assist in the purchase and sale of stocks, bonds, and mutual funds. However some firms operate as both brokerages and investment banks; this includes some of the best known financial services firms in the world.

In the strictest definition, investment banking is the raising of funds, both in debt and equity, and the division handling this in an investment bank is often called the "Investment Banking Division" (IBD). However, only a few small firms solely provide this service. Almost all investment banks are heavily involved in providing additional financial services for clients, such as the trading of fixed income, foreign exchange, commodity, and equity securities. It is therefore acceptable to refer to both the "Investment Banking Division" and other 'front office' divisions such as "Fixed Income" as part of "investment banking," and any employee involved in either side as an "investment banker." Furthermore, one who engages in these activities in-house at a non-investment bank is also considered an investment banker. That said, many if not most IBD employees consider the title of Investment Banker reserved to them alone and bristle at self-referential use of this title by employees of other IB divisions, especially those engaged in Sales & Trading.

More commonly used today to characterize what was traditionally termed "investment banking" is *sell side*. "This is trading securities for cash or securities (i.e., facilitating transactions, market-making), or the promotion of securities (i.e. underwriting, research, etc.)."

The *buy side* constitutes the pension funds, mutual funds, hedge funds, and the investing public who consume the products and services of the sell-side in order to maximize their return on investment. Many firms have both buy and sell side components.

Generally speaking, those on the sell side are engaged in persuading those on the buy side. As such, it is sometimes considered to be more desirable to be on the buy side, since discretionary control over decisions lies with them. This said, it is not necessarily the case that the buy side is more personally lucrative than the sell side. As with most other endeavors, financial rewards await those who through luck or skill identify opportunity, regardless of whether they are selling or buying.

Organizational structure of an investment bank

The main activities and units

The primary function of an investment bank is buying and selling products both on behalf of the bank's clients and also for the bank itself. Banks undertake risk through proprietary trading, done by a special set of traders who do not interface with clients and through *Principal Risk*, risk undertaken by a trader after he or she buys or sells a product to a client and does not hedge his or her total exposure. Banks seek to maximize profitability for a given amount of risk on their balance sheet.

An investment bank is split into the so-called **Front Office**, **Middle Office** and **Back Office**. The individual activities are described below:

Front Office

- **Investment Banking** is the traditional aspect of investment banks which involves helping customers raise funds in the Capital Markets and advising on mergers and acquisitions. Investment bankers prepare idea pitches that they bring to meetings with their clients, with the expectation that their effort will be rewarded with a mandate when the client is ready to undertake a transaction. Once mandated, an investment bank is responsible for preparing all materials necessary for the transaction as well as the execution of the deal, which may involve subscribing investors to a security issuance, coordinating with bidders, or negotiating with a merger target. Other terms for the Investment Banking Division include Mergers & Acquisitions (M&A) and Corporate Finance (often pronounced "corpfin").
- **Investment management** is the professional management of various securities (shares, bonds etc) and other assets (e.g. real estate), to meet specified investment goals for the benefit of the investors. Investors may be institutions (insurance companies, pension funds, corporations etc.) or private investors (both directly via investment contracts and more commonly via collective investment schemes eg. mutual funds) .
- **Financial Markets** is split into four key divisions: Sales, Trading, Research and Structuring.
 - **Sales and Trading** is often the most profitable area of an investment bank, responsible for the majority of revenue of most investment banks. In the process of market making, traders will buy and sell financial products with the goal of making an incremental amount of money on each trade. *Sales* is the term for the investment banks sales force, whose primary job is to call on institutional and high-net-worth investors to suggest trading ideas (on caveat emptor basis) and take orders. Sales desks then communicate their clients' orders to the appropriate trading desks, who can price and execute trades, or structure new products that fit a specific need.
 - **Research** is the division which reviews companies and writes reports about their prospects, often with "buy" or "sell" ratings. While the research division generates no revenue, its resources are used to assist traders in trading, the sales force in suggesting ideas to customers, and investment bankers by covering their clients. In recent years the relationship between investment banking and research has become highly regulated, reducing its importance to the investment bank.
 - **Structuring** has been a relatively recent division as derivatives have come into play, with highly technical and numerate employees working on creating complex structured products which typically offer much greater margins and returns than underlying cash securities.

Middle Office

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- **Risk Management** involves analysing the market and credit risk that traders are taking onto the balance sheet in conducting their daily trades, and setting limits on the amount of capital that they are able to trade in order to prevent 'bad' trades having a detrimental effect to a desk overall. Another key Middle Office role is to ensure that the above mentioned economic risks are captured accurately (as per agreement of commercial terms with the counterparty) correctly (as per standardised booking models in the most appropriate systems) and on time (typically within 30 minutes of trade execution). In recent years the risk of errors has become known as "operational risk" and the assurance Middle Offices provide now include measures to address this risk. When this assurance is not in place, market and credit risk analysis can be unreliable and open to deliberate manipulation.

Back Office

- **Operations** involves data-checking trades that have been conducted, ensuring that they are not erroneous, and transacting the required transfers. While it provides the greatest job security of the divisions within an investment bank, it is a critical part of the bank that involves managing the financial information of the bank and ensures efficient capital markets through the financial reporting function. The staff in these areas are often highly qualified and need to understand in depth the deals and transactions that occur across all the divisions of the bank. .

Technology

- Every major investment bank has considerable amounts of in-house software, created by the Technology team, who are also responsible for Computer and Telecommunications-based support. Technology has changed considerably in the last few years as more sales and trading desks are using electronic trading platforms. These platforms can serve as auto-executed hedging to complex model driven algorithms...

Size of industry

Global investment banking revenue increased for the third year running in 2005, to \$52.8bn. This was up 14% on the previous year, but 7% below the 2000 peak. The recovery in the global economy and capital markets resulted in an increase in M&A activity, which has been the primary source of investment banking revenue in recent years. Credit spreads are tightening and intense competition within the field has ensured that the banking industry is on its toes.

The US was the primary source of investment banking income in 2005, with 51% of the total, a proportion which has fallen somewhat during the past decade. Europe (with Middle East and Africa) generated 31% of the total, slightly up on its 30% share a decade ago. Asian countries generated the remaining 18%. Between 2002 and 2005, fee income from Asia increased by 98%. This compares with a 55% increase in Europe, and a 46% increase in the US, during this time period.

Recent evolution of the business

New products

Investment banking is one of the most global industries and is hence continuously challenged to respond to new developments and innovation in the global

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financial markets. Throughout the history of investment banking, many have theorized that all investment banking products and services would be commoditized. New products with higher margins are constantly invented and manufactured by bankers in hopes of winning over clients and developing trading know-how in new markets. However, since these can usually not be patented or copyrighted, they are very often copied quickly by competing banks, pushing down trading margins.

For example, trading bonds and equities for customers is now a commodity business, but structuring and trading derivatives is highly profitable. Each OTC contract has to be uniquely structured and could involve complex pay-off and risk profiles. Listed option contracts are traded through major exchanges, such as the CBOE, and are almost as commoditized as general equity securities.

In addition, while many products have been commoditized, an increasing amount of profit within investment banks has come from proprietary trading, where size creates a positive network benefit (since the more trades an investment bank does, the more it knows about the market flow, allowing it to theoretically make better trades and pass on better guidance to clients).

Vertical Integration

Another trend in Investment Banking at the dawn of the 21st century has been the vertical integration of debt securitization. Previously, investment banks had assisted lenders in raising more lending funds and having the ability to offer longer term fixed interest rates by converting the lenders' outstanding loans into bonds. For example, a mortgage lender would make a house loan, and then use the investment bank to sell bonds to fund the debt, the money from the sale of the bonds can be used to make new loans, while the lender accepts loan payments and passes the payments on to the bondholders. This process is called securitization. However, lenders have begun to securitize loans themselves, especially in the areas of mortgage loans. Because of this, and because of the fear that this will continue, many Investment Banks have focused on becoming lenders themselves, making loans with the goal of securitizing them. In fact, in the areas of commercial mortgages, many Investment Banks lend at loss leader interest rates in order to make money securitizing the loans, causing them to be a very popular financing option for commercial property investors and developers.

Possible conflicts of interest

Potential conflicts of interest may arise between different parts of a bank, creating the potential for financial movements that could be market manipulation. Authorities that regulate investment banking (the FSA in the United Kingdom and the SEC in the United States) require that banks impose a Chinese wall which prohibits communication between investment banking on one side and research and equities on the other.

Some of the conflicts of interest that can be found in investment banking are listed here:

- Historically, equity research firms were founded and owned by investment banks. One common practice is for equity analysts to initiate coverage on a company in order to develop relationships that lead to highly profitable investment banking business. In the 1990s, many equity researchers allegedly traded positive stock ratings directly for investment banking business. On the flip side of the coin: companies would threaten to divert investment banking business to competitors unless their stock was rated favorably. Politicians acted to pass laws to criminalize such acts. Increased pressure from regulators

and a series of lawsuits, settlements, and prosecutions curbed this business to a large extent following the 2001 stock market tumble.

- Many investment banks also own retail brokerages. Also during the 1990s, some retail brokerages sold consumers securities which did not meet their stated risk profile. This behaviour may have led to investment banking business or even sales of surplus shares during a public offering to keep public perception of the stock favorable.
- Since investment banks engage heavily in trading for their own account, there is always the temptation or possibility that they might engage in some form of front running.

Investment banks

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John Maynard Keynes

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John Maynard Keynes, 1st Baron Keynes CB (pronounced /'keɪnz/ "cains") (5 June 1883 – 21 April 1946) was a British economist whose ideas, called Keynesian economics, had a major impact on modern economic and political theory as well as on many governments' fiscal policies. He advocated interventionist government policy, by which the government would use fiscal and monetary measures to mitigate the adverse effects of economic recessions, depressions and booms. He is one of the fathers of modern theoretical macroeconomics.

Biography

Personal and marital life

Born at 6 Harvey Road, Cambridge, John Maynard Keynes was the son of John Neville Keynes, an economics lecturer at Cambridge University, and Florence Ada Brown, a successful author and a social reformer. His younger brother Geoffrey Keynes (1887–1982) was a surgeon and bibliophile and his younger sister Margaret (1890–1974) married the Nobel-prize-winning physiologist Archibald Hill.

Keynes' early romantic and sexual relationships were almost all with men. Homosexuality was not unusual in the Bloomsbury group in which Keynes was avidly involved. One of his great loves was the artist Duncan Grant, whom he met in 1908, and he was also involved with the writer Lytton Strachey. Keynes appeared to turn away from homosexual relationships around the time of the first World War. In 1918, he met Lydia Lopokova, a well-known Russian ballerina, and they married in 1925.

Keynes was ultimately a successful investor, building up a substantial private fortune. He was nearly wiped out following the Stock Market Crash of 1929, but he soon recouped his fortune. He enjoyed collecting books: for example, he collected and protected many of Isaac Newton's papers. He was interested in literature in general and drama in particular and supported the Cambridge Arts Theatre financially, which allowed the institution to become, at least for a while, a major British stage outside of London.

Bertrand Russell named Keynes the most intelligent person he had ever known, commenting, "Every time I argued with Keynes, I felt that I took my life in my hands, and I seldom emerged without feeling something of a fool." Keynes also famously commented to his wife that he had "met God on the 5:15 train" when he received

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Western Economists 20th-Century Economists (Keynesian economics)



Name John Maynard Keynes

Birth June 5, 1883 Cambridge, England

Death April 21, 1946 (aged 62) Tilton, East Sussex, England

School/tradition Keynesian

Main interests economics, political economy, Probability

Notable ideas Spending multiplier

Influenced by Knut Wicksell, Arthur C. Pigou, Alfred Marshall, Adam Smith, David Ricardo, Dennis Robertson, Karl Marx, Thomas

Russell's protégé Ludwig Wittgenstein on behalf of Cambridge.

Education

Keynes enjoyed an elite education at Eton, where he displayed talent in a wide range of subjects; particularly mathematics, classics and history. His abilities were remarkable for their sheer diversity. He entered King's College, Cambridge, in 1902, to study mathematics, but his interest in politics led him towards the field of economics, which he studied at Cambridge under A.C. Pigou and Alfred Marshall. It is Marshall who is believed to have prompted Keynes's shift in interest from mathematics and classics to economics. It was at this time when he became the President of the Cambridge University Liberal Club. Keynes received his B.A. in 1905 and his M.A. in 1908.

Malthus, Michal Kalecki, J.S.
Mill, Alfred Marshall

Influenced T. K. Whitaker, Michal Kalecki
Simon Kuznets, Paul Samuelson,
John Hicks, G.L.S. Shackle,
Silvio Gesell, William Vickrey,
Galbraith

Career

Keynes accepted a lectureship at Cambridge in economics funded personally by Alfred Marshall, from which position he began to build his reputation. Soon he was appointed to the Royal Commission on Indian Currency and Finance, where he showed his considerable talent at applying economic theory to practical problems.

His expertise was in demand during the First World War. He worked for the Adviser to the Chancellor of the Exchequer and to the Treasury on Financial and Economic Questions. Among his responsibilities were the design of terms of credit between Britain and its continental allies during the war, and the acquisition of scarce currencies.

At this latter endeavor Keynes' "nerve and mastery became legendary," in the words of Robert Lekachman, as in the case where he managed to put together — with difficulty — a small supply of Spanish pesetas and sold them all to break the market: it worked, and pesetas became much less scarce and expensive. These accomplishments led eventually to the appointment that would have a huge effect on Keynes' life and career: financial representative for the Treasury to the 1919 Paris Peace Conference.

Keynes' career lifted off as an adviser to the British finance department from 1915 – 1919 during World War I, and their representative at the Versailles peace conference in 1919. His observations appeared in the highly influential book *The Economic Consequences of the Peace* in 1919, followed by *A Revision of the Treaty* in 1922. Using statistics provided to him by the German delegation, he argued that the reparations which Germany was forced to pay to the victors in the war were too large, would lead to the ruin of the German economy and result in further conflict in Europe. These predictions were borne out when the German economy suffered in the hyperinflation of 1923. Only a fraction of reparations were ever paid.



Painter Duncan Grant with Keynes.

Keynes published his *Treatise on Probability* in 1921, a notable contribution to the philosophical and mathematical underpinnings of probability theory, championing the important view that *probabilities* were no more or less than truth values intermediate between simple truth and falsity. He attacked the deflation policies of the 1920s with *A Tract on Monetary Reform* in 1923, a trenchant argument that countries should target stability of domestic prices and propose flexible exchange rates. The *Treatise on Money* (1930) (2 volumes) effectively set out his Wicksellian theory of the credit cycle.

As Keynes recognizes in his magnum opus which was published in 1936, the *General Theory of Employment, Interest and Money*, his efforts challenged the economic paradigm. In the foreword to the German edition of the *General Theory*, Keynes states that "the theory of aggregated production, which is the point of the following book, nevertheless can be much easier adapted to the conditions of a totalitarian state (eines totalen Staates) than the

theory of production and distribution of a given production put forth under conditions of free competition and a large degree of laissez-faire."

In this book Keynes put forward a theory based upon the notion of aggregate demand to explain variations in the overall level of economic activity, such as were observed in the Great Depression. The total income in a society is defined by the sum of consumption and investment; and in a state of unemployment and unused production capacity, one can *only* enhance employment and total income by *first* increasing expenditures for either consumption or investment. The book was indexed by Keynes's student, later the economist David Bensusan-Butt.

The total amount of saving in a society is determined by the total income and thus, the economy could achieve an increase of total saving, even if the interest rates were lowered to increase the expenditures for investment. The book advocated activist economic policy by government to stimulate demand in times of high unemployment, for example by spending on public works. The book is often viewed as the foundation of modern macroeconomics. Historians agree that Keynes influenced U.S. president Roosevelt's New Deal, but disagree as to what extent. Deficit spending of the sort the New Deal began in 1938 had previously been called "pump priming" and had been endorsed by President Herbert Hoover. Few senior economists in the U.S. agreed with Keynes in the 1930s. With time, however, his ideas became more widely accepted.

In 1942, Keynes was a highly recognized economist and was raised to the House of Lords as **Baron Keynes**, of Tilton in the County of Sussex, where he sat on the Liberal benches. During World War II, Keynes argued in *How to Pay for the War* that the war effort should be largely financed by higher taxation, rather than deficit spending, in order to avoid inflation. As Allied victory began to look certain, Keynes was heavily involved, as leader of the British delegation and chairman of the World Bank commission, in the negotiations that established the Bretton Woods system. The Keynes-plan, concerning an international clearing-union argued for a radical system for the management of currencies, involving a world central bank, the International Clearing Union, responsible for a common world unit of currency, the Bancor. The USA's greater negotiating strength, however, meant that the final outcomes accorded more closely to the less radical plans of Harry Dexter White.

Keynes wrote *Essays in Biography* and *Essays in Persuasion*, the former giving portraits of economists and notables, whilst the latter presents some of Keynes' attempts to influence decision-makers during the Great Depression. Keynes was editor in chief for the *Economic Journal* from 1912. He was also a member of the Liberal Party.

Economic thought

In his *magnum opus*, *The General Theory of Employment, Interest, and Money* (1936), Keynes laid the foundation for the branch of economics termed "Macroeconomics" today. Based on the methods devised by Alfred Marshall, he argued that macroeconomic relationships differ from their microeconomic counterparts because the *ceteris paribus* clauses applicable to different levels of aggregation differ. The innovation in his core argument is to stop taking prices and wages as perfectly flexible, arguing instead for a certain degree of stickiness. Thanks to stickiness, it is established that the interaction of "aggregate demand" (in his sense) and "aggregate supply" (in his sense) may lead to stable unemployment equilibria. His work on employment went against the idea that the market ultimately settles at a state of full employment - a central tenet of Classical economists. Instead he argued that there exists a continuum of equilibria, the full employment equilibrium position being just one of them. (This idea underlies the choice of the title "General Theory": the classical theory being just a special case.)

His main contribution can be seen in establishing an approach to macroeconomics that maintains its relationship to the underlying microeconomic behaviors, but assumes a form qualitatively different from microeconomic models. (This contrasts with the assumption made in New Classical Economics where macro relationships are modelled analogously to micro-relationships, → Robert Lucas, Jr.).

He assumed that (marginal) labour productivity decreases with expanding employment. This is incompatible with the empirical findings summarized in Okun's Law. He combined this position with the marginal productivity theory of wages, implying that real wages decrease with increasing employment. This was shown to be empirically incorrect by the economist Dunlop, and Keynes accepted this. Keynes also suggested in the General Theory that inflation would occur only near "full employment" (in his sense), but it has been observed in many cases that inflation creeps up in states of severe underemployment (Stagflation). The assumption entertained by Keynes that inflation can only occur near full employment is still maintained in modern macroeconomics (→ NAIRU). Keynes held that the cause of unemployment is a too high rate of savings, or insufficient investment expenditure. He conjectured that the amount of labour supplied is different when the decrease in real wages is due to a decrease in the money wage, than when it is due to an increase in the price level, assuming money wages stay constant. This conjecture relates to the "actual attitudes of workers" and is "not theoretically fundamental," although the New Keynesian economics emphasizes this point.

In his *Theory of Money*, Keynes said that savings and investment were independently determined. The amount saved had little to do with variations in interest rates which in turn had little to do with how much was invested. Keynes thought that changes in saving depended on the changes in the predisposition to consume which resulted from marginal, incremental changes to income. Therefore, investment was determined by the relationship between expected rates of return on investment and the rate of interest.

Arts Council of Great Britain

Keynes' personal interest in Classical Opera and Dance focused on his support of the Royal Opera House, Covent Garden and the Ballet Company at Sadlers Wells. During the War as a member of CEMA (Council for the Encouragement of Music and the Arts) Keynes helped secure government funds to maintain both companies while their venues were shut. Following the War Keynes was instrumental in establishing the Arts Council of Great Britain and was the founding Chairman in 1946. Unsurprisingly from the start the two organizations that received the largest grant from the new body were the Royal Opera House and

Sadlers Wells.

British Eugenics Society

Keynes served on the board of directors of the British Eugenics Society in 1945, even as documented proof of the Nazi concentration camps were becoming more widely known in Great Britain during the final year of World War II as British and American troops liberated several concentration camps in Germany. Even so, in 1946 before his death, Keynes still declared eugenics "the most important, significant and, I would add, genuine branch of sociology which exists."

Death

Keynes died of myocardial infarction (heart attack) at his holiday home in Tilton, East Sussex. He died soon after he arranged a guarantee of an Anglo-American loan to Great Britain, a process he described as "absolute hell". Keynes' father, John Neville Keynes (1852 – 1949) outlived his son by three years. Keynes's brother Sir Geoffrey Keynes (1887 – 1982) was a distinguished surgeon, scholar and bibliophile. His nephews include Richard Keynes (born 1919) a physiologist; and Quentin Keynes (1921 – 2003) an adventurer and bibliophile.

Influence

Keynes' theories were so influential, even when disputed, that a subfield of Macroeconomics called Keynesian economics is further developing and discussing his theories and their applications. John Maynard Keynes had several cultural interests and was a central figure in the so-called Bloomsbury group, consisting of prominent artists and authors in Britain. His autobiographical essays *Two Memoirs* appeared in 1949.

Criticism

From Hayek

Friedrich von Hayek extensively critiqued Keynes's 1930 *Treatise on Money*, only to have Keynes assert that the *Treatise* no longer reflected his thinking. However, after reading Hayek's *The Road to Serfdom* Keynes said, "In my opinion it is a grand book ... Morally and philosophically I find myself in agreement with virtually the whole of it: and not only in agreement with it, but in deeply moved agreement." Keynes was known, however, to open his letters with such complimentary language. He concluded the same letter with the prophecy, "What we need therefore, in my opinion, is not a change in our economic programmes, which would only lead in practice to disillusion with the results of your philosophy; but perhaps even the contrary, namely, an enlargement of them. Your greatest danger is the probable practical failure of the application of your philosophy in the United States." On the pressing issue of the time, whether deficit spending could lift a country from depression, Keynes replied to Hayek's criticism in the following way,

"I should... conclude rather differently. I should say that what we want is not no planning, or even less planning, indeed I should say we almost certainly want more. But the planning should take place in a community in which as many people as possible, both leaders and followers wholly share your own moral

position. Moderate planning will be safe enough if those carrying it out are rightly oriented in their own minds and hearts to the moral issue. This is in fact already true of some of them. But the curse is that there is also an important section who could be said to want planning not in order to enjoy its fruits but because morally they hold ideas exactly the opposite of yours, and wish to serve not God but the devil.

Hayek explained the first section of the letter saying that this is "because Keynes believed that he was fundamentally still a classical English liberal and wasn't quite aware of how far he had moved away from it. His basic ideas were still those of individual freedom. He did not think systematically enough to see the conflicts."

The Keynes-Hayek conflict was but one battle in the Cambridge- LSE war. Hayek also felt that application of Keynes policies gives too much power to the state and leads to socialism.

From Friedman

While Milton Friedman described *The General Theory* as 'a great book', he argues that its implicit separation of nominal from real magnitudes is neither possible nor desirable; macroeconomic policy, Friedman argues, can reliably influence only the nominal.. He and other monetarists have consequently argued that Keynesian economics can result in stagflation, the combination of low growth and high inflation that developed economies suffered in the early 1970s. More to Friedman's taste was the *Tract on Monetary Reform* (1923), which he regarded as Keynes's best work because of its focus on maintaining domestic price stability.

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List of circulating currencies

2008/9 Schools Wikipedia Selection. Related subjects: Currency; Economics






This **list of circulating currencies** contains the 191 current official or *de facto* currencies of the 192 United Nations member states, one UN observer state, four partially recognized sovereign states, six unrecognized countries, and 32 dependencies. All dependencies on the table below will be italicized. Partially or wholly unrecognized countries are in bold. All dependencies listed here use a currency other than that of the sovereign state that administers them.












A currency is a unit of exchange and hence a kind of money and medium of exchange. Currency includes "paper" banknotes and metal coins. Countries generally have a monopoly on the issuing of currency, although some countries share currencies with other countries. Today, currencies are the dominant means of exchange. Different countries may use the same term to refer to their respective currencies, even though the currencies may have little else to do with each other. A place that is technically part of another country sometimes uses a different currency from that of the parent country.










































Samples of currency from various countries























List of currencies






















Country or territory	Currency	Sign	ISO code	Fractional monetary unit	Number to basic
 Abkhazia	Georgian lari	ლ	GEL	Tetri	100
	Russian ruble	₽	RUB	Kopek	100
 Afghanistan	Afghan afghani	؍	AFN	Pul	100
 <i>Akrotiri and Dhekelia</i>	Euro	€	EUR	Cent	100
 Albania	Albanian lek	L	ALL	Qintar	100
 <i>Alderney</i>	Alderney pound	£	None	Penny	100
	British pound	£	GBP	Penny	100
	Guernsey pound	£	None	Penny	100























 Algeria	Algerian dinar	د.ج	DZD	Centime	100
 Andorra	Euro	€	EUR	Cent	100
 Angola	Angolan kwanza	Kz	AOA	Cêntimo	100
 <i>Anguilla</i>	East Caribbean dollar	\$	XCD	Cent	100
 Antigua and Barbuda	East Caribbean dollar	\$	XCD	Cent	100
 Argentina	Argentine peso	\$	ARS	Centavo	100
 Armenia	Armenian dram	դր.	AMD	Luma	100
 <i>Aruba</i>	Aruban florin	f	AWG	Cent	100
 <i>Ascension Island</i>	Ascension pound	£	None	Penny	100
	Saint Helenian pound	£	SHP	Penny	100
 Australia	Australian dollar	\$	AUD	Cent	100
 Austria	Euro	€	EUR	Cent	100
 Azerbaijan	Azerbaijani manat	₼	AZN	Qəpik	100
 Bahamas, The	Bahamian dollar	\$	BSD	Cent	100
 Bahrain	Bahraini dinar	ب.د	BHD	Fils	1,000
 Bangladesh	Bangladeshi taka	৳	BDT	Paisa	100
 Barbados	Barbadian dollar	\$	BBD	Cent	100
 Belarus	Belarusian ruble	Br	BYR	Kapyeyka	100
 Belgium	Euro	€	EUR	Cent	100
 Belize	Belize dollar	\$	BZD	Cent	100
 Benin	West African CFA franc	Fr	XOF	Centime	100
 <i>Bermuda</i>	Bermudian dollar	\$	BMD	Cent	100
 Bhutan	Bhutanese ngultrum		BTN	Chertrum	100
	Indian rupee	Rs	INR	Paisa	100





















 Bolivia	Bolivian boliviano	Bs.	BOB	Centavo	100
 Bosnia and Herzegovina	Bosnia and Herzegovina convertible mark	KM or KM	BAM	Fening	100
 Botswana	Botswana pula	P	BWP	Thebe	100
 Brazil	Brazilian real	R\$	BRL	Centavo	100
 <i>British Indian Ocean Territory</i>	British pound (<i>de jure</i>)	£	GBP	Penny	100
	United States dollar (<i>de facto</i>)	\$	USD	Cent	100
 <i>British Virgin Islands</i>	British Virgin Islands dollar	\$	None	Cent	100
	United States dollar	\$	USD	Cent	100
 Brunei	Brunei dollar	\$	BND	Sen	100
	Singapore dollar	\$	SGD	Cent	100
 Bulgaria	Bulgarian lev	лB	BGN	Stotinka	100
 Burkina Faso	West African CFA franc	Fr	XOF	Centime	100
 Burundi	Burundian franc	Fr	BIF	Centime	100
 Cambodia	Cambodian riel	៛	KHR	Sen	100
 Cameroon	Central African CFA franc	Fr	XAF	Centime	100
 Canada	Canadian dollar	\$	CAD	Cent	100
 Cape Verde	Cape Verdean escudo	\$ or Esc	CVE	Centavo	100
 <i>Cayman Islands</i>	Cayman Islands dollar	\$	KYD	Cent	100
 Central African Republic	Central African CFA franc	Fr	XAF	Centime	100
 Chad	Central African CFA franc	Fr	XAF	Centime	100
 Chile	Chilean peso	\$	CLP	Centavo	100
 China, People's Republic of	Chinese renminbi yuan	¥	CNY	Jiao	10
 <i>Cocos (Keeling) Islands</i>	Australian dollar	\$	AUD	Cent	100
	Cocos (Keeling) Islands dollar	\$	None	Cent	100




















 Colombia	Colombian peso	\$	COP	Centavo	100
 Comoros	Comorian franc	Fr	KMF	Centime	100
 Congo, Democratic Republic of the	Congolese franc	Fr	CDF	Centime	100
 Congo, Republic of the	Central African CFA franc	Fr	XAF	Centime	100
 <i>Cook Islands</i>	New Zealand dollar	\$	NZD	Cent	100
	Cook Islands dollar	\$	None	Cent	100
 Costa Rica	Costa Rican colón	₡	CRC	Céntimo	100
 Côte d'Ivoire	West African CFA franc	Fr	XOF	Centime	100
 Croatia	Croatian kuna	kn	HRK	Lipa	100
 Cuba	Cuban convertible peso	\$	CUC	Centavo	100
	Cuban peso	\$	CUP	Centavo	100
 Cyprus	Euro	€	EUR	Cent	100
 Czech Republic	Czech koruna	Kč	CZK	Haléř	100
 Denmark	Danish krone	kr	DKK	Øre	100
 Djibouti	Djiboutian franc	Fr	DJF	Centime	100
 Dominica	East Caribbean dollar	\$	XCD	Cent	100
 Dominican Republic	Dominican peso	\$	DOP	Centavo	100
 East Timor	United States dollar	\$	USD	Cent	100
	None	None	None	Centavo	None
 Ecuador	United States dollar	\$	USD	Cent	100
	None	None	None	Centavo	None
 Egypt	Egyptian pound	£ or ₭	EGP	Piastre	100
 El Salvador	Salvadoran colón	₡	SVC	Centavo	100
	United States Dollar	\$	USD	Cent	100













 Equatorial Guinea	Central African CFA franc	Fr	XAF	Centime	100
 Eritrea	Eritrean nakfa	Nfk	ERN	Cent	100
 Estonia	Estonian kroon	KR	EEK	Sent	100
 Ethiopia	Ethiopian birr		ETB	Santim	100
 <i>Falkland Islands</i>	Falkland pound	£	FKP	Penny	100
 <i>Faroe Islands</i>	Danish krone	kr	DKK	Øre	100
	Faroese króna	kr	None	Oyra	100
 Fiji	Fijian dollar	\$	FJD	Cent	100
 Finland	Euro	€	EUR	Cent	100
 France	Euro	€	EUR	Cent	100
 <i>French Polynesia</i>	CFP franc	Fr	XPF	Centime	100
 Gabon	Central African CFA franc	Fr	XAF	Centime	100
 Gambia, The	Gambian dalasi	D	GMD	Butut	100
 Georgia	Georgian lari	ლ	GEL	Tetri	100
 Germany	Euro	€	EUR	Cent	100
 Ghana	Ghanaian cedi	¢	GHS	Pesewa	100
 <i>Gibraltar</i>	Gibraltar pound	£	GIP	Penny	100
 Greece	Euro	€	EUR	Cent	100
 Grenada	East Caribbean dollar	\$	XCD	Cent	100
 Guatemala	Guatemalan quetzal	Q	GTQ	Centavo	100
 <i>Guernsey</i>	British pound	£	GBP	Penny	100
	Guernsey pound	£	None	Penny	100
 Guinea	Guinean franc	Fr	GNF	Centime	100
 Guinea-Bissau	West African CFA franc	Fr	XOF	Centime	100






















 Guyana	Guyanese dollar	\$	GYD	Cent	100
 Haiti	Haitian gourde	G	HTG	Centime	100
 Honduras	Honduran lempira	L	HNL	Centavo	100
 <i>Hong Kong</i>	Hong Kong dollar	\$	HKD	Ho	10
 Hungary	Hungarian forint	Ft	HUF	Fillér	100
 Iceland	Icelandic króna	kr	ISK	Eyrir	100
 India	Indian rupee	Rs	INR	Paisa	100
 Indonesia	Indonesian rupiah	Rp	IDR	Sen	100
 Iran	Iranian rial	ریال	IRR	Dinar	100
 Iraq	Iraqi dinar	د.ع	IQD	Fils	1,000
 Ireland	Euro	€	EUR	Cent	100
 <i>Isle of Man</i>	British pound	£	GBP	Penny	100
	Manx pound	£	None	Penny	100
 Israel	Israeli new sheqel	₪	ILS	Agora	100
 Italy	Euro	€	EUR	Cent	100
 Jamaica	Jamaican dollar	\$	JMD	Cent	100
 Japan	Japanese yen	¥	JPY	Sen	100
 <i>Jersey</i>	British pound	£	GBP	Penny	100
	Jersey pound	£	None	Penny	100
 Jordan	Jordanian dinar	د.ا	JOD	Piastre	100
 Kazakhstan	Kazakhstani tenge	₸	KZT	Tiyn	100
 Kenya	Kenyan shilling	Sh	KES	Cent	100
 Kiribati	Australian dollar	\$	AUD	Cent	100
	Kiribati dollar	\$	None	Cent	100





















 Korea, North	North Korean won	₩	KPW	Chŏn	100
 Korea, South	South Korean won	₩	KRW	Jeon	100
 Kosovo	Euro	€	EUR	Cent	100
	Serbian dinar	din. or дин.	RSD	Para	100
 Kuwait	Kuwaiti dinar	د.ك	KWD	Fils	1,000
 Kyrgyzstan	Kyrgyzstani som		KGS	Tyiyn	100
 Laos	Lao kip	₭	LAK	Att	100
 Latvia	Latvian lats	Ls	LVL	Santīms	100
 Lebanon	Lebanese lira	ل.ل	LBP	Piastre	100
 Lesotho	Lesotho loti	L	LSL	Sente	100
	South African rand	R	ZAR	Cent	100
 Liberia	Liberian dollar	\$	LRD	Cent	100
 Libya	Libyan dinar	د.ل	LYD	Dirham	1,000
 Liechtenstein	Swiss franc	Fr	CHF	Rappen	100
 Lithuania	Lithuanian litas	Lt	LTL	Centas	100
 Luxembourg	Euro	€	EUR	Cent	100
 <i>Macau</i>	Macanese pataca	P	MOP	Avo	100
 Macedonia, Republic of	Macedonian denar	ден	MKD	Deni	100
 Madagascar	Malagasy ariary		MGA	Iraimbilanja	5
 Malawi	Malawian kwacha	МК	MWK	Tambala	100
 Malaysia	Malaysian ringgit	RM	MYR	Sen	100
 Maldives	Maldivian rufiyaa	ރ.	MVR	Laari	100
 Mali	West African CFA franc	Fr	XOF	Centime	100
 Malta	Euro	€	EUR	Cent	100

 Marshall Islands	United States dollar	\$	USD	Cent	100
 Mauritania	Mauritanian ouguiya	UM	MRO	Khoums	5
 Mauritius	Mauritian rupee	Rs	MUR	Cent	100
 Mexico	Mexican peso	\$	MXN	Centavo	100
 Micronesia	Micronesian dollar	\$	None	Cent	100
	United States dollar	\$	USD	Cent	100
 Moldova	Moldovan leu	L	MDL	Ban	100
 Monaco	Euro	€	EUR	Cent	100
 Mongolia	Mongolian tögrög	₮	MNT	Mönggö	100
 Montenegro	Euro	€	EUR	Cent	100
 <i>Montserrat</i>	East Caribbean dollar	\$	XCD	Cent	100
 Morocco	Moroccan dirham	د.م.	MAD	Centime	100
 Mozambique	Mozambican metical	MTn	MZN	Centavo	100
 Myanmar	Myanmar kyat	K	MMK	Pya	100
 Nagorno-Karabakh	Armenian dram	դր.	AMD	Luma	100
	Nagorno-Karabakh dram	դր.	None	Luma	100
 Namibia	Namibian dollar	\$	NAD	Cent	100
	South African rand	R	ZAR	Cent	100
 Nauru	Australian dollar	\$	AUD	Cent	100
	Nauruan dollar	\$	None	Cent	100
 Nepal	Nepalese rupee	Rs	NPR	Paisa	100
 Netherlands	Euro	€	EUR	Cent	100
 <i>Netherlands Antilles</i>	Netherlands Antillean gulden	f	ANG	Cent	100
 <i>New Caledonia</i>	CFP franc	Fr	XPF	Centime	100

 New Zealand	New Zealand dollar	\$	NZD	Cent	100
 Nicaragua	Nicaraguan córdoba	C\$	NIO	Centavo	100
 Niger	West African CFA franc	Fr	XOF	Centime	100
 Nigeria	Nigerian naira	₦	NGN	Kobo	100
 <i>Niue</i>	New Zealand dollar	\$	NZD	Cent	100
	Niuean dollar	\$	None	Cent	100
 Northern Cyprus	Turkish new lira	₺	TRY	New kuruş	100
 <i>Northern Mariana Islands</i>	Northern Mariana Islands dollar	\$	None	Cent	100
	United States dollar	\$	USD	Cent	100
 Norway	Norwegian krone	kr	NOK	Øre	100
 Oman	Omani rial	ر.ع.	OMR	Baisa	1,000
 Pakistan	Pakistani rupee	Rs	PKR	Paisa	100
 Palau	Palauan dollar	\$	None	Cent	100
	United States dollar	\$	USD	Cent	100
 Palestine	Israeli new sheqel	₪	ILS	Agora	100
	Jordanian dinar	د.ا.	JOD	Piastre	100
 Panama	Panamanian balboa	B/.	PAB	Centésimo	100
	United States dollar	\$	USD	Cent	100
 Papua New Guinea	Papua New Guinean kina	K	PGK	Toea	100
 Paraguay	Paraguayan guaraní	₲	PYG	Céntimo	100
 Peru	Peruvian nuevo sol	S/.	PEN	Céntimo	100
 Philippines	Philippine peso	₱	PHP	Centavo	100
 <i>Pitcairn Islands</i>	New Zealand dollar	\$	NZD	Cent	100
 Poland	Polish złoty	zł	PLN	Grosz	100

 Portugal	Euro	€	EUR	Cent	100
 Qatar	Qatari riyal	ر.ق.	QAR	Dirham	100
 Romania	Romanian leu	L	RON	Ban	100
 Russia	Russian ruble	руб.	RUB	Kopek	100
 Rwanda	Rwandan franc	Fr	RWF	Centime	100
 <i>Saint Helena</i>	Saint Helenian pound	£	SHP	Penny	100
 Saint Kitts and Nevis	East Caribbean dollar	\$	XCD	Cent	100
 Saint Lucia	East Caribbean dollar	\$	XCD	Cent	100
 Saint Vincent and the Grenadines	East Caribbean dollar	\$	XCD	Cent	100
 Samoa	Samoaan tala	T	WST	Sene	100
 San Marino	Euro	€	EUR	Cent	100
 São Tomé and Príncipe	São Tomé and Príncipe dobra	Db	STD	Cêntimo	100
 Saudi Arabia	Saudi riyal	ر.س.	SAR	Hallallah	100
 Senegal	West African CFA franc	Fr	XOF	Centime	100
 Serbia	Serbian dinar	din. or дин.	RSD	Para	100
 Seychelles	Seychellois rupee	Rs	SCR	Cent	100
 Sierra Leone	Sierra Leonean leone	Le	SLL	Cent	100
 Singapore	Brunei dollar	\$	BND	Sen	100
	Singapore dollar	\$	SGD	Cent	100
 Slovakia	Slovak koruna	Sk	SKK	Halier	100
 Slovenia	Euro	€	EUR	Cent	100
 Solomon Islands	Solomon Islands dollar	\$	SBD	Cent	100
 Somalia	Somali shilling	Sh	SOS	Cent	100
 Somaliland	Somaliland shilling	Sh	None	Cent	100

 South Africa	South African rand	R	ZAR	Cent	100
 <i>South Georgia and the South Sandwich Islands</i>	British pound	£	GBP	Penny	100
	South Georgia and the South Sandwich Islands pound	£	None	Penny	100
 South Ossetia	Georgian lari	ლ	GEL	Tetri	100
	Russian ruble	p.	RUB	Kopek	100
 Spain	Euro	€	EUR	Cent	100
 Sri Lanka	Sri Lankan rupee	Rs	LKR	Cent	100
 Sudan	Sudanese pound	£	SDG	Piastre	100
 Suriname	Surinamese dollar	\$	SRD	Cent	100
 Swaziland	Swazi lilangeni	L	SZL	Cent	100
 Sweden	Swedish krona	kr	SEK	Öre	100
 Switzerland	Swiss franc	Fr	CHF	Rappen	100
 Syria	Syrian pound	£ or ل.س	SYP	Piastre	100
 Taiwan (Republic of China)	New Taiwan dollar	\$	TWD	Cent	100
 Tajikistan	Tajikistani somoni	SM	TJS	Diram	100
 Tanzania	Tanzanian shilling	Sh	TZS	Cent	100
 Thailand	Thai baht	฿	THB	Satang	100
 Togo	West African CFA franc	Fr	XOF	Centime	100
 Tonga	Tongan pa‘anga	T\$	TOP	Seniti	100
 Transnistria	Transnistrian ruble	p.	None	Kopek	100
 Trinidad and Tobago	Trinidad and Tobago dollar	\$	TTD	Cent	100
 <i>Tristan da Cunha</i>	Saint Helenian pound	£	SHP	Penny	100
	Tristan da Cunha pound	£	None	Penny	100
 Tunisia	Tunisian dinar	د.ت	TND	Millime	1,000

 Turkey	Turkish new lira	YTL	TRY	New kuruş	100
 Turkmenistan	Turkmenistani manat	m	TMM	Tennesi	100
 <i>Turks and Caicos Islands</i>	United States dollar	\$	USD	Cent	100
 Tuvalu	Australian dollar	\$	AUD	Cent	100
	Tuvaluan dollar	\$	None	Cent	100
 Uganda	Ugandan shilling	Sh	UGX	Cent	100
 Ukraine	Ukrainian hryvnia	₴	UAH	Kopiyka	100
 United Arab Emirates	United Arab Emirates dirham	د.إ.	AED	Fils	100
 United Kingdom	British pound	£	GBP	Penny	100
 United States	United States dollar	\$	USD	Cent	100
 Uruguay	Uruguayan peso	\$	UYU	Centésimo	100
 Uzbekistan	Uzbekistani som		UZS	Tiyin	100
 Vanuatu	Vanuatu vatu	Vt	VUV	None	None
 Vatican City	Euro	€	EUR	Cent	100
 Venezuela	Venezuelan bolívar	Bs F	VEF	Céntimo	100
 Vietnam	Vietnamese đồng	₫	VND	Hào	10
 <i>Wallis and Futuna</i>	CFP franc	Fr	XPF	Centime	100
 Western Sahara	Moroccan dirham	د.م.	MAD	Centime	100
 Yemen	Yemeni rial	ريال	YER	Fils	100
 Zambia	Zambian kwacha	ZK	ZMK	Ngwee	100
 Zimbabwe	Zimbabwean dollar	\$	ZWD	Cent	100

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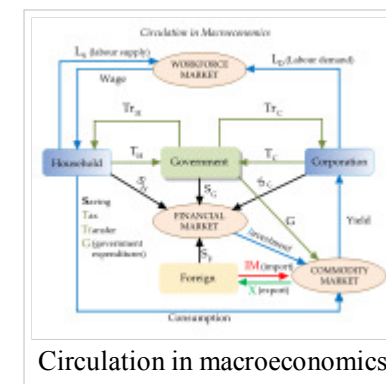
Macroeconomics

2008/9 Schools Wikipedia Selection. Related subjects: Economics

Macroeconomics is a branch of economics that deals with the performance, structure, and behaviour of a national or regional economy as a whole. Along with microeconomics, macroeconomics is one of the two most general fields in economics. Macroeconomists study aggregated indicators such as GDP, unemployment rates, and price indexes to understand how the whole economy functions. Macroeconomists develop models that explain the relationship between such factors as national income, output, consumption, unemployment, inflation, savings, investment, international trade and international finance. In contrast, microeconomics is primarily focused on the actions of individual agents, such as firms and consumers, and how their behaviour determines prices and quantities in specific markets.

While macroeconomics is a broad field of study, there are two areas of research that are emblematic of the discipline: the attempt to understand the causes and consequences of short-run fluctuations in national income (the business cycle), and the attempt to understand the determinants of long-run economic growth (increases in national income).

Macroeconomic models and their forecasts are used by both governments and large corporations to assist in the development and evaluation of economic policy and business strategy.



Circulation in macroeconomics

Development of macroeconomic theory

The first published use of the term "macroeconomics" was by the Norwegian Economist Ragnar Frisch in 1933 and before this, there already was an effort to understand many of the broad elements of the field.

Classical economics and the quantity theory of money

Until the early twentieth century, the quantity theory of money dominated as the favored macroeconomic model among classical economists. This theory gives the equation of exchange:

$$M \cdot V = P \cdot Q$$

The equation states that the *money supply* times the *velocity of money* (how quickly cash is passed from one person to another through a series of transactions)

is equivalent to nominal output (price level times quantity of goods and services produced). Classical economists, such as Irving Fisher assumed that real income and the velocity of money would be static in the short-run, so, based on this theory, a change in price level could only be brought about by a change in money supply. The classical quantity theory of money assumed that the demand for money was static and independent of other factors such as interest rates. Economists questioned the classical quantity theory of money during the Great Depression when the demand for money, and thus the velocity of money, fell sharply.

Keynesianism

Until the 1930s, most economic analysis did not separate out individual behavior from aggregate behaviour. With the Great Depression of the 1930s and the development of the concept of national income and product statistics, the field of macroeconomics began to expand. Before that time, comprehensive national accounts, as we know them today, did not exist. The ideas of the British economist John Maynard Keynes, who worked on explaining the Great Depression, were particularly influential.

After Keynes

One of the challenges of economics has been a struggle to reconcile macroeconomic and microeconomic models. Starting in the 1950s, macroeconomists developed micro-based models of macroeconomic behaviour, such as the consumption function. Dutch economist Jan Tinbergen developed the first national macroeconomic model, which he first built for the Netherlands and later applied to the United States and the United Kingdom after World War II. The first global macroeconomic model, Wharton Econometric Forecasting Associates LINK project, was initiated by Lawrence Klein and was mentioned in his citation for the Nobel Memorial Prize in Economics in 1980.

Theorists such as Robert Lucas Jr suggested (in the 1970s) that at least some traditional Keynesian (after John Maynard Keynes) macroeconomic models were questionable as they were not derived from assumptions about individual behaviour, but instead based on observed past correlations between macroeconomic variables. However, New Keynesian macroeconomics has generally presented microeconomic models to shore up their macroeconomic theorizing, and some Keynesians have contested the idea that microeconomic foundations are essential, if the model is analytically useful. An analogy might be, that the fact that quantum physics is not fully consistent with relativity theory does not mean that relativity is false.

The various schools of thought are not always in direct competition with one another, even though they sometimes reach differing conclusions. Macroeconomics is an ever evolving area of research. The goal of economic research is not to be "right," but rather to be useful (Friedman, M. 1953). An economic model, according to Friedman, should accurately reproduce observations beyond the data used to calibrate or fit the model.

Analytical approaches

The traditional distinction is between two different approaches to economics: Keynesian economics, focusing on demand; and supply-side economics, focusing on supply. Neither view is typically endorsed to the complete exclusion of the other, but most schools do tend clearly to emphasize one or the other as a

theoretical foundation.

- **Keynesian economics** The first stage of macroeconomics was a period of academic theory heavily influenced by the economist Keynes. It therefore has his name. This period focused on aggregate demand to explain levels of unemployment and the business cycle. That is, business cycle fluctuations should be reduced through fiscal policy (the government spends more or less depending on the situation) and monetary policy. Early Keynesian macroeconomics was "activist," calling for regular use of policy to stabilize the capitalist economy, while some Keynesians called for the use of incomes policies.
- **Neoclassical economics** For decades there existed a split between the Keynesians and classical economists, the former studying macroeconomics and the latter studying microeconomics. This schism has been resolved since the late 80s, however, and macroeconomics has evolved well into its second phase. The models Keynes used are now considered to be outdated, and new models have been designed that have greater logical consistency and are more closely related to microeconomics. The models used in macroeconomics today, however, have been built upon Keynesian models and are therefore similar. The main difference in this second stage of macroeconomics is an increased focus on monetary policy, such as interest rates and money supply. Macroeconomic theory today has harmonized the study of aggregate demand and supply with the study of money.

Schools

- **Monetarism**, led by Milton Friedman, holds that inflation is always and everywhere a monetary phenomenon. It rejects fiscal policy because it leads to "crowding out" of the private sector. Further, it does not wish to combat inflation or deflation by means of active demand management as in Keynesian economics, but by means of monetary policy rules, such as keeping the rate of growth of the money supply constant over time.
- **New classical economics**. The original theoretical impetus was the charge that Keynesian economics lacks microeconomic foundations -- i.e. its assertions are not founded in basic economic theory. This school emerged during the 1970s. This school asserts that it does not make sense to claim that the economy at any time might be "out-of-equilibrium". Fluctuations in aggregate variables follow from the individuals in the society continuously re-optimizing as new information on the state of the world is revealed. A neo classical economist would define macroeconomics as dynamic stochastic general equilibrium theory, which means that choices are made optimally considering time, uncertainty and all markets clearing.
- **New Keynesian economics**, which developed partly in response to new classical economics, strives to provide microeconomic foundations to Keynesian economics by showing how imperfect markets can justify demand management.
- **Post-Keynesian economics** represents a dissent from mainstream Keynesian economics, emphasizing the role of uncertainty, liquidity preference and the historical process in macroeconomics.

Macroeconomic Policies

In order to try to avoid major economic shocks, such as The Great Depression, governments make adjustments through policy changes which they hope will succeed in stabilizing the economy. Governments believe that the success of these adjustments is necessary to maintain stability and continue growth. This economic management is achieved through two types of strategies.

- **Fiscal Policy**

- Monetary Policy

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Marginal cost

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In economics and finance, **marginal cost** is the change in total cost that arises when the quantity produced changes by one unit. Mathematically, the marginal cost (MC) function is expressed as the derivative of the total cost (TC) function with respect to quantity (Q). Note that the marginal cost may change with volume, and so at each level of production, the marginal cost is the cost of the next unit produced.

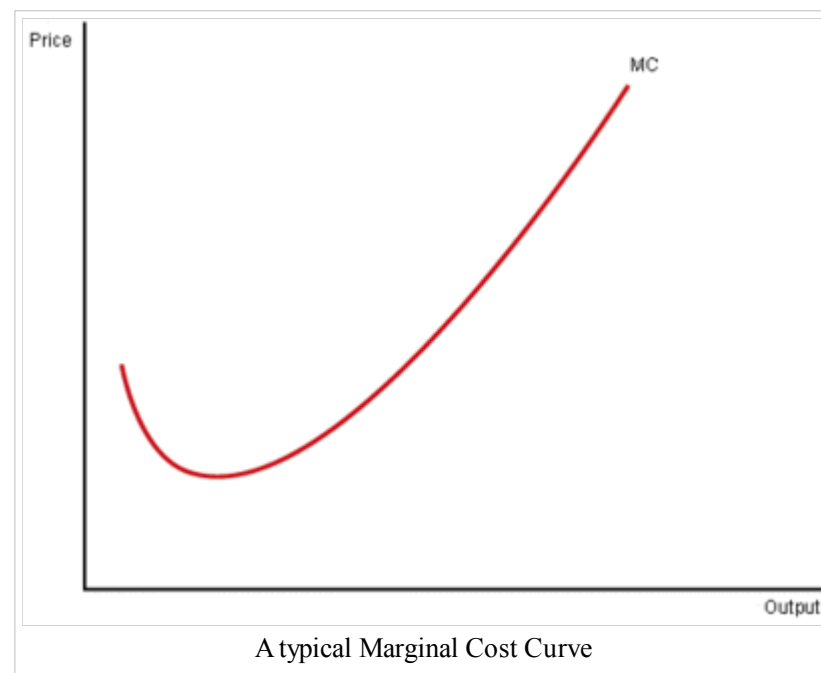
$$MC = \frac{dTC}{dQ}$$

In general terms, marginal cost at each level of production includes any additional costs required to produce the next unit. If producing additional vehicles requires, for example, building a new factory, the marginal cost of those *extra* vehicles includes the cost of the new factory. In practice, the analysis is segregated into short and long-run cases, and over the longest run, all costs are marginal. At each level of production and time period being considered, marginal costs include all costs which vary with the level of production, and other costs are considered fixed costs.

It is a general principle of economics that a (rational) producer should always produce (and sell) the last unit if the marginal cost is less than the market price. As the market price will be dictated by supply and demand, it leads to the conclusion that **marginal cost equals marginal revenue**. These general principles are subject to a number of other factors and exceptions, but marginal cost and marginal cost pricing play a central role in economic definitions of efficiency.

Marginal cost pricing is the principle that the market will, over time, cause goods to be sold at their marginal cost of production. Whether goods are in fact sold at their marginal cost will depend on competition and other factors, as well as the time frame considered. In the most general criticism of the theory of marginal cost pricing, economists note that monopoly power may allow a producer to maintain prices above the marginal cost; more specifically, if a good has low elasticity of demand (consumers are insensitive to changes in price) and supply of the product is limited (or can be limited), prices may be considerably higher than marginal cost. Since this description applies to most products with established brands, marginal pricing may be relatively rare; an example would be in markets for commodities.

A number of other factors can affect marginal cost and its applicability to real world problems. Some of these may be considered market failures. These may



include information asymmetries, the presence of negative or positive externalities, transaction costs, price discrimination and others.

Cost functions and relationship to average cost

In the most simple case, the total cost function and its derivative are expressed as follows, where Q represents the production quantity, VC represents variable costs (costs that vary with Q), and FC represents fixed costs:

$$TC = FC + VC$$

$$MC = \frac{dTC}{dQ} = \frac{d(FC + VC)}{dQ} = \frac{dVC}{dQ}$$

Since (by definition) fixed costs do not vary with production quantity, it drops out of the equation when it is differentiated. The important conclusion is that marginal cost *is not related to* fixed costs. This can be compared with average total cost or ATC, which is the total cost divided by the number of units produced and *does* include fixed costs.

$$ATC = \frac{FC + VC}{Q}$$

For discrete calculation without calculus, marginal cost equals the change in total (or variable) cost that comes with each additional unit produced. For instance, suppose the total cost of making 1 shoe is \$30 and the total cost of making 2 shoes is \$40. The marginal cost of producing the second shoe is $\$40 - \$30 = \$10$.

Economies of scale

Production may be subject to economies of scale (or diseconomies of scale). Increasing returns to scale are said to exist if additional units can be produced for less than the previous unit, that is, average cost is falling. This can only occur if average cost at any given level of production is higher than the marginal cost. Conversely, there may be levels of production where marginal cost is higher than average cost, and average cost will rise for each unit of production after that point. This type of production function is generically known as diminishing marginal productivity: at low levels of production, productivity gains are easy and marginal costs falling, but productivity gains become smaller as production increases; eventually, marginal costs rise because increasing output (with existing capital, labour or organization) becomes more expensive. For this generic case, minimum average cost occurs at the point where average cost and marginal cost are equal (when plotted, the two curves intersect); this point will *not* be at the minimum for marginal cost if fixed costs are greater than zero.

Short and long run costs and economies of scale

A textbook distinction is made between short-run and long-run marginal cost. The former takes as unchanged, for example, the capital equipment and overhead of the producer, any change in its production involving only changes in the inputs of labour, materials and energy. The latter allows all inputs, including capital items (plant, equipment, buildings) to vary.

A long-run cost function describes the cost of production as a function of output assuming that all inputs are obtained at current prices, that current technology is employed, and everything is being built new from scratch. In view of the durability of many capital items this textbook concept is less useful than one which allows for some scrapping of existing capital items or the acquisition of new capital items to be used with the existing stock of capital items acquired in the past. Long-run marginal cost then means the additional cost or the cost saving per unit of additional or reduced production, including the expenditure on additional capital goods or any saving from disposing of existing capital goods. Note that marginal cost upwards and marginal cost downwards may differ, in contrast with marginal cost according to the less useful textbook concept.

Economies of scale are said to exist when marginal cost according to the textbook concept falls as a function of output and is less than the average cost per unit. This means that the average cost of production from a larger new built-from-scratch installation falls below that from a smaller new built-from-scratch installation. Under the more useful concept, with an existing capital stock, it is necessary to distinguish those costs which vary with output from accounting costs which will also include the interest and depreciation on that existing capital stock, which may be of a different type from what can currently be acquired in past years at past prices. The concept of economies of scale then does not apply.

Externalities

Externalities are costs (or benefits) that are not borne by the parties to the economic transaction. A producer may, for example, pollute the environment, and others may bear those costs. A consumer may consume a good which produces benefits for society, such as education; because the individual does not receive all of the benefits, he may consume less than efficiency would suggest. Alternatively, an individual may be a smoker or alcoholic and impose costs on others. In these cases, production or consumption of the good in question may differ from the optimum level.

Negative externalities of production

Much of the time, private and social costs do not diverge from one another, but at times social costs may be either greater or less than private costs. When marginal social costs of production are greater than that of the private cost function, we see the occurrence of a negative externality of production. Productive processes that result in pollution are a textbook example of production that creates negative externalities.

Such externalities are a result of firms externalising their costs onto a third party in order to reduce their own total cost. As a result of externalising such costs we see that members of society will be negatively affected by such behaviour of the firm. In this case, we see that an increased cost of production on society creates a social cost curve that depicts a greater cost than the private cost curve.

In an equilibrium state we see that markets creating negative externalities of production will overproduce that good. As a result, the socially optimal production level would be lower than that observed.

Positive externalities of production

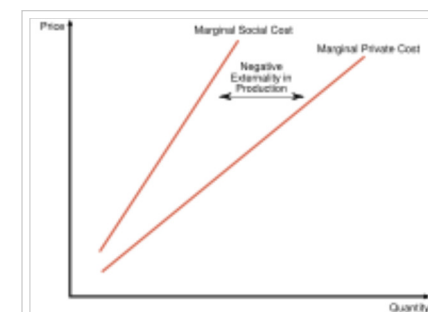
When marginal social costs of production are less than that of the private cost function, we see the occurrence of a positive externality of production. Production of public goods are a textbook example of production that create positive externalities. An example of such a public good, which creates a divergence in social and private costs, includes the production of education. It is often seen that education is a positive for any whole society, as well as a positive for those directly involved in the market.

Examining the relevant diagram we see that such production creates a social cost curve that is less than that of the private curve. In an equilibrium state we see that markets creating positive externalities of production will under produce that good. As a result, the socially optimal production level would be greater than that observed.

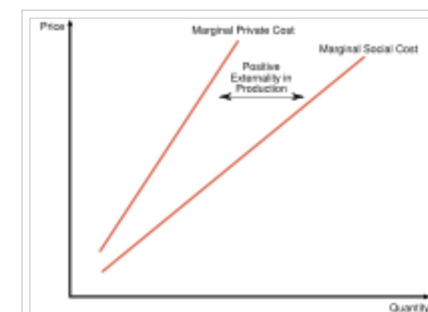
Social costs

Of great importance in the theory of marginal cost is the distinction between the marginal *private* and *social* costs. The marginal private cost shows the cost associated to the firm in question. It is the marginal private cost that is used by business decision makers in their profit maximization goals, and by individuals in their purchasing and consumption choices. Marginal social cost is similar to private cost in that it includes the cost functions of private enterprise but *also* that of society as a whole, including parties that have no direct association with the private costs of production. It incorporates all negative and positive externalities, of both production and consumption.

Hence, when deciding whether or how much to buy, buyers take account of the cost to society of their actions *if* private and social marginal cost coincide. The equality of price with social marginal cost, by aligning the interest of the buyer with the interest of the community as a whole is a necessary condition for economically efficient resource allocation.



Negative Externalities of Production



Positive Externalities of Production

Other cost definitions

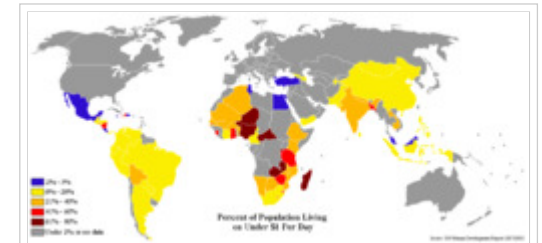
- **Fixed costs** are costs which do not vary with output, for example, rent. In the long run all costs can be considered variable.
- **Variable cost** also known as, *operating costs*, *prime costs*, *on costs* and *direct costs*, are costs which vary directly with the level of output, for example, labour, fuel, power and cost of raw material.
- **Social costs of production** are costs incurred by society, as a whole, resulting from private production.
- **Average total cost** is the total cost divided by the quantity of output.
- **Average fixed cost** is the fixed cost divided by the quantity of output.
- **Average variable cost** are variable costs divided by the quantity of output.

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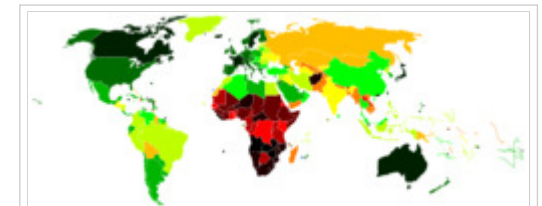
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Measuring poverty

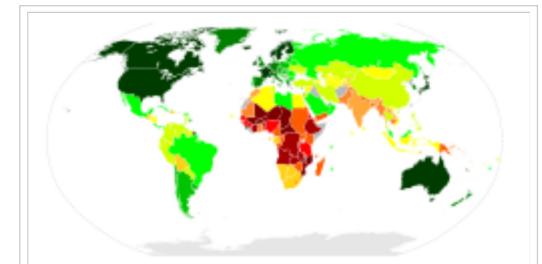
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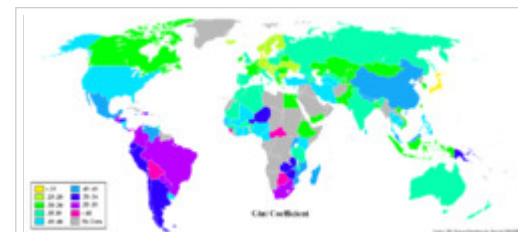
Map of world poverty by country, showing percentage of population living on less than 1 dollar per day. Unfortunately, information is missing for some countries.



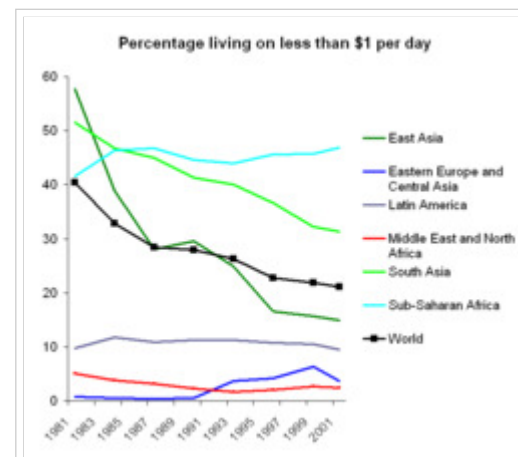
World map showing Life expectancy.



World map showing the Human Development Index.



World map showing the Gini coefficient, a measure of income inequality.



The percentage of the world's population living on less than \$1 per day has halved in twenty years. However, most of this improvement has occurred in East and South Asia. The graph shows the 1981-2001 period.

Although the most severe poverty is in the developing world, there is evidence of poverty in every region. In developed countries, this condition results in wandering homeless people and poor suburbs and ghettos. Poverty may be seen as the collective condition of poor people, or of poor groups, and in this sense entire nation-states are sometimes regarded as poor. To avoid stigma these nations are usually called developing nations.

When measured, poverty may be absolute or relative poverty. Absolute poverty refers to a set standard which is consistent over time and between countries. An example of an absolute measurement would be the percentage of the population eating less food than is required to sustain the human body (approximately 2000-2500 kilocalories per day).

Relative poverty, in contrast, views poverty as socially defined and dependent on social context. One relative measurement would be to compare the total wealth of the poorest one-third of the population with the total wealth of richest 1% of the population. In this case, the number of people counted as poor could increase while their income rise. There are several different income inequality metrics, one example is the Gini coefficient.

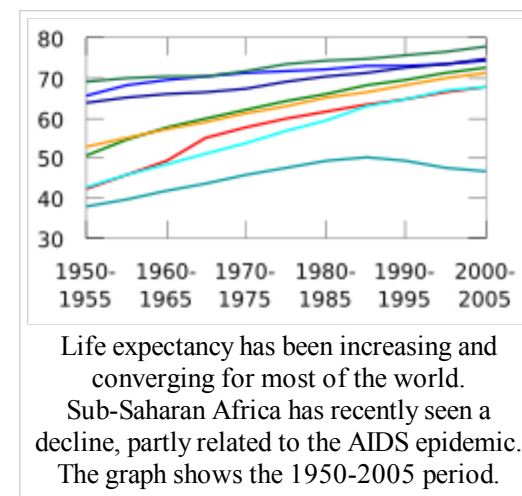
The main poverty line used in the OECD and the European Union is a relative poverty measure based on "economic distance", a level of income set at 50% of the median household income.

The United States, in contrast, uses an absolute poverty measure. The US poverty line was created in 1963-64 and was based on the dollar costs of the U.S. Department of Agriculture's "economy food plan" multiplied by a factor of three. The multiplier was based on research showing that food costs then accounted for about one third of the total money income. This one-time calculation has since been annually updated for inflation.

The US line has been critiqued as being either too high or too low. For example, the Heritage Foundation, a conservative U.S. think tank, objects to the fact that, according to the U.S. Census Bureau, 46% of those defined as being in poverty in the U.S. own their own home (with the average poor person's home having three bedrooms, with one and a half baths, and a garage).. Others, such as economist Ellen Frank, argue that the poverty measure is too low as families spend much less of their total budget on food than they did when the measure was established in the 1950s. Further, federal poverty statistics do not account for the widely varying regional differences in non-food costs such as housing, transport, and utilities.

Both absolute and relative poverty measures are usually based on a person's yearly income and frequently take no account of total wealth. Some people argue that this ignores a key component of economic well-being.

The World Bank defines poverty in absolute terms. The bank defines *extreme poverty* as living on less than \$1 per day US (PPP), and *moderate poverty* as less than \$2 a day. It has been estimated that in 2001, 1.1 billion people had consumption levels below \$1 a day and 2.7 billion lived on less than \$2 a day. The proportion of the developing world's population living in extreme economic poverty has fallen from 28 percent in 1990 to 21 percent in 2001. Much of the improvement has occurred in East and South Asia. In Sub-Saharan Africa GDP/capita shrank with 14 percent and extreme poverty increased from 41 percent in 1981 to 46 percent in 2001. Other regions have seen little or no change. In the early 1990s the transition economies of Europe and Central Asia experienced a sharp drop in income. Poverty rates rose to 6 percent at the end of the decade before beginning to recede. There are various criticisms of these measurements.



Some economists such as Guy Pfeffermann say that other non-monetary indicators of "absolute poverty" are also improving. Life expectancy has greatly increased in the developing world since WWII and is starting to close the gap to the developed world where the improvement has been smaller. Even in Sub-Saharan Africa, the least developed region, life expectancy increased from 30 years before World War II to a peak of about 50 years before the HIV pandemic and other diseases started to force it down to the current level of 47 years. Child mortality has decreased in every developing region of the world. The proportion of the world's population living in countries where per-capita food supplies are less than 2,200 calories (9,200 kilojoules) per day decreased from 56% in the mid-1960s to below 10% by the 1990s. Between 1950 and 1999, global literacy increased from 52% to 81% of the world. Women made up much of the gap: Female literacy as a percentage of male literacy has increased from 59% in 1970 to 80% in 2000. The percentage of children not in the labor force has also risen to over 90% in 2000 from 76% in 1960. There are similar trends for electric power, cars, radios, and telephones per capita, as well as the proportion of the population with access to clean water.

Income inequality for the world as a whole is diminishing. A 2002 study by Xavier Sala-i-Martin finds that this is driven mainly, but not fully, by the extraordinary growth rate of the incomes of the 1.2 billion Chinese citizens. However, unless Africa achieve economic growth, then China, India, the OECD and the rest of middle-income and rich countries will diverge away from it, and global inequality will rise. Thus, the economic growth of the African continent should be the priority of anyone concerned with decreasing global income inequality.

Poverty Gap Index The mean distance below the poverty line as a proportion of the poverty line where the mean is taken over the whole population, counting the non-poor as having zero poverty gap.

Even if poverty may be lessening for the world as a whole, it continues to be an enormous problem:

- One third of deaths - some 18 million people a year or 50,000 per day - are due to poverty-related causes. That's 270 million people since 1990, the majority women and children, roughly equal to the population of the US.
- Every year nearly 11 million children die before their fifth birthday.
- In 2001, 1.1 billion people had consumption levels below \$1 a day and 2.7 billion lived on less than \$2 a day
- 800 million people go to bed hungry every day.

The World Bank's "Voices of the Poor" , based on research with over 20,000 poor people in 23 countries, identifies a range of factors which poor people consider elements of poverty. Most important are those necessary for material well-being, especially food. Many others relate to social rather than material issues.

- precarious livelihoods
- excluded locations
- gender relationships
- problems in social relationships
- lack of security

- abuse by those in power
- dis-empowering institutions
- limited capabilities, and
- weak community organizations.

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Mercantilism

2008/9 Schools Wikipedia Selection. Related subjects: Economics; Systems of government

Mercantilism is an economic theory that the prosperity of a nation depends upon its capital, and that the volume of the world economy and international trade is unchangeable. Government economic policy based on these ideas is also sometimes called mercantilism, but is more properly known as the **mercantile system**. Some scholars conceive the mercantile system as a subset of, or synonymous with, the early stages of capitalism, while others consider mercantilism to be a distinct economic system.

Economic assets, or capital, are represented by bullion (gold, silver, and trade value) held by the state, which is best increased through a positive balance of trade with other nations (exports minus imports). Mercantilism suggests that the ruling government should advance these goals by playing a protectionist role in the economy, by encouraging exports and discouraging imports, especially through the use of tariffs.

Though traces of mercantilism can be found in the Roman Empire, mercantilism was established during the early modern period, from the 16th to the 18th centuries, a period which also included the emergence of the nation-state. This led to some of the first instances of significant government intervention and control over market economies, and it was during this period that much of the modern capitalist system was established. Internationally, mercantilism encouraged the many European wars of the period, and fueled European imperialism, as the European powers fought over "available" markets.

Criticism of mercantilism began to increase in the late 18th century, as the arguments of Adam Smith and the other classical economists won favour in the British Empire (among such advocates as Richard Cobden) and to a lesser degree in the rest of Europe (with the notable exception of Germany where the Historical school of economics was favored throughout the 19th and early 20th century). Some have said that America chose not to adhere to classical economics, preferring a form of neo-mercantilism embodied by the "American School," but in 1792 Alexander Hamilton, basing his policies on his study of Adam Smith, established a gold standard designed to conform to that of Britain to promote international trade. America drifted from the gold standard a number of times prior to the Great Depression, but always returned to the Hamilton gold standard. The Great Depression influenced American government to return to neo-mercantilism imposing high protectionist tariffs and suspending private ownership of gold. Finally, during the New Deal, the currency was devalued based on the government's new neo-mercantilist leaning. Today, mercantilism has seen a resurgence in economic theories that focus on the trade surplus and deficit as determinants of monetary value, but mercantilism as a whole is rejected by many economists. However, elements of mercantilism are still accepted by some economists, including Ravi Batra, Pat Choate, Eammon Fingleton, and journalist Michael Lind.

History

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :482 of 626.



A painting of a French seaport from 1638, at the height of mercantilism

Some economic historians (like Peter Temin) argue that the economy of the Early Roman Empire was a market economy and one of the most advanced agricultural economies to have existed (in terms of productivity, urbanization and development of capital markets), comparable to the most advanced economies of the world before the Industrial Revolution, namely the economies of 18th century England and 17th century Netherlands. There were markets for every type of good, for land, for cargo ships; there was even an insurance market.

Early free markets were also present in the Caliphate, where an early market economy and early form of the mercantile system was developed between the 8th-12th centuries, which some refer to as "Islamic capitalism". A vigorous monetary economy was created on the basis of the expanding levels of circulation of a stable high-value currency (the dinar) and the integration of monetary areas that were previously independent. Innovative new business techniques and forms of business organisation were introduced, which included trading companies, bills of exchange, contracts, long-distance trade, big businesses, partnerships (*mufawada* in Arabic) such as limited partnerships (*mudaraba*), and the concepts of credit, profit, capital (*al-mal*) and capital accumulation (*nama al-mal*). Many of these early mercantile concepts were adopted and further advanced in medieval Europe from the 13th century onwards.

Many European economists between 1500 and 1750 are today generally considered mercantilists; however, these economists did not see themselves as contributing to a single economic ideology. The bulk of what is commonly called "mercantilist literature" appeared in the 1620s in Great Britain. However, the term was coined by the French writer Victor de Riqueti, marquis de Mirabeau in 1763 in his *Philosophie Rurale*, although the French form of mercantilism was called Colbertism after 1600s French finance minister Jean-Baptiste Colbert. Perhaps the last major mercantilist work was James Steuart's *Principles of Political Oeconomy* published in 1767. Adam Smith, who was critical of the idea, was the first person to organize formally most of the contributions of mercantilists into what he called "the mercantile system" in his 1776 book *The Wealth of Nations*. Smith saw English merchant Thomas Mun (1571-1641) as a major creator of the mercantile system, especially in his posthumously published *Treasure by Forraign Trade* (1664), which Smith considered the archetype of manifesto of the movement.



Merchants in Venice

Beyond England, Italy, France, and Spain had noted writers who had mercantilist themes in their work, indeed the earliest examples of mercantilism are from outside of England: in Italy, Giovanni Botero (1544-1617) and Antonio Serra (1580-?), in France, Colbert and some other precursors to the physiocrats, in Spain, the School of Salamanca writers Francisco de Vitoria (1480 or 1483 – 1546), Domingo de Soto (1494-1560), Martin de Azpilcueta (1491 - 1586), and Luis de Molina (1535-1600). Themes also existed in writers from the German historical school from List, as well as followers of the "American system" and British "free-trade imperialism," thus stretching the system into the nineteenth century. However, many British writers, including Mun and Misselden, were merchants, while many of the writers from other countries were public officials. Beyond mercantilism as a way of understanding the wealth and power of nations, Mun and Misselden are noted for their viewpoints on a wide range of economic matters.

Mun and Misselden

Much of Mun and Misselden's writings are a result of the discussion about the depression England was in at the time, starting in the early 1620s. English merchant Gerard de Malynes argued that the depression was due to weakening terms of trade for English goods due to a conspiracy by foreign money speculators (especially Dutch and Jewish) to lower the value of English Money. de Malynes saw speculation as a moral evil, and wrote about it in his 1601 pamphlet, "The Canker of England's Commonwealth". Mun, who chaired a Privy Council committee which sought a solution to the crisis, felt along with Misselden that the weakening terms of trade was due to a negative balance of trade between England and other countries since the beginning of the Thirty Years War. Beyond questions of validity of Mun's and Misselden's arguments, Swedish historian of economics Lars Magnusson emphasizes the importance of aspects of their arguments on future thinkers such as Josiah Child, Charles Davenant, Nicholas Barbon, Sir Dudley North, John Martyn, and William Petty. Magnusson traces the importance of Mun and Misselden to their belief in the role of supply and demand for bullion on balance of payments as a cause of depression, and of their emphasis on amoral self-interested agents rather than looking at economic matters as moral questions. This meant that Mun and Misselden were able to introduce the Baconian scientific method of Francis Bacon to the area of economics, and thus base their work on empiricism in a much stronger way than those who more tightly tied economics with morality.

Theory

Mercantilism as a whole cannot be considered a unified theory of economics because mercantilism has traditionally been driven more by the political and commercial interests of the State and security concerns than by abstract ideas. There were no mercantilist writers presenting an overarching scheme for the ideal economy, as Adam Smith would later do for classical (*laissez-faire*) economics. Rather, each mercantilist writer tended to focus on a single area of the economy. Only later did non-mercantilist scholars integrate these "diverse" ideas into what they called *mercantilism*. Some scholars thus reject the idea of mercantilism completely, arguing that it gives "a false unity to disparate events". Smith saw the mercantile system as an enormous conspiracy by manufacturers and merchants against consumers, a view that has led some authors, especially Robert E. Ekelund and Robert D. Tollison to call mercantilism "a rent-seeking society". To a certain extent, mercantilist doctrine itself made a general theory of economics impossible. Mercantilists viewed the economic system as a zero-sum game, in which any gain by one party required a loss by another. Thus, any system of policies that benefited one group would by definition harm the other, and there was no possibility of economics being used to maximize the "commonwealth", or common good. Mercantilists' writings were also generally created to rationalize particular practices rather than as investigations into the best policies.

Mercantilist domestic policy was more fragmented than its trade policy. While Adam Smith portrayed mercantilism as supportive of strict controls over the economy, many mercantilists disagreed. The early modern era was one of letters patent and government-imposed monopolies; some mercantilists supported these, but others acknowledged the corruption and inefficiency of such systems. Many mercantilists also realized that the inevitable results of quotas and price ceilings were black markets. One notion mercantilists widely agreed upon was the need for economic oppression of the working population; laborers and farmers were to live at the "margins of subsistence". The goal was to maximize production, with no concern for consumption. Extra money, free time, or education for the "lower classes" was seen to inevitably lead to vice and laziness, and would result in harm to the economy.

Scholars are divided on why mercantilism was the dominant economic ideology for two and a half centuries. One group, represented by Jacob Viner, argues that mercantilism was simply a straightforward, common-sense system whose logical fallacies could not be discovered by the people of the time, as they simply lacked the required analytical tools. The second school, supported by scholars such as Robert B. Ekelund, contends that mercantilism was not a mistake, but rather the best possible system for those who developed it. This school argues that mercantilist policies were developed and enforced by rent-seeking merchants

and governments. Merchants benefited greatly from the enforced monopolies, bans on foreign competition, and poverty of the workers. Governments benefited from the high tariffs and payments from the merchants. Whereas later economic ideas were often developed by academics and philosophers, almost all mercantilist writers were merchants or government officials.

Mercantilism developed at a time when the European economy was in transition. Isolated feudal estates were being replaced by centralized nation-states as the focus of power. Technological changes in shipping and the growth of urban centers led to a rapid increase in international trade. Mercantilism focused on how this trade could best aid the states. Another important change was the introduction of double-entry bookkeeping and modern accounting. This accounting made extremely clear the inflow and outflow of trade, contributing to the close scrutiny given to the balance of trade. Of course, the impact of the discovery of America cannot be ignored. New markets and new mines propelled foreign trade to previously inconceivable heights. The latter led to “the great upward movement in prices” and an increase in “the volume of merchant activity itself.”

Prior to mercantilism, the most important economic work done in Europe was by the medieval scholastic theorists. The goal of these thinkers was to find an economic system that was compatible with Christian doctrines of piety and justice. They focused mainly on microeconomics and local exchanges between individuals. Mercantilism was closely aligned with the other theories and ideas that were replacing the medieval worldview. This period saw the adoption of Niccolò Machiavelli's *realpolitik* and the primacy of the *raison d'état* in international relations. The mercantilist idea that all trade was a zero sum game, in which each side was trying to best the other in a ruthless competition, was integrated into the works of Thomas Hobbes. Note that non-zero sum games such as prisoner's dilemma can also be consistent with a mercantilist view. In prisoner's dilemma, players are rewarded for defecting against their opponents - even though everyone would be better off if everyone could cooperate. More modern views of economic co-operation amidst ruthless competition can be seen in the folk theorem of game theory.

The dark view of human nature fit well with the Puritan view of the world, and some of the most stridently mercantilist legislation, such as the Navigation Acts, was introduced by the government of Oliver Cromwell.

Criticisms

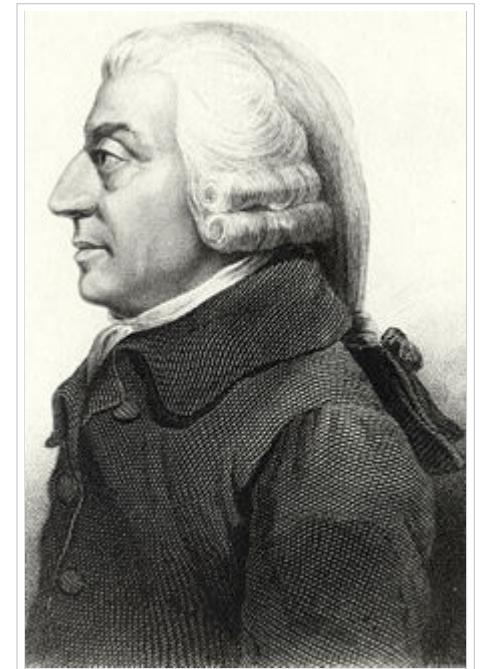
Adam Smith and David Hume are considered to be the founding fathers of anti-mercantilist thought. A number of scholars found important flaws with mercantilism long before Adam Smith developed an ideology that could fully replace it. Critics like Dudley North, John Locke, and David Hume undermined much of mercantilism, and it steadily lost favour during the eighteenth century. Mercantilists failed to understand the notions of absolute advantage and comparative advantage (although this idea was only fully fleshed out in 1817 by David Ricardo) and the benefits of trade. For instance, Portugal was a far more efficient producer of wine than England, while in England it was relatively cheaper to produce cloth. Thus if Portugal specialized in wine and England in cloth, *both* states would end up *better off* if they traded. This is an example of the reciprocal benefits of trade due to a comparative advantage. In modern economic theory, trade is *not* a zero-sum game of cutthroat competition, because both sides can benefit (rather, it is an iterated prisoner's dilemma). By imposing mercantilist import restrictions and tariffs instead, *both* nations ended up *poorer*.

David Hume famously noted the impossibility of the mercantilists' goal of a constant positive balance of trade. As bullion flowed into one country, the supply would increase and the value of bullion in that state would steadily decline relative to other goods. Conversely, in the state exporting bullion, its value would slowly rise. Eventually it would no longer be cost-effective to export goods from the high-price country to the low-price country, and the balance of trade would reverse itself. Mercantilists fundamentally misunderstood this, long arguing that an increase in the money supply simply meant that everyone gets richer.

The importance placed on bullion was also a central target, even if many mercantilists had themselves begun to de-emphasize the importance of gold and silver. Adam Smith noted that at the core of the mercantile system was the "popular folly of confusing wealth with money," bullion was just the same as any other commodity, and there was no reason to give it special treatment. More recently, scholars have discounted the accuracy of this critique. They believe that Mun and Misselden were not making this mistake in the 1620s, and point to their followers Child and Davenant, who, in 1699, wrote: "Gold and Silver are indeed the Measure of Trade, but that the Spring and Original of it, in all nations is the Natural or Artificial Product of the Country; that is to say, what this Land or what this Labour and Industry Produces." The critique that mercantilism was a form of rent-seeking has also seen criticism, as scholars such as Jacob Viner in the 1930s point out that merchant mercantilists such as Mun understood that they would not gain by higher prices for English wares abroad.

The first school to completely reject mercantilism was the physiocrats, who developed their theories in France. Their theories also had several important problems, and the replacement of mercantilism did not come until Adam Smith published *The Wealth of Nations* in 1776. This book outlines the basics of what is today known as classical economics. Smith spends a considerable portion of the book rebutting the arguments of the mercantilists, though often these are simplified or exaggerated versions of mercantilist thought.

Scholars are also divided over the cause of mercantilism's end. Those who believe the theory was simply an error hold that its replacement was inevitable as soon as Smith's more accurate ideas were unveiled. Those who feel that mercantilism was rent seeking hold that it ended only when major power shifts occurred. In Britain, mercantilism faded as the Parliament gained the monarch's power to grant monopolies. While the wealthy capitalists who controlled the



Much of Adam Smith's *The Wealth of Nations* is an attack on mercantilism

House of Commons benefited from these monopolies, Parliament found it difficult to implement them because of the high cost of group decision making.

Mercantilist regulations were steadily removed over the course of the eighteenth century in Britain, and during the 19th century the British government fully embraced free trade and Smith's laissez-faire economics. On the continent, the process was somewhat different. In France economic control remained in the hands of the royal family and mercantilism continued until the French Revolution. In Germany mercantilism remained an important ideology in the nineteenth and early twentieth centuries, when the historical school of economics was paramount.

Legacy

In the English-speaking world, Adam Smith's utter repudiation of mercantilism was accepted, eventually, as public policy in the British Empire and in the United States. Initially it was rejected in the United States by such prominent figures as Alexander Hamilton, Henry Clay, Henry Charles Carey, and Abraham Lincoln and in Britain by such figures as Thomas Malthus. When Britain passed its Corn Laws in 1815 Thomas Malthus thought such restrictions were a good idea, but David Ricardo thought them not. In 1849 they were repealed largely on "Free Market" arguments given by Sir Richard Peel, though this was hotly contested and others such as Benjamin Disraeli felt that the real reason was to keep grain prices low and empower "Commercial Interests." In the 20th century, most economists on both sides of the Atlantic have come to accept that in some areas mercantilism had been correct. Most prominently, the economist John Maynard Keynes explicitly supported some of the tenets of mercantilism. Adam Smith had rejected focusing on the money supply, arguing that goods, population, and institutions were the real causes of prosperity. Keynes argued that the money supply, balance of trade, and interest rates were of great importance to an economy. These views later became the basis of monetarism, whose proponents actually reject much of Keynesian monetary theory, and has developed as one of the most important modern schools of economics.

Adam Smith rejected the mercantilist focus on production, arguing that consumption was the only way to grow an economy. Keynes argued that encouraging production was just as important as consumption. Keynes also noted that in the early modern period the focus on the bullion supplies was reasonable. In an era before paper money, an increase for bullion was one of the few ways to increase the money supply. Keynes and other economists of the period also realized that the balance of payments is an important concern, and since the 1930s, all nations have closely monitored the inflow and outflow of capital, and most economists agree that a favorable balance of trade is desirable. Keynes also adopted the essential idea of mercantilism that government intervention in the economy is a necessity. While Keynes' economic theories have had a major impact, few have accepted his effort to rehabilitate the word *mercantilism*. Today the word remains a pejorative term, often used to attack various forms of protectionism. The similarities between Keynesianism, and its successor ideas, with mercantilism have sometimes led critics to call them neo-mercantilism. Some other systems that do copy several mercantilist policies, such as Japan's economic system, are also sometimes called neo-mercantilist. In an essay appearing in the May 14, 2007 issue of *Newsweek*, economist Robert J. Samuelson argued that China was pursuing an essentially mercantilist trade policy that threatened to undermine the post-World War II international economic structure.

One area Smith was reversed on well before Keynes was that of the use of data. Mercantilists, who were generally merchants or government officials, gathered vast amounts of trade data and used it considerably in their research and writing. William Petty, a strong mercantilist, is generally credited with being the first to use empirical analysis to study the economy. Smith rejected this, arguing that deductive reasoning from base principles was the proper method to discover economic truths. Today, many schools of economics accept that both methods are important, the Austrian School being a notable exception.

In specific instances, protectionist mercantilist policies also had an important and positive impact on the state that enacted them. Adam Smith himself, for instance, praised the Navigation Acts as they greatly expanded the British merchant fleet, and played a central role in turning Britain into the naval and economic superpower that it was for several centuries. Some economists thus feel that protecting infant industries, while causing short term harm, can be beneficial in the long term.

Nonetheless, *The Wealth of Nations* had a profound impact on the end of the mercantilist era and the later adoption of free market policy. By 1860, England removed the last vestiges of the mercantile era. Industrial regulations, monopolies and tariffs were withdrawn.

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Microeconomics

2008/9 Schools Wikipedia Selection. Related subjects: Economics

Microeconomics is a branch of economics that studies how individuals, households and firms make decisions to allocate limited resources, typically in markets where goods or services are being bought and sold.

Microeconomics examines how these decisions and behaviours affect the supply and demand for goods and services, which determines prices; and how prices, in turn, determine the supply and demand of goods and services.

Macroeconomics, on the other hand, involves the "sum total of economic activity, dealing with the issues of growth, inflation and unemployment, and with national economic policies relating to these issues" and the effects of government actions (such as changing taxation levels) on them. Particularly in the wake of the Lucas critique, much of modern macroeconomic theory has been built upon 'microfoundations' — i.e. based upon basic assumptions about micro-level behaviour.

One of the goals of microeconomics is to analyze market mechanisms that establish relative prices amongst goods and services and allocation of limited resources amongst many alternative uses. Microeconomics analyzes market failure, where markets fail to produce efficient results, as well as describing the theoretical conditions needed for perfect competition. Significant fields of study in microeconomics include general equilibrium, markets under asymmetric information, choice under uncertainty and economic applications of game theory. Also considered is the elasticity of products within the market system.

Assumptions and definitions

The theory of supply and demand usually assumes that markets are perfectly competitive. This implies that there are many buyers and sellers in the market and none of them have the capacity to significantly influence prices of goods and services. In many real-life transactions, the assumption fails because some individual buyers or sellers or groups of buyers or sellers do have the ability to influence prices. Quite often a sophisticated analysis is required to understand the demand-supply equation of a good. However, the theory works well in simple situations.

Mainstream economics does not assume *a priori* that markets are preferable to other forms of social organization. In fact, much analysis is devoted to cases where so-called market failures lead to resource allocation that is suboptimal by some standard (highways are the classic example, profitable to all for use but not directly profitable for anyone to finance). In such cases, economists may attempt to find policies that will avoid waste directly by government control, indirectly by regulation that induces market participants to act in a manner consistent with optimal welfare, or by creating "missing markets" to enable efficient trading where none had previously existed. This is studied in the field of collective action. It also must be noted that "optimal welfare" usually takes on a Paretian norm, which in its mathematical application of Kaldor-Hicks Method, does not stay consistent with the Utilitarian norm within the normative side of economics which studies collective action, namely public choice. Market failure in positive economics (microeconomics) is limited in implications without

mixing the belief of the economist and his or her theory.

The demand for various commodities by individuals is generally thought of as the outcome of a utility-maximizing process. The interpretation of this relationship between price and quantity demanded of a given good is that, given all the other goods and constraints, this set of choices is that one which makes the consumer happiest.

Modes of operation

It is assumed that all firms are following rational decision-making, and will produce at the profit-maximizing output. Given this assumption, there are four categories in which a firm's profit may be considered.

- A firm is said to be making an economic profit when its average total cost is less than the price of each additional product at the profit-maximizing output. The economic profit is equal to the quantity output multiplied by the difference between the average total cost and the price.
- A firm is said to be making a normal profit when its economic profit equals zero. This occurs where average total cost equals price at the profit-maximizing output.
- If the price is between average total cost and average variable cost at the profit-maximizing output, then the firm is said to be in a loss-minimizing condition. The firm should still continue to produce, however, since its loss would be larger if it were to stop producing. By continuing production, the firm can offset its variable cost and at least part of its fixed cost, but by stopping completely it would lose the entirety of its fixed cost.
- If the price is below average variable cost at the profit-maximizing output, the firm should go into shutdown. Losses are minimized by not producing at all, since any production would not generate returns significant enough to offset any fixed cost and part of the variable cost. By not producing, the firm loses only its fixed cost. By losing this fixed cost the company faces a challenge. It must either exit the market or remain in the market and risk a complete loss.

Market failure

In microeconomics, the term "market failure" does *not* mean that a given market has ceased functioning. Instead, a market failure is a situation in which a given market does not efficiently organize production or allocate goods and services to consumers. Economists normally apply the term to situations where the inefficiency is particularly dramatic, or when it is suggested that non-market institutions would provide a more desirable result. On the other hand, in a political context, stakeholders may use the term market failure to refer to situations where market forces do not serve the public interest.

The four main types or causes of market failure are:

- Monopolies or other cases of abuse of market power where a "single buyer or seller can exert significant influence over prices or output"). Abuse of market power can be reduced by using antitrust regulations.
- Externalities, which occur in cases where the "market does not take into account the impact of an economic activity on outsiders." There are positive externalities and negative externalities. Positive externalities occur in cases such as when a television program on family health improves the public's health. Negative externalities occur in cases such as when a company's processes pollutes air or waterways. Negative externalities can be reduced by

using government regulations, taxes, or subsidies, or by using property rights to force companies and individuals to take the impacts of their economic activity into account.

- Public goods are goods that have the characteristics that they are non-excludable and non-rivalous and include national defense and public health initiatives such as draining mosquito-breeding marshes. For example, if draining mosquito-breeding marshes was left to the private market, far fewer marshes would probably be drained. To provide a good supply of public goods, nations typically use taxes that compel all residents to pay for these public goods (due to scarce knowledge of the positive externalities to third parties/social welfare); and
- Cases where there is asymmetric information or uncertainty (information inefficiency). Information asymmetry occurs when one party to a transaction has more or better information than the other party. For example, used-car salespeople may know whether a used car has been used as a delivery vehicle or taxi, information that may not be available to buyers. Typically it is the seller that knows more about the product than the buyer, but this is not always the case. An example of a situation where the buyer may have better information than the seller would be an estate sale of a house, as required by a last will and testament. A real estate broker purchasing this house may have more information about the house than the family members of the deceased.

This situation was first described by Kenneth J. Arrow in a seminal article on health care in 1963 entitled "Uncertainty and the Welfare Economics of Medical Care," in the *American Economic Review*. George Akerlof later used the term asymmetric information in his 1970 work *The Market for Lemons*. Akerlof noticed that, in such a market, the average value of the commodity tends to go down, even for those of perfectly good quality, because the buyer has no way of knowing whether the product they are buying will turn out to be a "lemon" (a defective product).

Opportunity cost

Although opportunity cost can be hard to quantify, the effect of opportunity cost is universal and very real on the individual level. In fact, this principle applies to all decisions, not just economic ones. Since the work of the Austrian economist Friedrich von Wieser, opportunity cost has been seen as the foundation of the marginal theory of value.

Opportunity cost is one way to measure the cost of something. Rather than merely identifying and adding the costs of a project, one may also identify the next best alternative way to spend the same amount of money. The forgone profit of this *next best alternative* is the opportunity cost of the original choice. A common example is a farmer that chooses to farm his land rather than rent it to neighbors, wherein the opportunity cost is the forgone profit from renting. In this case, the farmer may expect to generate more profit himself. Similarly, the opportunity cost of attending university is the lost wages a student could have earned in the workforce, rather than the cost of tuition, books, and other requisite items (whose sum makes up the total cost of attendance). The opportunity cost of a vacation in the Bahamas might be the down payment money for a house.

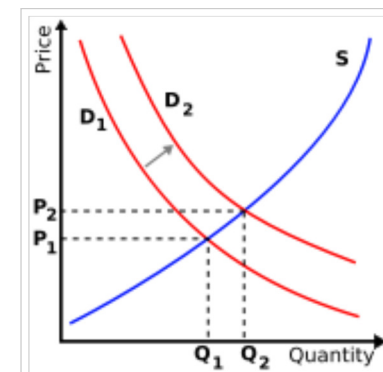
Note that opportunity cost is not the *sum* of the available alternatives, but rather the benefit of the single, best alternative. Possible opportunity costs of the city's decision to build the hospital on its vacant land are the loss of the land for a sporting centre, *or* the inability to use the land for a parking lot, *or* the money that could have been made from selling the land, *or* the loss of any of the various other possible uses—but not all of these in aggregate. The true opportunity cost would be the forgone profit of the most lucrative of those listed.

One question that arises here is how to assess the benefit of dissimilar alternatives. We must determine a dollar value associated with each alternative to

facilitate comparison and assess opportunity cost, which may be more or less difficult depending on the things we are trying to compare. For example, many decisions involve environmental impacts whose dollar value is difficult to assess because of scientific uncertainty. Valuing a human life or the economic impact of an Arctic oil spill involves making subjective choices with ethical implications.

Applied microeconomics

Applied microeconomics includes a range of specialized areas of study, many of which draw on methods from other fields. Much applied works use little more than the basics of **price theory**, supply and demand. **Industrial organization and regulation** examines topics such as the entry and exit of firms, innovation, role of trademarks. **Law and economics** applies microeconomic principles to the selection and enforcement of competing legal regimes and their relative efficiencies. **Labor economics** examines wages, employment, and labor market dynamics. **Public finance** (also called public economics) examines the design of government tax and expenditure policies and economic effects of these policies (e.g., social insurance programs). **Political economy** examines the role of political institutions in determining policy outcomes. **Health economics** examines the organization of health care systems, including the role of the health care workforce and health insurance programs. **Urban economics**, which examines the challenges faced by cities, such as are sprawl, air and water pollution, traffic congestion, and poverty, draws on the fields of urban geography and sociology. The field of **financial economics** examines topics such as the structure of optimal portfolios, the rate of return to capital, econometric analysis of security returns, and corporate financial behaviour. The field of **economic history** examines the evolution of the economy and economic institutions, using methods and techniques from the fields of economics, history, geography, sociology, psychology, and political science.



The supply and demand model describes how prices vary as a result of a balance between product availability at each price (supply) and the desires of those with purchasing power at each price (demand). The graph depicts a right-shift in demand from D_1 to D_2 along with the consequent increase in price and quantity required to reach a new market-clearing equilibrium point on the supply curve (S).

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Minimum wage

2008/9 Schools Wikipedia Selection. Related subjects: Economics

A *minimum wage* is the lowest hourly, daily or monthly wage that employers may legally pay to employees or workers. First enacted in Australia and New Zealand in the late nineteenth century, minimum wage laws are now in force in more than 90% of all countries.

Many supporters of the minimum wage assert that it is a matter of ethics and social justice that helps reduce exploitation and ensures workers can afford what are considered to be basic necessities. Among some American economists opinions of the minimum wage tend to be less favorable. A 2000 survey by Dan Fuller and Doris Geide-Stevenson reports that of a sample of 308 American Economic Association economists, 45.6% fully agreed with the statement, "a minimum wage increases unemployment among young and unskilled workers", 27.9% partially agreed, and 26.5% disagreed.

History

The history of minimum wage laws begins in 1896, when New Zealand established arbitration boards with the Industrial Conciliation and Arbitration Act. Also in 1896 in Victoria, Australia, an amendment to the Factories Act provided for the creation of a wages board. The wages board did not set a universal minimum wage, but set basic wages for six industries that were considered to pay low wages.. First enacted as a four-year experiment, the wages board was renewed in 1900 and made permanent in 1904. By that time it covered 150 different industries. By 1902, other Australian states, such as New South Wales and Western Australia, had also formed wages boards.

In 1907, the Harvester decision was handed down in Australia. It established a 'living wage' for a man, his wife and two children to "live in frugal comfort." In 1907 Ernest Aves was sent by the British Secretary of State for the Home Department to investigate the results of the minimum wage laws in Australia and New Zealand. In part as a result of his report, Winston Churchill, then president of the Board of Trade, introduced the Trade Boards Act on March 24, 1909. It became law in October of that year, and went into effect in January of 1910. In 1912, the state of Massachusetts, United States, set minimum wages for women and children. In the United States, statutory minimum wages were first introduced nationally in 1938. In addition to the federal minimum wage, nearly all states within the United States have their own minimum wage laws with the exception of South Carolina, Tennessee, Alabama, Mississippi and Louisiana. In the 1960s, minimum wage laws were introduced into Latin America as part of the Alliance for Progress; however these minimum wages were, and are, low.

Minimum wage law

Minimum wage laws vary greatly across many different jurisdictions, not only in setting a particular amount of money (e.g. US\$5.85 per hour under U.S. Federal law, or £5.52 (for those aged 22+) in the United Kingdom), but also in terms of which pay period (e.g. Russia and China set monthly minimums) or the scope of coverage. For instance, not all workers may be paid a full minimum wage, because exceptions may be made for teenagers or those under 21. Some jurisdictions

allow employers to count tips given to their workers as credit towards the minimum wage level.

Europe

See also: National Minimum Wage Act 1998 for UK

In the European Union, 20 out of 27 member states currently have national minimum wages. Some countries, such as Norway, Sweden, Finland, Denmark, Switzerland, Germany, Austria, Italy, and Cyprus have no minimum wage laws, but rely on employer groups and trade unions to set minimum earnings through collective bargaining.

North America

Australia

A 2005 study found that the Australian federal minimum wage was 58% of the median wage, compared to 45% in Britain and 34% in the USA. The typical minimum wage worker is in a middle-income household.

In Australia, on 14 December 2005, the Australian Fair Pay Commission was established under the Workplace Relations Amendment (WorkChoices) Act 2005. It is the responsibility of the commission to adjust the standard federal minimum wage, replacing the role of the Australian Industrial Relations Commission that took submissions from a variety of sources to determine appropriate minimum wages. As of 2007, the minimum wage is AUD\$13.74 per hour or AUD\$522.12 per week.

Minimum wage economics

Economic theory analyzes the effects of minimum wages within the context of labor markets (c.f. labor economics). In a labor market, workers supply their labor, which is sold for wages, and employers demand labor.

The traditional economic argument views the labor market as perfectly competitive. In perfectly competitive markets, the market price settles to the marginal value of the product. Therefore, under the perfect competition assumption, absent a minimum wage, workers are paid their marginal value. As is the case with all (binding) price floors above the equilibrium, minimum wage laws are predicted to result in more people being willing to offer their labor for hire, but fewer employers wishing to hire labor. The result is a surplus of labor, or, in this case, unemployment.

Supply of labor curve

The amount of labor that workers supply is generally considered to be positively related to the nominal wage; as wage increases, labor supplied increases.

Economists graph this relationship with the wage on the vertical axis and the quantity of labor supplied on the horizontal axis. The supply of labor curve then is upward sloping, and is depicted as a line moving up and to the right.

The upward sloping labor supply curve results from the fact that, as wages rise, people in the labor force are incented to spend less time in leisure and more time working while people outside the labor force are incented to join the labor force. As wages rise, the cost of spending time in leisure and the cost of not being a labor force participant rises.

Demand for labor curve

The amount of labor demanded by firms is generally assumed to be negatively related to the nominal wage; as wages increase, firms demand less labor. As with the supply of labor curve, this relationship is often depicted on a graph with wages represented on the vertical axis, and the quantity of labor demanded on the horizontal axis. The demand for labor curve is downward sloping, and is depicted as a line moving down and to the right on a graph.

A firm's cost is a function of the wage rate. As the wage rate rises, it becomes more expensive for firms to hire workers and so firms hire fewer workers.

Supply and demand for labor

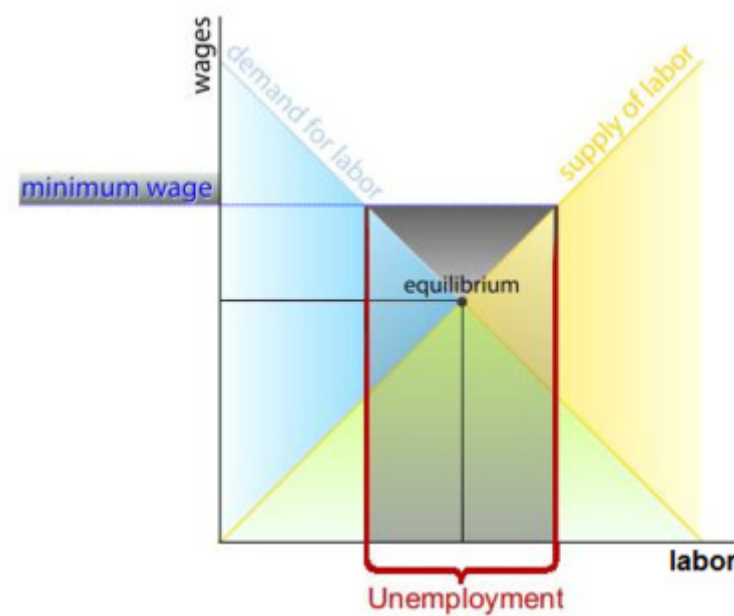
Combining the demand and supply curves for labor allows us to examine the effect of a minimum wage.

The point at which the demand for labor curve and the supply of labor curve intersect is the labor market equilibrium. At the equilibrium, the number of people seeking jobs (the quantity supplied of labor) equals the number of jobs available (the quantity demanded of labor). If the wage rate rises above the equilibrium wage, then the number of people seeking jobs will exceed the number of jobs available. This is unemployment.

In the absence of government intervention, competition among workers for the limited number of jobs would cause wages to fall until the wage rate reached the equilibrium and the unemployment was eliminated. A minimum wage prevents wages from falling and so the unemployment remains.

Standard theory criticism

Gary Fields, Professor of Labor Economics and Economics at Cornell University, argues that the standard "textbook model" for the minimum wage is "ambiguous", and that the standard theoretical arguments incorrectly measure only a one-sector market. Fields says a two-sector market, where "the self-employed, service workers, and farm workers are typically excluded



from minimum-wage coverage... [and with] one sector with minimum-wage coverage and the other without it [and possible mobility between the two]," is the basis for better analysis. Through this model, Fields shows the typical theoretical argument to be ambiguous and says "the predictions derived from the textbook model definitely do not carry over to the two-sector case. Therefore, since a non-covered sector exists nearly everywhere, the predictions of the textbook model simply cannot be relied on."

An alternate view of the labor market has low-wage labor markets characterized as monopsonistic competition wherein buyers (employers) have significantly more market power than do sellers (workers). Such a case is a type of market failure and results in workers being paid less than their marginal value. Under the monopsonistic assumption, an appropriately set minimum wage could increase both wages and employment, with the optimal level being equal to the marginal productivity of labor. This view emphasizes the role of minimum wages as a market regulation policy akin to antitrust policies, as opposed to an illusory "free lunch" for low-wage workers. Detractors point out that no collusion between employers to keep wages low has ever been demonstrated, asserting that in most labor markets, demand meets supply, and it is only minimum wage laws and other market interference which cause the imbalance. However collusion is not a pre-requisite for market power; segmented markets, information costs, imperfect mobility and the 'personal' element of labor markets all represent movements away from the idealized perfectly competitive labor market.

Debate

On an episode of the British political tv show, *Question Time* in 1994, the then Secretary of State for Trade, Michael Heseltine (Conservative) and the deputy leader of the opposition John Prescott (Labour) were engaged in a heated debate about Labour's proposals to introduce a National Minimum Wage. This brings out many of the key points,

Prescott: Why is it always millionaires like yourself that get uptight about £2 an hour more for people on minimum?

Heseltine: I'll tell you, I'll tell you. Because I know something about actually creating jobs as opposed to just talking about them.

P: You've done a lot better than your workers then.

H: And created a large number of jobs in the process.

P: Not at £2 an hour.

H: Now you just tell the people of this country...

P: Is £2 an hour acceptable to you?

H: You know perfectly well that what you're talking about is £4.08 an hour as the minimum wage.

P: Is £2 an hour acceptable to you as a very wealthy man?

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :496 of 626.

H: It is nothing to do with me being a wealthy man.

P: Is it acceptable, £2 an hour?

H: It is entirely a matter of what people are prepared to accept in the circumstances of getting a job.

Support

Supporters of the minimum wage claim it has these effects:

- Increases the standard of living for the poorest and most vulnerable in society and raises average.
- Creates incentive to work. (Contrast with welfare transfer payments.)
- Does not have budget consequence on government. "Neither taxes nor public sector borrowing requirements rise." (Contrast with negative income taxes such as the EITC.)
- Minimum wage is administratively simple; workers only need to report violations of wages less than minimum, minimizing a need for a large enforcement agency.
- Stimulates consumption, by putting more money in the hands of low-income people who spend their entire paychecks.
- Increases the work ethic of those who earn very little, as employers demand more return from the higher cost of hiring these employees.
- Decreases the cost of government social welfare programs by increasing incomes for the lowest-paid.
- Does not have a substantial effect on unemployment compared to most other economic factors, and so does not put any extra pressure on welfare systems.
- Makes it easier for students and others at the bottom of the pay scale to support themselves on a small number of hours, enabling them to train for higher wage positions.

Opposition

Opponents of the minimum wage claim it has these effects:

- Hurts small business more than large business.
- Lowers competitiveness
- Reduces quantity demanded of workers. This may manifest itself through a reduction in the number of hours worked by individuals, or through a reduction in the number of jobs.
- Reduces profit margins of business owners employing minimum wage workers, thus encouraging a move to businesses that do not employ low-skill workers.
- Businesses try to compensate for the decrease in profit by simply raising the prices of the goods being sold thus causing inflation and increasing the costs of goods and services produced.
- Increases prices for customers of employers of minimum wage workers, which would pass through to the general price level, which disproportionately affects the prices that poor people pay for goods and services.
- Not an effective policy for transferring welfare to work.
- Does not improve the situation of those in poverty. "Will have only negative effects on the distribution of economic justice. Minimum-wage legislation, by its very nature, benefits some at the expense of the least experienced, least productive, and poorest workers."
- Is a limit on the freedom of both employers and employees. Minimum wage laws make it illegal for employers to pay workers less than the minimum wage. This also prevents workers from being made to provide labor or services for less than the minimum. For example, during the apartheid era in South Africa, white trade unions lobbied for the introduction of minimum wage laws so as to exclude black

workers from the labor market. By preventing black workers from selling their labor for less than white workers, the black workers were prevented from competing for jobs held by whites.

- Businesses spend less on training their employees.
 - Is less effective than the Earned Income Tax Credit at targeting the truly needy, and is more damaging to businesses.
 - Reduces economic growth by skewing factor-choice incentives away from the optimum choice.
 - Increase in offshoring
 - Fewer job options for low wage earners.
 - Encourages high school students to drop-out to become employed.
 - Increase in underemployment.
 - Decreases human capital by encouraging people to enter the job market instead of pursuing further education.
 - Hurts the least employable by making them unemployable, in effect pricing them out of the market.
 - Decreases opportunities for low-skilled workers to gain the training and experience of lower paid positions to move up the wage ladder.
 - Increases the number of people on welfare, thus requiring greater government spending.
-
- Many minimum-wage earners in the United States are high school or college students, not families, so it does not matter what they are paid. Less than 3 percent of minimum wage earners in the United States were single parents, according to a 1996 report.

Debate over consequences

A classical economics analysis of supply and demand implies that by mandating a price floor above the equilibrium wage, minimum wage laws should cause unemployment. This is because a greater number of workers are willing to work at the higher wage while a smaller number of jobs will be available at the higher wage. Companies can be more selective in those whom they employ thus the least skilled and inexperienced will typically be excluded.

However, there are many other variables that can complicate the issue such as monopsony in the labour market, whereby the individual employer has some market power in determining wages paid. Thus it is at least theoretically possible that the minimum wage may boost employment. Though single employer market power is unlikely to exist in most labour markets in the sense of the traditional 'company town,' asymmetric information, imperfect mobility, and the 'personal' element of the labour transaction give some degree of wage-setting power to most firms.

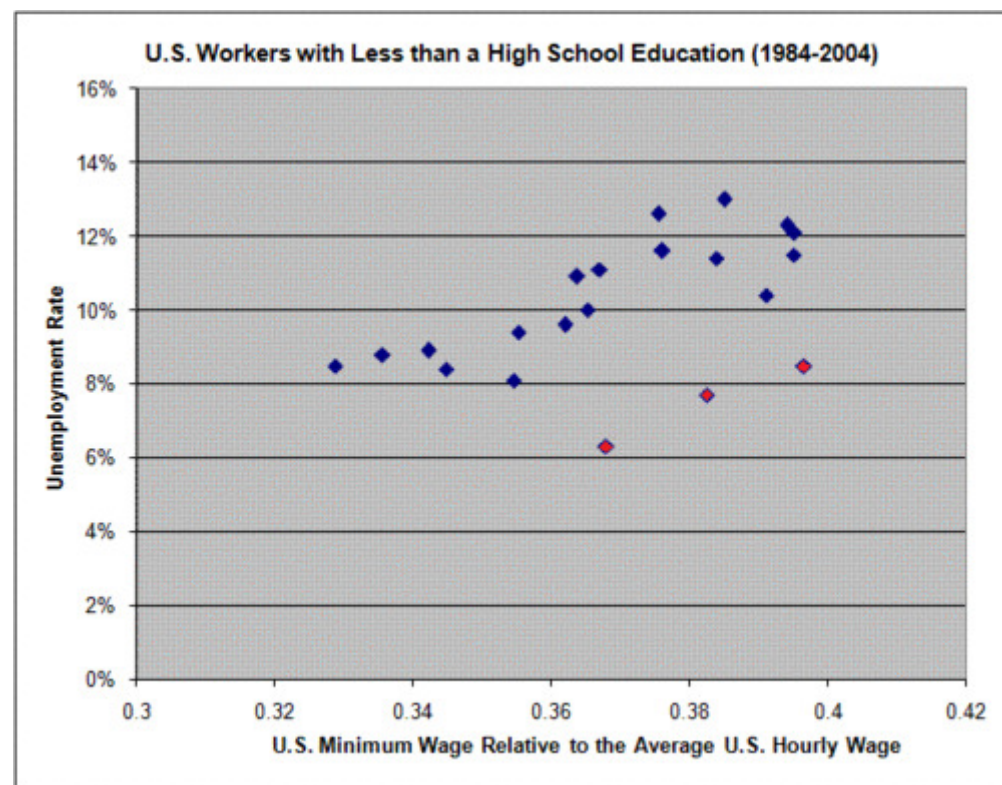
Economists disagree as to the measurable impact of minimum wages in the 'real world'. This disagreement usually takes the form of competing empirical tests of the elasticities of demand and supply in labor markets and the degree to which markets differ from the efficiency that models of perfect competition predict.

A 2000 survey by Dan Fuller and Doris Geide-Stevenson reports that of a sample of 308 American Economic Association economists, 45.6% fully agreed with the statement, "a minimum wage increases unemployment among young and unskilled workers", 27.9% agreed with provisos, and 26.5% disagreed. The authors of this study also reweighted data from a 1990 sample to show that at that time 62.4% of academic economists agreed with the statement above, while 19.5% agreed with provisos and 17.5% disagreed.

A similar survey in 2006 by Robert Whaples polled PhD members of the American Economic Association. Whaples found that 37.7% of respondents supported an increase in the minimum wage while 46.8% wanted it completely eliminated.

In the debate about minimum wage it is rarely mentioned by *how much* the quantity of labor demanded may fall if the minimum wage is raised. Research papers by the Employment Policies Institute and by the National Centre for Policy Analysis claim that increases of 10% in the minimum wage may reduce demand hours worked at the minimum wage by around 1% or 2% depending on circumstances.

Some research suggests that the unemployment effects of small minimum wage increases are dominated by other factors. In Florida, where voters approved an increase in 2004, a follow-up comprehensive study confirms a strong economy with increased employment above previous years in Florida and better than in



the U.S. as a whole. : “The Florida Minimum Wage After One Year.” http://www.risep-fiu.org/reports/Florida_Minimum_Wage_Report.pdf

According to a claim by the Mackinac Centre for Public Policy, the passage of the first Federal mandated minimum wage in the United States in 1938 led to an estimated 500,000 blacks losing their jobs via replacement by higher skilled and more educated white laborers. Milton Friedman, 1976 Nobel Prize winner in Economics, called the minimum wage one of the most "anti-negro laws" for what he saw as its adverse effect on black employment.

Today, the International Labour Organization (ILO) and the OECD do not consider that the minimum wage can be directly linked to unemployment in countries which have suffered job losses. Although strongly opposed by both the business community and the Conservative Party when introduced in 1999, the minimum wage introduced in the UK is no longer controversial and the Conservatives reversed their opposition in 2000. A review of its effects found no discernible impact on pay levels.

Minimum wage alternatives

Some critics of the minimum wage argue that a negative income tax or earned income tax credit benefits a broader population of low wage earners, and society as a whole bears the cost. In this view, this is more economically efficient because a low tax rate on the broader economy causes less deadweight loss than a high tax rate on a small section of the economy. The ability of the earned income tax credit to deliver a larger monetary benefit to poor workers at a lower cost to society was recently documented in a report by the Congressional Budget Office.

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Money supply

2008/9 Schools Wikipedia Selection. Related subjects: Economics

The **money supply**, or **money stock**, refers to the total amount of money held by the nonbank public at a point in time in an economy. There are several ways to measure such an amount (called a **monetary aggregate**), but each includes currency in circulation plus demand deposits (checking-account money).

Purpose

Money supply data is recorded and published in order to monitor the growth of the money supply. Public- and private-sector analysts have long monitored this growth because of the effects that it is believed to have on real economic activity and on the price level. The money supply is considered an important instrument for controlling inflation by economists who say that growth in money supply will only lead to inflation if money demand is stable.

Convention

Because (in principle) money is anything that can be used in settlement of a debt, there are varying measures of money supply. Since most modern economic systems are regulated by governments through monetary policy, the supply of money is broken down into types of money based on how much of an effect monetary policy can have on that type of money. **Narrow money** is the type of money that is more easily affected by monetary policy whereas **broad money** is more difficult to affect through monetary policy. Narrow money exists in smaller quantities while broad money exists in much larger quantities. Each type of money can be classified by placing it along a spectrum between **narrow** (easily affected) and **broad** (difficult to affect) money. The different types of money are typically classified as **M's**. The number of **M's** usually range from M0 (most narrow) to M3 (broadest) but which M's are actually used depends on the system. The typical layout for each of the M's is as follows:

- **M0**: Physical **currency**. A measure of the money supply which combines any liquid or cash assets held within a central bank and the amount of physical currency circulating in the economy. M0 (M-zero) is the most liquid measure of the money supply. It only includes cash or assets that could quickly be converted into currency. This measure is known as **narrow money** because it is the smallest measure of the money supply.
- **M1**: M0 + demand deposits, which are checking accounts. This is used as a measurement for economists trying to quantify the amount of money in circulation. The M1 is a very liquid measure of the money supply, as it contains cash and assets that can quickly be converted to currency.

Finance



Financial Markets

Bond market
 Stock (Equities) Market
 Forex market
 Derivatives market
 Commodity market
 Money market
 Spot (cash) Market
 OTC market
 Real Estate market

Market Participants

Investors
 Speculators
 Institutional Investors

Corporate finance

Structured finance
 Capital budgeting
 Financial risk management

- **M2**: M1 + small time deposits (less than \$100,000), savings deposits, and non-institutional money-market funds. M2 is a broader classification of money than M1. Economists use M2 when looking to quantify the amount of money in circulation and trying to explain different economic monetary conditions. M2 is key economic indicator used to forecast inflation.
- **M3**: M2 + all large time deposits, institutional money-market funds, short-term repurchase agreements, along with other larger liquid assets. The **broadest measure of money**; it is used by economists to estimate the entire supply of money within an economy.

Fractional-reserve banking

The different forms of money in government money supply statistics arise from the practice of fractional-reserve banking. Whenever a bank gives out a loan in a fractional-reserve banking system, a new type of money is created. This new type of money is what makes up the non-**M0** components in the **M1-M3** statistics. In short, there are two types of money in a fractional-reserve banking system:

1. **central bank money** (physical currency)
2. **commercial bank money** (money created through loans) - sometimes referred to as **checkbook money**

In the money supply statistics, **central bank money** is **M0** while the **commercial bank money** is divided up into the **M1-M3** components. Generally, the types of commercial bank money that tend to be valued at lower amounts are classified in the narrow category of **M1** while the types of commercial bank money that tend to exist in larger amounts are categorized in **M2** and **M3**, with **M3** having the largest.

Money supplies around the world

United States

Mergers and Acquisitions
Accounting
Financial Statements
Auditing
Credit rating agency

Personal finance

Credit and Debt
Employment contract
Retirement
Financial planning

Public finance

Tax

Banks and Banking

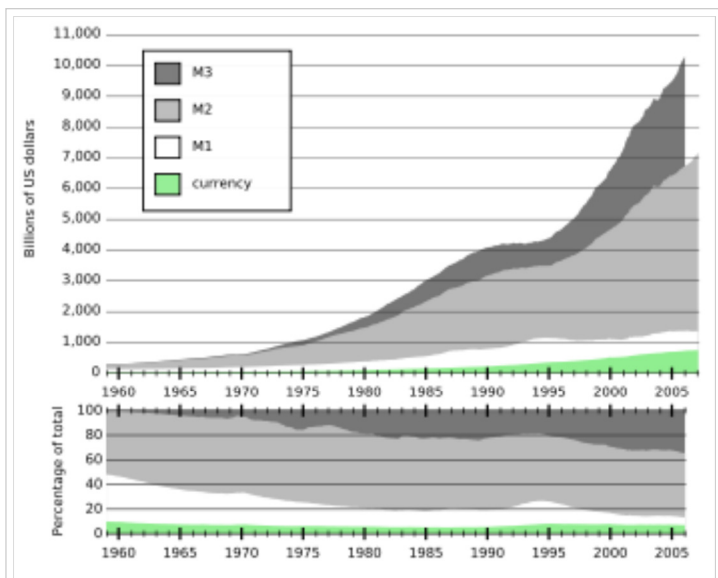
Fractional-reserve banking
Central Bank
List of banks
Deposits
Loan
Money supply

Financial regulation

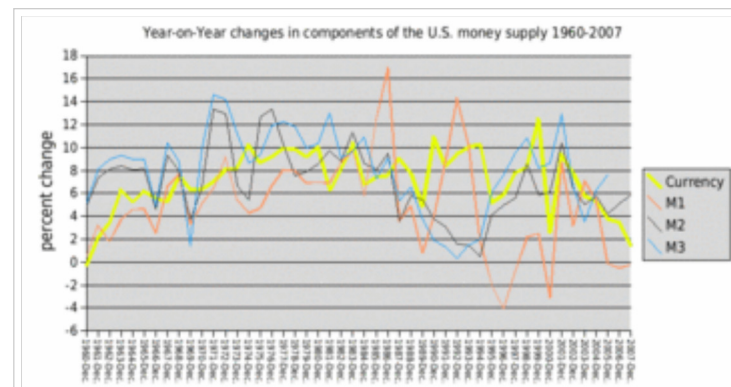
Finance designations
Accounting scandals

History of finance

Stock market bubble
Recession
Stock market crash



Components of US money supply (currency, M1, M2, and M3) since 1959



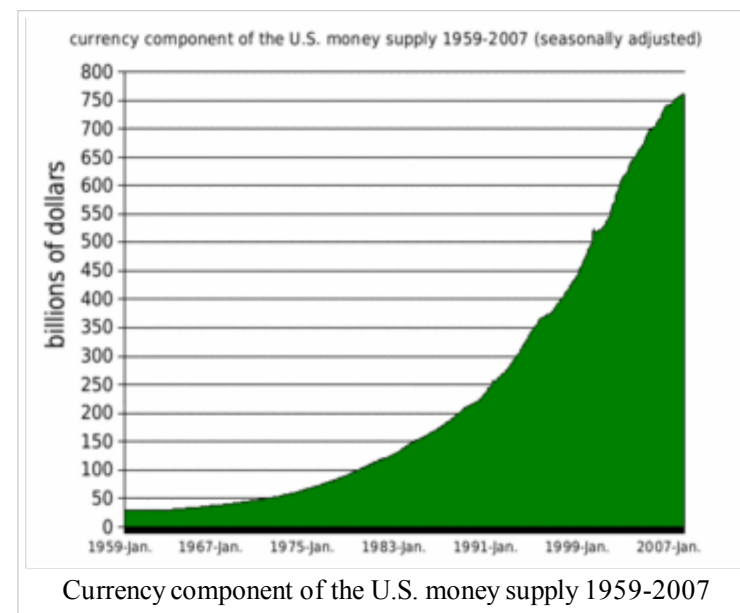
Year-on-year change in the components of the US money supply 1960-2007

The Federal Reserve previously published data on three monetary aggregates, but now it only publishes data on 2 of them. The first, M1, is made up of types of money commonly used for payment, basically currency (M0) and checking deposits. The second, M2, includes M1 plus balances that generally are similar to transaction accounts and that, for the most part, can be converted fairly readily to M1 with little or no loss of principal. The M2 measure is thought to be held primarily by households. The third aggregate, M3, which is no longer published, included M2 plus certain accounts that are held by entities other than individuals and are issued by banks and thrift institutions to augment M2-type balances in meeting credit demands; it also includes balances in money market mutual funds held by institutional investors. The aggregates have had different roles in monetary policy as their reliability as guides has changed. The following details their principal components:

- **M0**: The total of all physical currency, plus accounts at the central bank that can be exchanged for physical currency.
- **M1**: M0 - those portions of M0 held as reserves or vault cash + the amount in demand accounts ("checking" or "current" accounts).
- **M2**: M1 + most savings accounts, money market accounts, and small denomination time deposits (certificates of deposit of under \$100,000).
- **M3**: M2 + all other CDs (large time deposits, institutional money market mutual fund balances), deposits of eurodollars and repurchase agreements.

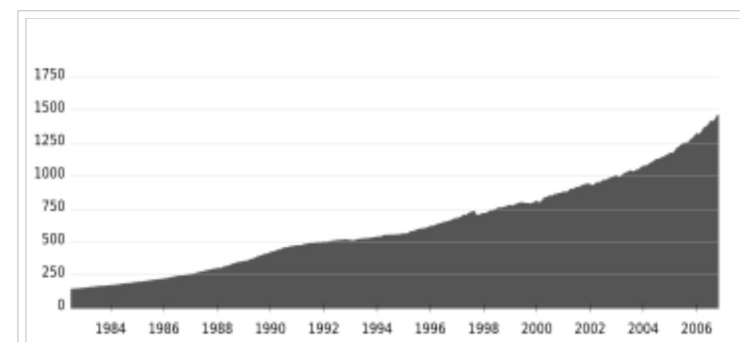
The Federal Reserve ceased publishing M3 statistics in March 2006, claiming that M3 did not appear to convey additional information about economic activity compared to M2, had not been used in determining economic policy, and that the costs to collect M3 data outweighed the benefits. Some politicians have spoken out against the Federal Reserve's decision to cease publishing M3 statistics and have urged the U.S. Congress to take steps requiring the Federal Reserve to do so. Congressman Ron Paul claimed that "M3 is the best description of how quickly the Fed is creating new money and credit. Common sense tells us that a government central bank creating new money out of thin air depreciates the value of each dollar in circulation.". Some of the data used to calculate M3 are still collected and published on a regular basis. Current alternate sources of M3 data are available from the private sector.

United Kingdom



There are just two official UK measures. M0 is referred to as the "wide monetary base" or "narrow money" and M4 is referred to as "broad money" or simply "the money supply".

- **M0**: Cash outside Bank of England + Banks' operational deposits with Bank of England.
- **M4**: Cash outside banks (ie. in circulation with the public and non-bank firms) + private-sector retail bank and building society deposits + Private-sector wholesale bank and building society deposits and Certificate of Deposit.

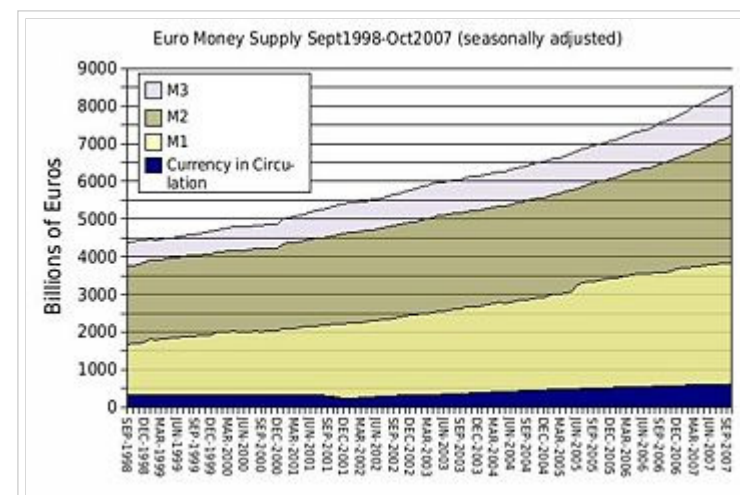


M4 money supply of the United Kingdom

European Union

The European Central Bank's definition of euro area monetary aggregates:

- **M1**: Currency in circulation + overnight deposits
- **M2**: M1 + Deposits with an agreed maturity up to 2 years + Deposits redeemable at a period of notice up to 3 months
- **M3**: M2 + Repurchase agreements + Money market fund (MMF) shares/units + Debt securities up to 2 years

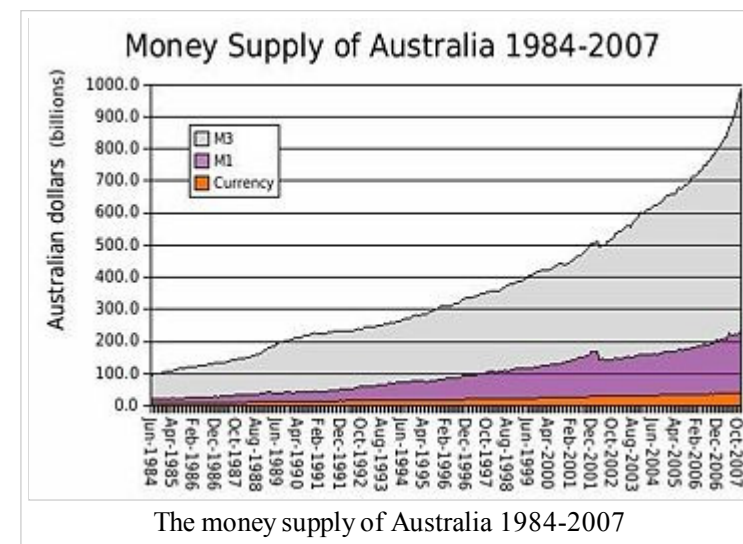


The Euro money supply from 1998-2007.

Australia

The Reserve Bank of Australia defines the monetary aggregates as:

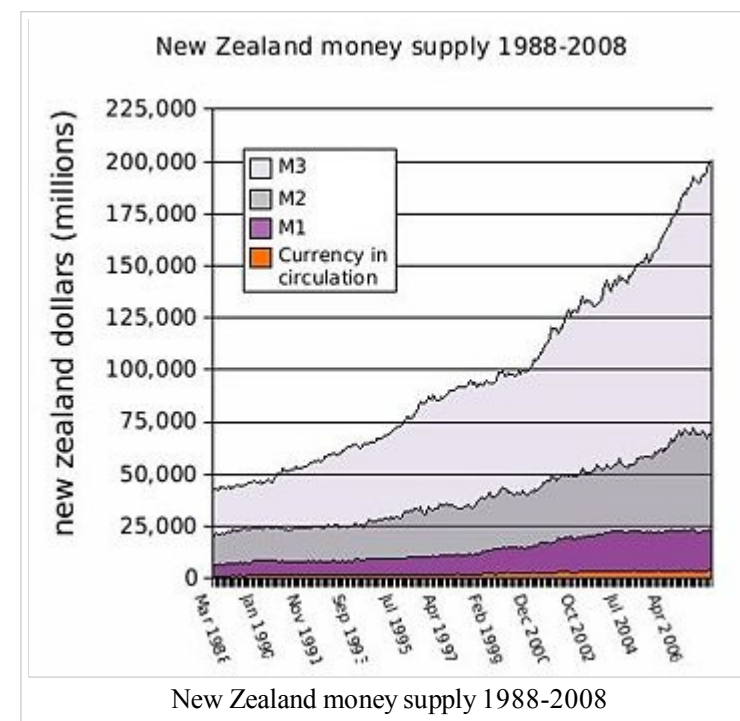
- **M1**: currency + bank current deposits of the private non-bank sector
- **M3**: M1 + all other bank deposits of the private non-bank sector
- **Broad Money**: M3 + borrowings from the private sector by NBFIs, less the latter's holdings of currency and bank deposits
- **Money Base**: holdings of notes and coins by the private sector plus deposits of banks with the Reserve Bank of Australia (RBA) and other RBA liabilities to the private non-bank sector



New Zealand

The Reserve Bank of New Zealand defines the monetary aggregates as:

- **M1**: notes and coin held by the public plus chequeable deposits, minus inter-institutional chequeable deposits, and minus central government deposits
- **M2**: M1 + all non-M1 call funding (call funding includes overnight money and funding on terms that can of right be broken without break penalties) minus inter-institutional non-M1 call funding
- **M3**: the broadest monetary aggregate. It represents all New Zealand dollar funding of M3 institutions and any Reserve Bank repos with non-M3 institutions. M3 consists of notes & coin held by the public plus NZ dollar funding minus inter-M3 institutional claims and minus central government deposits



India

The Reserve Bank of India defines the monetary aggregates as:

- **Reserve Money (M0):** Currency in circulation + Bankers' deposits with the RBI + 'Other' deposits with the RBI = Net RBI credit to the Government + RBI credit to the commercial sector + RBI's claims on banks + RBI's net foreign assets + Government's currency liabilities to the public – RBI's net non-monetary liabilities.
- **M1:** Currency with the public + Demand deposits with the banking system + 'Other' deposits with the RBI.
- **M2:** M1 + Savings deposits of post office savings banks.
- **M3:** M1+ Time deposits with the banking system. = Net bank credit to the Government + Bank credit to the commercial sector + Net foreign assets of the banking sector + Government's currency liabilities to the public – Net non-monetary liabilities of the banking sector.
- **M4:** M3 + All deposits with post office savings banks (excluding National Savings Certificates).

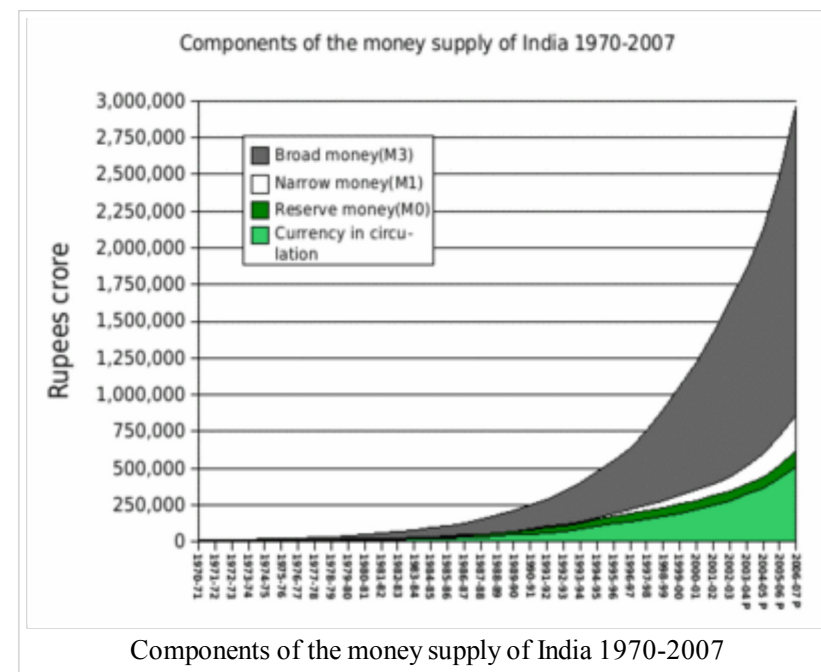
Link with inflation

Monetary exchange equation

Money supply is important because it is linked to inflation by the "monetary exchange equation":

$$MV = PQ$$

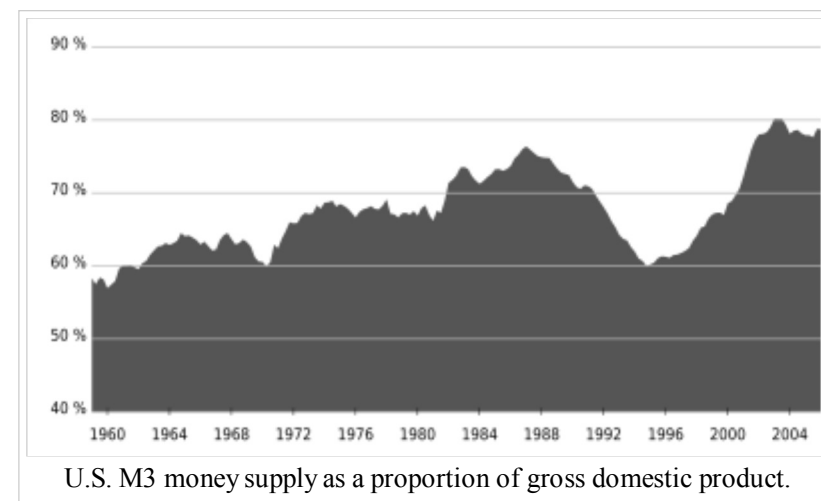
- M is the total dollars in the nation's money supply
- V is the number of times per year each dollar is spent
- P is the average price of all the goods and services sold during the year
- Q is the quantity of goods and services sold during the year



where:

- velocity = the number of times per year that money turns over in transactions for goods and services (if it is a number it is always simply nominal GDP / money supply)
- nominal GDP = real Gross Domestic Product \times GDP deflator
- GDP deflator = measure of inflation. Money supply may be less than or greater than the demand of money in the economy

In other words, if the money supply grows faster than real GDP growth (described as "unproductive debt expansion"), inflation is likely to follow ("inflation is always and everywhere a monetary phenomenon"). This statement must be qualified slightly, due to changes in velocity. While the monetarists presume that velocity is relatively stable, in fact velocity exhibits variability at business-cycle frequencies, so that the velocity equation is not particularly useful as a short run tool. Moreover, in the US, velocity has grown at an average of slightly more than 1% a year between 1959 and 2005 (which is to be expected due to the increase in population, unless money supply grows very rapidly).



Another aspect of money supply growth that has come under discussion since the collapse of the housing bubble in 2007 is the notion of "asset classes." Economists have noted that M3 growth may not affect all assets equally. For example, following the stock market run up and then decline in 2001, home prices began an historically unusual climb that then dropped sharply in 2007. The dilemma for the Federal Reserve in regulating the money supply is that lowering interest rates to slow price declines in one asset class, e.g. real estate, may cause prices in other asset classes to rise, e.g. commodities.

Percentage

In terms of percentage changes (to a small approximation, the percentage change in a product, say XY is equal to the sum of the percentage changes %X + %Y). So:

$$\%P + \%Y = \%M + \%V$$

That equation rearranged gives the "basic inflation identity":

$$\%P = \%M + \%V - \%Y$$

Inflation (%P) is equal to the rate of money growth (%M), plus the change in velocity (%V), minus the rate of output growth (%Y).

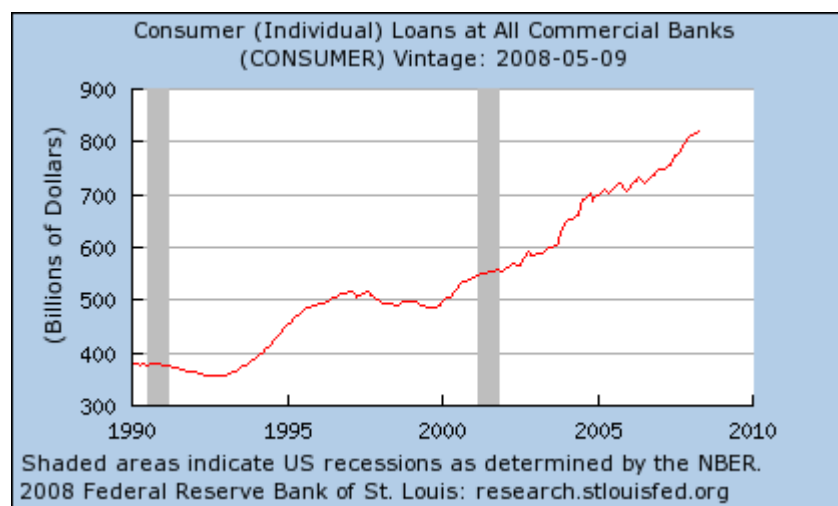
Bank reserves at central bank

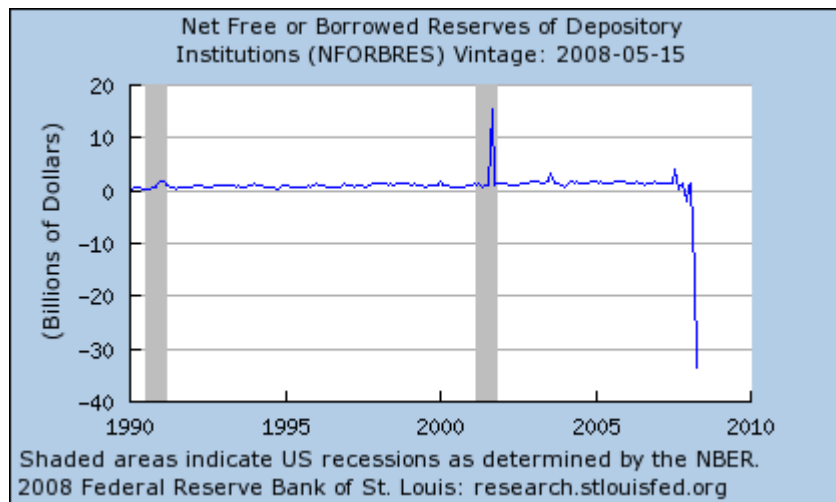
When a central bank is "easing", it triggers an increase in money supply by purchasing government securities on the open market thus increasing available funds for private banks to loan through fractional-reserve banking (the issue of new money through loans) and thus grows the money supply. When the central bank is "tightening", it slows the process of private bank issue by selling securities on the open market and pulling money (that could be loaned) out of the private banking sector. It reduces or increases the supply of short term government debt, and inversely increases or reduces the supply of lending funds and thereby the ability of private banks to issue new money through debt. Note that while the terms "easing" and "tightening" are commonly used to describe the central bank's stated interest rate policy, a central bank has the ability to influence the money supply in a much more direct fashion, as explained earlier in this paragraph.

The operative notion of easy money is that the central bank creates new bank reserves (in the US known as " federal funds"), which let the banks lend out more money. These loans get spent, and the proceeds get deposited at other banks. Whatever is not required to be held as reserves is then lent out again, and through the "multiplying" effect of the fractional-reserve system, loans and bank deposits go up by many times the initial injection of reserves.

However, in the 1970s the reserve requirements on deposits started to fall with the emergence of money market funds, which require no reserves. Then in the early 1990s, reserve requirements were dropped to zero on savings deposits, CDs, and Eurodollar deposit. At present, reserve requirements apply only to " transactions deposits" – essentially checking accounts. The vast majority of funding sources used by private banks to create loans are not limited by bank reserves. Most commercial and industrial loans are financed by issuing large denomination CDs. Money market deposits are largely used to lend to corporations who issue commercial paper. Consumer loans are also made using savings deposits, which are not subject to reserve requirements. These loans can be bunched into securities and sold to somebody else, taking them off of the bank's books.

Therefore, neither commercial nor consumer loans are any longer limited by bank reserves. Since 1995 the amount of consumer loans has steadily increased, while bank reserves have generally remained constant:





In recent years, the irrelevance of open market operations has also been argued by academic economists renowned for their work on the implications of rational expectations, including Robert Lucas, Jr., Thomas Sargent, Neil Wallace, Finn E. Kydland, Edward C. Prescott and Scott Freeman.

Arguments

Assuming that prices do not instantly adjust to equate supply and demand, one of the principal jobs of central banks is to ensure that aggregate (or overall) demand matches the potential supply of an economy. Central banks can do this because overall demand can be controlled by the money supply. By putting more money into circulation, the central bank can stimulate demand. By taking money out of circulation, the central bank can reduce demand.

For instance, if there is an overall shortfall of demand relative to supply (that is, a given economy can potentially produce more goods than consumers wish to buy) then some resources in the economy will be unemployed (i.e., there will be a recession). In this case the central bank can stimulate demand by increasing the money supply. In theory the extra demand will then lead to job creation for the unemployed resources (people, machines, land), leading back to full employment (more precisely, back to the natural rate of unemployment, which is basically determined by the amount of government regulation and is different in different countries).

However, central banks have a difficult balancing act because, if they put too much money into circulation, demand will outstrip an economy's ability to supply so that, even when all resources are employed, demand still cannot be satisfied. In this case, unemployment will fall back to the natural rate and there will then be competition for the last remaining labour, leading to wage rises and inflation. This can then lead to another recession as the central bank takes money out of circulation (raising interest rates in the process) to try to damp down demand.

The main debate amongst economists in the second half of the twentieth century concerned the central banks ability to know how much money to inject into or take out of circulation under different circumstances. Some economists like Milton Friedman believed that the central bank would always get it wrong, leading to wider swings in the economy than if it were just left alone. That is why they advocated a non-interventionist approach.

Current Chairman of the U.S. Federal Reserve, Ben Bernanke, has suggested that over the last 10 to 15 years, many modern central banks have become relatively adept at manipulation of the money supply, leading to a smoother business cycle, with recessions tending to be smaller and less frequent than in earlier decades, a phenomenon he terms " The Great Moderation" .

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Money

2008/9 Schools Wikipedia Selection. Related subjects: Currency; Economics

Money is anything that is generally accepted as payment for goods and services and repayment of debts. The main uses of money are as a medium of exchange, a unit of account, and a store of value. Some authors explicitly require money to be a standard of deferred payment.

Money includes both currency, particularly the many circulating currencies with legal tender status, and various forms of financial deposit accounts, such as demand deposits, savings accounts, and certificates of deposit. In modern economies, currency is the smallest component of the money supply.

Money is not the same as real value, the latter being the basic element in economics. Money is central to the study of economics and forms its most cogent link to finance. The absence of money causes a market economy to be inefficient because it requires a coincidence of wants between traders, and an agreement that these needs are of equal value, before a barter exchange can occur. The use of money is thought to encourage trade and the division of labour.



Various denominations of currency, one form of money.

Economic characteristics

Money is generally considered to have the following characteristics, which are summed up in a rhyme found in older economics textbooks: "Money is a matter of functions four, a medium, a measure, a standard, a store." That is, money functions as a medium of exchange, a unit of account, and a store of value.

There have been many historical arguments regarding the combination of money's functions, some arguing that they need more separation and that a single unit is insufficient to deal with them all. One of these arguments is that the role of money as a medium of exchange is in conflict with its role as a store of value: its role as a store of value requires holding it without spending, whereas its role as a medium of exchange requires it to circulate. 'Financial capital' is a more general and inclusive term for all liquid instruments, whether or not they are a uniformly recognized tender.

Medium of exchange

Money is used as an intermediary for trade, in order to avoid the inefficiencies of a barter system, which are sometimes referred to as the 'double coincidence of wants problem'. Such usage is termed a *medium of exchange*.

Unit of account

A **unit of account** is a standard numerical unit of measurement of the market value of goods, services, and other transactions. Also known as a "measure" or "standard" of relative worth and deferred payment, a unit of account is a necessary prerequisite for the formulation of commercial agreements that involve debt.

- Divisible into small units without destroying its value; precious metals can be coined from bars, or melted down into bars again.
- Fungible: that is, one unit or piece must be perceived as equivalent to any other, which is why diamonds, works of art or real estate are not suitable as money.
- A specific weight, or measure, or size to be verifiably countable. For instance, coins are often made with ridges around the edges, so that any removal of material from the coin (lowering its commodity value) will be easy to detect.

Store of value

To act as a **store of value**, a commodity, a form of money, or financial capital must be able to be reliably saved, stored, and retrieved — and be predictably useful when it is so retrieved. Fiat currency like paper or electronic currency no longer backed by gold in most countries is not considered by some economists to be a store of value.

Market liquidity

Liquidity describes how easily an item can be traded for another item, or into the common currency within an economy. Money is the most liquid asset because it is universally recognised and accepted as the common currency. In this way, money gives consumers the freedom to trade goods and services easily without having to barter.

Liquid financial instruments are easily tradable and have low transaction costs. There should be no — or minimal — spread between the prices to buy and sell the instrument being used as money.

Types of money

In economics, money is a broad term that refers to any instrument that can be used in the resolution of debt. However, different types of money have different economic strengths and liabilities. Theoretician Ludwig von Mises made that point in his book *The Theory of Money and Credit*, and he argued for the importance of distinguishing among three types of money: commodity money, fiat money, and credit money. Modern monetary theory also distinguishes among different types of money, using a categorization system that focuses on the liquidity of money.

Commodity money

Commodity money is any money whose value comes from the commodity out of which it is made. The commodity itself constitutes the money, and the money is the commodity. Examples of commodities that have been used as mediums of exchange include gold, silver, copper, salt, peppercorns, large stones, decorated

belts, shells, alcohol, cigarettes, cannabis, and candy. Since payment by commodity generally provides a useful good, commodity money is similar to barter, but is distinct because commodity money uses a single recognized unit of exchange.

Representative money

Representative money is money that consists of token coins, other physical tokens such as certificates, and even non-physical "digital certificates" (authenticated digital transactions) that can be reliably exchanged for a fixed quantity of a commodity such as gold, silver or potentially water, oil or food. Representative money thus stands in direct and fixed relation to the commodity which backs it, while not itself being composed of that commodity.

Credit money

Credit money is any claim against a physical or legal person that can be used for the purchase of goods and services. Credit money differs from commodity and fiat money in two ways: It is not payable on demand (although in the case of fiat money, "demand payment" is a purely symbolic act since all that can be demanded is other types of fiat currency) and there is some element of risk that the real value upon fulfillment of the claim will not be equal to real value expected at the time of purchase.

This risk comes about in two ways and affects *both* buyer and seller.

First it is a claim and the claimant may default (not pay). High levels of default have destructive supply side effects. If manufacturers and service providers do not receive payment for the goods they produce, they will not have the resources to buy the labor and materials needed to produce new goods and services. This reduces supply, increases prices and raises unemployment, possibly triggering a period of stagflation. In extreme cases, widespread defaults can cause a lack of confidence in lending institutions and lead to economic depression. For example, abuse of credit arrangements is considered one of the significant causes of the Great Depression of the 1930s.

The second source of risk is time. Credit money is a promise of *future* payment. If the interest rate on the claim fails to compensate for the combined impact of the inflation (or deflation) rate and the time value of money, the seller will receive less real value than anticipated. If the interest rate on the claim overcompensates, the buyer will pay more than expected.

Over the last two centuries, credit money has steadily risen as the main source of money creation, progressively replacing first commodity and then representative money. In many cases credit money has been converted to fiat money (see below), as governments have backed certain private credit instruments (first banknotes from central banks, then later certain types of deposits to banks), thus converting central banknotes to legal tender, and other types of notes (deposit certificates of less than a certain value) to a status not very different from fiat money, since they are backed by the power of the central government to redeem eventually with tax collection.



Banknotes from all around the world donated by visitors to the British Museum, London.

A particular problem with credit money is that its supply moves in line with the business cycle. When lenders are optimistic, notably when the debt level is low, they increase their lending activity which creates new money. This may also trigger inflation and bull markets. When creditors are pessimistic (for instance, when debt level is perceived as too high, or unwise lending activity in the past has resulted in situations where defaults are expected to follow), then creditors reduce their lending activity and money becomes "tight" or "illiquid." Bear markets, characterized by bankruptcies and market recessions, then follow.

Fiat money

Fiat money is any money whose value is determined by legal means, rather than the strict availability of goods and services which are named on the representative note.

Fiat money is created when a type of credit money (typically notes from a central bank, such as the Federal Reserve System in the U.S.) is declared by a government act (**fiat**) to be acceptable and officially-recognized payment for all debts, both public and private. Fiat money may thus be symbolic of a commodity or a government promise, though not a *completely specified amount* of either of these. Fiat money is thus not technically fungible or tradable directly for fixed quantities of anything, except more of the same government's fiat money. Fiat moneys usually trade against each other in value in an international market, as with other goods. An exception to this is when currencies are locked to each other, as explained below. Many but not all fiat moneys are accepted on the international market as having value. Those that are traded indirectly against any internationally available goods and services. Thus the number of U.S. dollars or Japanese yen which are equivalent to each other, or to a gram of gold metal, are all market decisions which change from moment to moment on a daily basis. Occasionally, a country will peg the value of its fiat money to that of the fiat money of a larger economy: for example the Belize dollar trades in fixed proportion (at 2:1) to the U.S. dollar, so there is no floating value ratio of the two currencies.

Representative, credit, and fiat money all provide solutions to several limitations of commodity money. Depending on the laws, there may be little or no need to physically transport the money — an electronic exchange may be sufficient. Other types of moneys have as their sole use to be medium of exchange, so their supply is not limited by competing alternate uses. Credit and fiat monies can be created without limit in theory, so there is no limit on trade volumes.

Fiat money, if physically represented in the form of currency (paper or coins) can be easily damaged or destroyed. However, here fiat money has an advantage over representative or commodity money, in that the same laws that created the money can also define rules for its replacement in case of damage or destruction. For example, the U.S. government will replace mutilated federal reserve notes (U.S. fiat money) if at least half of the physical note can be reconstructed, or if it can be otherwise proven to have been destroyed. . By contrast, commodity money which has been destroyed or lost is gone.

Paper currency is especially vulnerable to everyday hazards: from fire, water, termites, and simple wear and tear. Currency in the form of minted coins is more durable but a significant portion is simply lost in everyday use. In order to reduce replacement costs, many countries are converting to plastic currency. For example, Mexico has changed its twenty and fifty peso notes, Singapore its \$2, \$5, \$10 and \$50 bills, Malaysia with RM5 bill, and Australia and New Zealand their \$5, \$10, \$20, \$50 and \$100 to plastic, both for the increased durability and because plastic may be easily specifically constructed for each denomination, thus making it impossible for counterfeiters to "lift" or raise the value of a bill by using the material of a bill of lesser value as a primary source to make a counterfeit note of higher value.

Some of the benefits of fiat money can be a double-edged sword. For example, if the amount of money in active circulation outstrips the available goods and

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services for sale, the effect can be inflationary. This can easily happen if governments print money without attention to the level of economic activity, or if successful counterfeiters flourish.

A criticism of credit and fiat moneys relates to the fact that their stabilities are highly dependent on the stability of the legal system backing the currency: should the legal system fail, so will the value of any type of money that depends on it. However, this situation is typical of the maintenance of the value of any promisory note system: if a guarantor creates money or wealth by means of any legal *promise* to provide goods or services in the future (as is the case with both credit and fiat type moneys), then any failure of a legal system which backs up the rights of the debt-holder to collect on the promise, will act to jeopardize the value of future promises.

Money supply

The money supply is the amount of money within a specific economy available for purchasing goods or services. The supply in the US is usually considered as four escalating categories M0, M1, M2 and M3. The categories grow in size with M3 representing all forms of money (including credit) and M0 being just base money (coins, bills, and central bank deposits). M0 is also money that can satisfy private banks' reserve requirements. In the US, the Federal Reserve is responsible for controlling the money supply, while in the Euro area the respective institution is the European Central Bank. Other central banks with significant impact on global finances are the Bank of Japan, People's Bank of China and the Bank of England.

When gold is used as money, the money supply can grow in either of two ways. First, the money supply can increase as the amount of gold increases by new gold mining at about 2% per year, but it can also increase more during periods of gold rushes and discoveries, such as when Columbus discovered the new world and brought gold back to Spain, or when gold was discovered in California in 1848. This kind of increase helps debtors, and causes inflation, as the value of gold goes down. Second, the money supply can increase when the value of gold goes up. This kind of increase in the value of gold helps savers and creditors and is called deflation, where items for sale are less expensive in terms of gold. Deflation was the more typical situation for over a century when gold and credit money backed by gold were used as money in the US from 1792 to 1913.

Monetary policy

Monetary policy is the process by which a government, central bank, or monetary authority manages the money supply to achieve specific goals. Usually the goal of monetary policy is to accommodate economic growth in an environment of stable prices. For example, it is clearly stated in the Federal Reserve Act that the Board of Governors and the Federal Open Market Committee should seek “to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates.”

A failed monetary policy can have significant detrimental effects on an economy and the society that depends on it. These include hyperinflation, stagflation, recession, high unemployment, shortages of imported goods, inability to export goods, and even total monetary collapse and the adoption of a much less efficient barter economy. This happened in Russia, for instance, after the fall of the Soviet Union.

Governments and central banks have taken both regulatory and free market approaches to monetary policy. Some of the tools used to control the money supply

include:

- currency purchases or sales
- increasing or lowering government spending
- increasing or lowering government borrowing
- changing the rate at which the government loans or borrows money
- manipulation of exchange rates
- taxation or tax breaks on imports or exports of capital into a country
- raising or lowering bank reserve requirements
- regulation or prohibition of private currencies

For many years much of monetary policy was influenced by an economic theory known as monetarism. Monetarism is an economic theory which argues that management of the money supply should be the primary means of regulating economic activity. The stability of the demand for money prior to the 1980s was a key finding of Milton Friedman and Anna Schwartz supported by the work of David Laidler, and many others.

The nature of the demand for money changed during the 1980s owing to technical, institutional, and legal factors and the influence of monetarism has since decreased.

History of money

According to some fables, inventors of money were Demodike (or Hermodike) of Kymi (the wife of Midas), Lykos (son of Pandion II and ancestor of the Lycians) and Erichthonius, the Lydians or the Naxians. However, the use of proto-money may date back to at least 100,000 years ago, and the use of precious metals as money dates back at least 6000 years. The use of gold as money has been traced back to the fourth millennium B.C. when the Egyptians used gold bars of a set weight as a medium of exchange, as the Sumerians had done somewhat earlier with silver bars. Coins or at least minted tokens of a fixed value first appear in the 7th century BC in Greece. The first banknotes was used in China in the 7th century, and the first in Europe was issued by Stockholms Banco in 1661.

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Monopoly

2008/9 Schools Wikipedia Selection. Related subjects: Economics

The term **monopoly** (from Greek *monos* , alone or single + *polein* , to sell) can bear two main definitions:

1. In Economics, *monopoly* (also "Pure oligopoly") exists when a specific individual or enterprise has sufficient control over a particular product or service to determine significantly the terms on which other individuals shall have access to it. Monopolies are thus characterized by a lack of economic competition for the good or service that they provide and a lack of viable substitute goods. Alternatively (a modern and less common usage), it may be used as a verb or adjective to refer to the *process* (see Monopolism) by which a firm gains persistently greater market share than what is expected under perfect competition. The latter usage of the term is invoked in the theory of monopolistic competition.
2. In political discourse, the term monopoly is frequently invoked as a blanket generalization in criticism of firms with large market share or lack of what's perceived as "fair" competition.

The latter usage of the term is more predominant among non-economists than economists and while its assertions *may* hold true, it is not based upon the definition of "monopoly," used by economists.

A monopoly should be distinguished from monopsony, in which there is only one *buyer* of a product or service; a monopoly may also have monopsony control of a sector of a market. Likewise, a monopoly should be distinguished from a cartel (a form of oligopoly), in which several providers act together to coordinate services, prices or sale of goods.

A government-granted monopoly or *legal monopoly* is sanctioned by the state, often to provide an incentive to invest in a risky venture or enrich a domestic constituency. The government may also reserve the venture for itself, thus forming a government monopoly.

Economic analysis

- **No close substitutes:** A monopoly is not merely the state of having control over a product; it also means that there is no real alternative to the monopolised product.
- **A price maker:** Because a single firm controls the total supply in a pure monopoly, it is able to exert a significant degree of control over the price by changing the quantity supplied.

Other common assumptions in modeling monopolies include the presence of multiple buyers (if a firm is the only buyer, it also has a monopsony), an identical price for all buyers, and asymmetric information.

A company with a monopoly does not undergo price pressure from competitors, although it may face pricing pressure from potential competition. If a company

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raises prices too high, then others may enter the market if they are able to provide the same good, or a substitute, at a lower price. The idea that monopolies in markets with easy entry need not be regulated against is known as the "revolution in monopoly theory".

A monopolist can extract only one premium, and getting into complementary markets does not pay. That is, the total profits a monopolist could earn if it sought to leverage its monopoly in one market by monopolizing a complementary market are equal to the extra profits it could earn anyway by charging more for the monopoly product itself.

However, the one monopoly profit theorem does not hold true if there exist:

- Stranded customers in the monopoly good.
- Poorly informed customers.
- High fixed costs in the tied good.
- Economies of scale in the tied good.
- Price regulations for the monopoly product

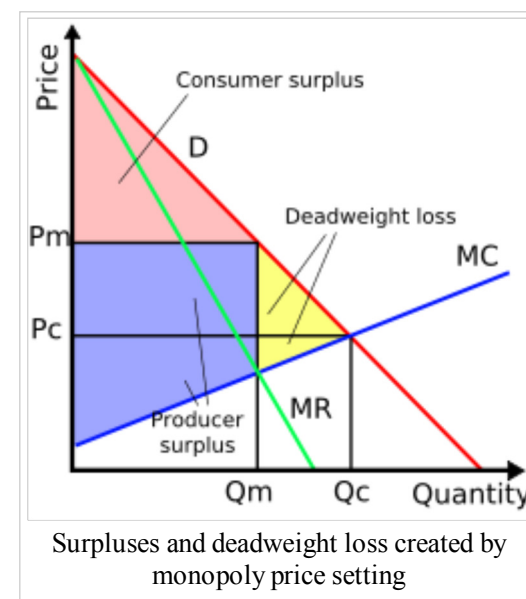
Price setting for unregulated monopolies

In economics, a firm facing the entire market demand curve is said to have **monopoly power**. This is in contrast to a price-taking firm, which operates in a negligible segment of the overall market and thus faces a demand curve with infinite price elasticity. The pricing and production choices made by these firms follow identical decision rules. That is, regardless of the type of firm, the profit maximizing price and quantity choice will equate the marginal cost and marginal revenue of production (see diagram). The key difference is in the *outcome* of such a rule: typically a monopoly selects a higher price and lower quantity than a price-taking firm.

There are important points for one to remember when considering the monopoly model diagram (and its associated conclusions) displayed here. The result that monopoly prices are higher, and production output lower, than a competitive firm follow from a requirement that the monopoly not charge different prices for different customers. That is, the monopoly is restricted from engaging in price discrimination. If the monopoly were permitted to charge individualized prices, the quantity produced, and the price charged to the *marginal* customer, would be identical to a competitive firm, thus eliminating the deadweight loss.

As long as the price elasticity of demand for most customers is less than one in absolute value, it is advantageous for a firm to increase its prices: it then receives more money for fewer goods. With a price increase, price elasticity tends to rise, and in the optimum case above it will be greater than one for most customers. The following formula

gives the relation among price, marginal cost of production and demand elasticity that maximizes a monopoly profit: $P(1 - \frac{1}{e}) = MC$ where (e) is the



elasticity of demand. A monopoly's power is given by the vertical distance between the point at which the marginal cost curve (MC) intersects with the marginal revenue curve (MR) and the demand curve. The longer the vertical distance, (i.e., the more inelastic the demand curve) the greater the monopoly's power, and thus, the larger its profits.

Calculating monopoly output

The single price monopoly profit maximization problem is as follows:

The monopoly profit is its total revenue less its total cost. Let the price it sets as a market response be a function of the quantity it produces (Q) $P(Q)$ and let its cost function be as a function of quantity $C(Q)$. The monopoly's revenue is the product of the price and the quantity it produces. Hence its profit is:

$$\Pi = P(Q) \cdot Q - C(Q)$$

Taking the first order derivative with respect to quantity yields:

$$\frac{d\Pi}{dQ} = P'(Q) \cdot Q + P(Q) - C'(Q)$$

Setting this equal to zero for maximization:

$$\frac{d\Pi}{dQ} = P'(Q) \cdot Q + P(Q) - C'(Q) = 0$$

$$\frac{d\Pi}{dQ} + C'(Q) = P'(Q) \cdot Q + P(Q) = C'(Q)$$

h.k.j. i.e. marginal revenue = marginal cost, provided

$$\frac{d^2\Pi}{dQ^2} = P''(Q) \cdot Q + 2 \cdot P'(Q) - C''(Q) < 0$$

(the *rate* of marginal revenue is less than the *rate* of marginal cost, for maximization).

This procedure assumes that the monopolist knows the exact demand function.

Monopoly and efficiency

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According to standard economic theory (see analysis above), a monopoly will sell a lower quantity of goods at a higher price than firms would in a purely competitive market. The monopoly will secure monopoly profits by appropriating some or all of the consumer surplus. Since the loss in consumer surplus is higher than the monopolist's gain, this creates deadweight loss, which is inefficient and a form of market failure.

Negative aspects

It is often argued that monopolies tend to become less efficient and innovative over time, becoming "complacent giants", because they do not have to be efficient or innovative to compete in the marketplace. Sometimes this very loss of efficiency can raise a potential competitor's value enough to overcome market entry barriers, or provide incentive for research and investment into new alternatives. The theory of contestable markets argues that in some circumstances (private) monopolies are forced to behave *as if* there were competition because of the risk of losing their monopoly to new entrants. This is likely to happen where a market's barriers to entry are low. It might also be because of the availability in the longer term of substitutes in other markets. For example, a canal monopoly, while worth a great deal in the late eighteenth century United Kingdom, was worth much less in the late nineteenth century because of the introduction of railways as a substitute.

Positive aspects

Some argue that it can be good to allow a firm to attempt to monopolize a market, since practices such as dumping can benefit consumers in the short term; and once the firm grows too big, it can be dealt with via regulation. When monopolies are not broken through the open market, often a government will step in, either to regulate the monopoly, turn it into a publicly owned monopoly, or forcibly break it up (see Antitrust law). Public utilities, often being natural monopolies and less susceptible to efficient breakup, are often strongly regulated or publicly owned. AT&T and Standard Oil are debatable examples of the breakup of a private monopoly. When AT&T was broken up into the "Baby Bell" components, MCI, Sprint, and other companies were able to compete effectively in the long distance phone market and began to take phone traffic from the less efficient AT&T.

Hotelling's law

Mathematician Harold Hotelling came up with Hotelling's law which showed that there exist cases where monopoly has advantages for the consumer. If there is a beach where customers are distributed evenly along it, an entrepreneur setting up an ice cream stand would naturally place it in the middle of the beach. A competing ice cream seller would do best to place his competing ice cream stand next to it to gain half the market share, but two stalls right next to each other is not an ideal situation for the people on the beach. A monopolist who owns *both* stalls on the other hand, would distribute his ice cream stalls some distance apart.

The "natural monopoly" problem

A natural monopoly is defined as a theoretical situation in which production is characterized by falling long-run marginal cost throughout the relevant output range. In such situations, a policy of *laissez-faire* must result in a single seller. The conventional Paretian solution to market failure of this kind is public

regulation (in the United States) or public enterprise (in the United Kingdom).

Historical monopolies

Common salt (sodium chloride) historically gave rise to natural monopolies. Until recently, a combination of strong sunshine and low humidity or an extension of peat marshes was necessary for winning salt from the sea, the most plentiful source. Changing sea levels periodically caused salt "famines" and communities were forced to depend upon those who controlled the scarce inland mines and salt springs, which were often in hostile areas (the Dead Sea, the Sahara desert) requiring well-organized security for transport, storage, and distribution. The "Gabelle", a notoriously high tax levied upon salt, played a role in the start of the French Revolution, when strict legal controls were in place over who was allowed to sell and distribute salt.

Examples of alleged and legal monopolies

- The salt commission, a legal monopoly in China formed in 758.
- British East India Company; created as a legal trading monopoly in 1600.
- Dutch East India Company; created as a legal trading monopoly in 1602.
- U.S. Steel; anti-trust prosecution failed in 1911.
- Standard Oil; broken up in 1911.
- National Football League; survived anti-trust lawsuit in the 1960s, convicted of being an illegal monopoly in the 1980s.
- Major League Baseball; survived U.S. anti-trust litigation in 1922, though its special status is still in dispute as of 2008.
- United Aircraft and Transport Corporation; aircraft manufacturer holding company forced to divest itself of airlines in 1934.
- American Telephone & Telegraph; telecommunications giant broken up in 1982.
- Microsoft; settled anti-trust litigation in the U.S. in 2001; fined by the European Commission in 2004, which was upheld for the most part by the Court of First Instance of the European Communities in 2007. The fine was 1.35 Billion USD in 2008 for incompliance with the 2004 rule.
- De Beers; settled charges of price fixing in the diamond trade in the 2000s.
- Joint Commission; has a monopoly over whether or not US hospitals are able to participate in the Medicare and Medicaid programs.
- Telecom New Zealand; local loop unbundling enforced by central government.
- Monsanto has been sued by competitors for anti-trust and monopolistic practices. They hold between 70% and 100% of the commercial seed market.

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Organization

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An **organization** (or **organisation** — see spelling differences) is a social arrangement which pursues collective goals, which controls its own performance, and which has a boundary separating it from its environment. The word itself is derived from the Greek word *ὄργανον* (organon) meaning *tool*. The term is used in both daily and scientific English in multiple ways.

In the social sciences, organizations are studied by researchers from several disciplines, the most common of which are sociology, economics, political science, psychology, management, and organizational communication. The broad area is commonly referred to as organizational studies, organizational behaviour or organization analysis. Therefore, a number of different theories and perspectives exist, some of which are compatible, and others that are competing.

- Organization – process-related: an entity is being (re-)organized (organization as task or action).
- Organization – functional: organization as a function of how entities like businesses or state authorities are used (organization as a permanent structure).
- Organization – institutional: an entity is an organization (organization as an actual purposeful structure within a social context)

Organization in sociology

In sociology "organization" is understood as planned, coordinated and purposeful action of human beings to construct or compile a common tangible or intangible product. This action is usually framed by formal membership and form (institutional rules). Sociology distinguishes the term organization into planned formal and unplanned informal (i.e. spontaneously formed) organizations. Sociology analyzes organizations in the first line from an institutional perspective. In this sense, organization is a permanent arrangement of elements. These elements and their actions are determined by rules so that a certain task can be fulfilled through a system of coordinated division of labor.

An organization is defined by the elements that are part of it (who belongs to the organization and who does not?), its communication (which elements communicate and how do they communicate?), its autonomy (Max Weber termed autonomy in this context: Autocephaly)(which changes are executed autonomously by the organization or its elements?) and its rules of action compared to outside events (what causes an organization to act as a collective actor?).

By coordinated and planned cooperation of the elements, the organization is able to solve tasks that lie beyond the abilities of the single elements. The price paid by the elements is the limitation of the degrees of freedom of the elements. Advantages of organizations are enhancement (more of the same), addition (combination of different features), and extension. Disadvantages can be inertness (through co-ordination) and loss of interaction.

Organization in management and organizational studies

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Management is interested in organization mainly from an instrumental point of view. For a company organization is a means to an end to achieve its goals.

Organization theories

Among the theories that are or have been most influential are:

- Weberian organization theory (refer to Max Weber's chapter on Bureaucracy in his book 'Economy and Society')
- Marxist organization analysis
- Scientific management (mainly following Frederick W. Taylor)
- Human Relations Studies (going back to the Hawthorne studies, Maslow and Hertzberg)
- Administrative theories (with work by e.g. Henri Fayol and Chester Barnard)
- Contingency theory
- New institutionalism and new institutional economics
- Network analysis
- Economic sociology
- Organization ecology (or demography of organizations)
- Transaction cost economics
- Agency theory (sometimes called principal - agent theory)
- Studies of organization culture
- Postmodern organization studies
- Labour Process Theory
- Critical Management Studies
- Complexity Theory and Organizations
- Transaction cost theory/Transaction cost Economics (TCE)
- Garbage can model
- Actor-Network Theory and the 'Montreal School'
- social entrepreneurship

Organizational structures

The study of organizations includes a focus on optimizing organizational structure. According to management science, most human organizations fall roughly into four types:

- Pyramids or hierarchies
- Committees or juries
- Matrix organizations

- Ecologies

Pyramids or hierarchies

A hierarchy exemplifies an arrangement with a leader who leads leaders. This arrangement is often associated with bureaucracy. Hierarchies were satirized in *The Peter Principle* (1969), a book that introduced *hierarchiology* and the saying that "in a hierarchy every employee tends to rise to his level of incompetence".

An extremely rigid, in terms of responsibilities, type of organization is exemplified by Führerprinzip.

Committees or juries

These consist of a group of peers who decide as a group, perhaps by voting. The difference between a jury and a committee is that the members of the committee are usually assigned to perform or lead further actions after the group comes to a decision, whereas members of a jury come to a decision. In common law countries legal juries render decisions of guilt, liability and quantify damages; juries are also used in athletic contests, book awards and similar activities. Sometimes a selection committee functions like a jury. In the Middle Ages juries in continental Europe were used to determine the law according to consensus amongst local notables.

Committees are often the most reliable way to make decisions. Condorcet's jury theorem proved that if the average member votes better than a roll of dice, then adding more members increases the number of majorities that can come to a correct vote (however correctness is defined). The problem is that if the average member is *worse* than a roll of dice, the committee's decisions grow worse, not better: Staffing is crucial.

Parliamentary procedure, such as Robert's Rules of Order, helps prevent committees from engaging in lengthy discussions without reaching decisions.

Staff organization or cross-functional team

A staff helps an expert get all his work done. To this end, a "chief of staff" decides whether an assignment is routine or not. If it's routine, he assigns it to a staff member, who is a sort of junior expert. The chief of staff schedules the routine problems, and checks that they are completed.

If a problem is not routine, the chief of staff notices. He passes it to the expert, who solves the problem, and educates the staff – converting the problem into a routine problem.

In a "cross functional team", like an executive committee, the boss *has* to be a non-expert, because so many kinds of expertise are required.

Organization: Cyclical structure

A theory put forth by renowned scholar Stephen John has asserted that throughout the cyclical nature of one's life organizational patterns are key to success. Through various social and political constraints within society one must realize that organizational skills are paramount to success. Stephen John suggests that emphasis needs to be put on areas such as individual/ group processes, functionality, and overall structures of institutions in order to maintain a proper organization. Furthermore, the individual's overall organizational skills are pre-determined by the processes undertaken.:

Matrix organization

This organizational type assigns each worker two bosses in two different hierarchies. One hierarchy is "functional" and assures that each type of expert in the organization is well-trained, and measured by a boss who is super-expert in the same field. The other direction is "executive" and tries to get projects completed using the experts. Projects might be *organized by regions, customer types, or some other schema*. matrix management

Ecologies

This organization has intense competition. Bad parts of the organization starve. Good ones get more work. Everybody is paid for what they actually do, and runs a tiny business that has to show a profit, or they are fired.

Companies who utilize this organization type reflect a rather one-sided view of what goes on in ecology. It is also the case that a natural ecosystem has a natural border - ecoregions do not in general compete with one another in any way, but are very autonomous.

The pharmaceutical company GlaxoSmithKline talks about functioning as this type of organization in this external article from The Guardian.

"Chaordic" organizations

The chaordic model of organizing human endeavors emerged in the 1990s, based on a blending of chaos and order (hence "chaordic"), comes out of the work of Dee Hock and the creation of the VISA financial network. Blending democracy, complex system, consensus decision making, co-operation and competition, the chaordic approach attempts to encourage organizations to evolve from the increasingly nonviable hierarchical, command-and-control models.

Similarly, emergent organizations, and the principle of self-organization. See also group entity for an anarchist perspective on human organizations.

Organizations that are legal entities: government, international organization, non-governmental organization, armed forces, corporation, partnership, charity, not-for-profit corporation, cooperative, university.

The organization of the artist

The organization of the artist is a term first used by architect Frank Gehry to denote the organizational set-up he enforces in order to ensure that the architect/artist is in control of design through construction. The organization of the artist deliberately eliminates the influence of politicians and business people

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on design. The purpose of the organization of the artist is to ensure that it is the design of the architect/artist that is actually implemented and not some compromise decided by political and business interests.

Gehry initially developed the concept of the organization of the artist as a reaction against what he calls the "marginalization of the architect/artist." Gehry explains:

"There's a tendency to marginalize and treat the creative people like women are treated, 'sweetie, us big business guys know how to do this, just give us the design and we'll take it from there.' That is the worst thing that can happen. It requires the organization of the artist to prevail so that the end product is as close as possible to the object of desire [the design] that both the client and architect have come to agree on." (Flyvbjerg 2005, 53).

Gehry argues that the organization of the artist, in addition to making possible artistic integrity, also helps keep his buildings on time and budget, which is rare for the type of innovative and complex designs that Gehry is known for. The organization of the artist thus serves the dual purpose of artistic freedom and economic prudence.

Leadership in organizations

Leadership in formal organizations

An organization that is established as an instrument or means for achieving defined objectives has been referred to as a **formal organization**. Its design specifies how goals are subdivided and reflected in subdivisions of the organization. Divisions, departments, sections, positions, jobs, and tasks make up this work structure. Thus, the formal organization is expected to behave impersonally in regard to relationships with clients or with its members. According to Weber's definition, entry and subsequent advancement is by merit or seniority. Each employee receives a salary and enjoys a degree of tenure that safeguards him from the arbitrary influence of superiors or of powerful clients. The higher his position in the hierarchy, the greater his presumed expertise in adjudicating problems that may arise in the course of the work carried out at lower levels of the organization. It is this bureaucratic structure that forms the basis for the appointment of heads or chiefs of administrative subdivisions in the organization and endows them with the authority attached to their position.

Leadership in informal organizations

In contrast to the appointed head or chief of an administrative unit, a leader emerges within the context of the **informal organization** that underlies the formal structure. The informal organization expresses the personal objectives and goals of the individual membership. Their objectives and goals may or may not coincide with those of the formal organization. The informal organization represents an extension of the social structures that generally characterize human life — the spontaneous emergence of groups and organizations as ends in themselves.

In prehistoric times, man was preoccupied with his personal security, maintenance, protection, and survival. Now man spends a major portion of his waking hours working for organizations. His need to identify with a community that provides security, protection, maintenance, and a feeling of belonging continues unchanged from prehistoric times. This need is met by the informal organization and its emergent, or unofficial, leaders.

Leaders emerge from within the structure of the informal organization. Their personal qualities, the demands of the situation, or a combination of these and other factors attract followers who accept their leadership within one or several overlay structures. Instead of the authority of position held by an appointed head or chief, the emergent leader wields influence or power. Influence is the ability of a person to gain cooperation from others by means of persuasion or control over rewards. Power is a stronger form of influence because it reflects a person's ability to enforce action through the control of a means of punishment.

Leader in organizations

An individual who is appointed to a managerial position has the right to command and enforce obedience by virtue of the authority of his position. However, he must possess adequate personal attributes to match his authority, because authority is only potentially available to him. In the absence of sufficient personal competence, a manager may be confronted by an emergent leader who can challenge his role in the organization and reduce it to that of a figurehead. However, only authority of position has the backing of formal sanctions. It follows that whoever wields personal influence and power can legitimize this only by gaining a formal position in the hierarchy, with commensurate authority.

Hybrid organizations

A hybrid organization is a body that operates in both the public sector and the private sector, simultaneously fulfilling public duties and developing commercial market activities. As a result the hybrid organization becomes a mixture of both a part of government and a private corporation. gjfj

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Planned economy

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A **planned economy** or **directed economy** is an economic system in which the state or government manages the economy. Its most extensive form is referred to as a **command economy**, **centrally planned economy**, or **command and control economy**. In such economies, the state or government controls all major sectors of the economy and formulates all decisions about their use and about the distribution of income. The planners decide what should be produced and direct enterprises to produce those goods. Planned economies are in contrast to *unplanned economies*, such as a market economy, where production, distribution, pricing, and investment decisions are made by the private owners of the factors of production based upon their own and their customers' interests rather than upon furthering some overarching macroeconomic plan. Less extensive forms of planned economies include those that use indicative planning, in which the state employs "influence, subsidies, grants, and taxes, but does not compel." This latter is sometimes referred to as a "planned market economy."

A planned economy may consist of state-owned enterprises, private enterprises directed by the state, or a combination of both. Though "planned economy" and "command economy" are often used as synonyms, some make the distinction that under a command economy, the means of production are publicly owned. That is, a planned economy is "an economic system in which the government controls and regulates production, distribution, prices, etc." but a command economy, while also having this type of regulation, necessarily has substantial public ownership of industry. Therefore, command economies are planned economies, but not necessarily the reverse (example: USA economy during World War II or Nazi Germany's private ownership yet use of the Four Year Plan could construe them as a planned economy in the wide sense, but not necessarily a command economy, while the Soviet Union with public ownership would be a command economy).

Important planned economies that existed in the past include the economy of the Soviet Union, which was for a time the world's second-largest economy, China during its Great Leap Forward, and India, prior to its economic reforms in 1991 . Beginning in the 1980s and 1990s, many governments presiding over planned economies began deregulating (or as in the Soviet Union, the system collapsed) and moving toward market-based economies by allowing the private sector to make the pricing, production, and distribution decisions. Although most economies today are market economies or mixed economies (which are partially planned), planned economies exist in some countries such as Cuba, North Korea, and Myanmar.

Advantages of economic planning

Supporters of planned economies cast them as a practical measure to ensure the production of necessary goods—one which does not rely on the vagaries of free markets.

Stability

A planned economy can ensure the continuous utilization of all available resources. If isolated and unresponsive to consumer



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demand, a planned economy does not suffer from a business cycle. Under an ideally administered planned economy, neither unemployment nor idle production facilities should exist beyond minimal levels, and the economy should develop in a stable manner, unimpeded by inflation or recession.

Long-term infrastructure investment can be made without fear of a market downturn (or loss of confidence) leading to abandonment of the project. This is especially where returns are risky (*e.g.* fusion reactor technology) or where the return is diffuse (*e.g.* immunization programs or public education).

Conformance to a grand design

While a market economy maximizes wealth by evolution, a planned economy favors design. While evolution tends to lead to a local maximum in aggregate wealth, design is in theory capable of achieving a global maximum. For example, a planned city can be designed for efficient transport, while organically grown cities tend to suffer from traffic congestion. Critics would point out that planned cities will suffer from the same problems as unplanned cities, unless reproduction and population growth is subject to strict control, as in a closed city.

Meeting collective objectives by individual sacrifice

A planned economy serves collective rather than individual needs: under such a system, rewards, whether wages or perquisites, are to be distributed according to the value that the state ascribes to the service performed. A planned economy eliminates the individual profit motives as the driving force of production and places it in the hands of the state planners to determine what is the appropriate production of different sets of goods.

The government can harness land, labor, and capital to serve the economic objectives of the state. Consumer demand can be restrained in favour of greater capital investment for economic development in a desired pattern. The state can begin building a heavy industry at once in an underdeveloped economy without waiting years for capital to accumulate through the expansion of light industry, and without reliance on external financing. This is what happened in the Soviet Union during the 1930s when the government forced the share of GNP dedicated to private consumption from 80 percent to 50 percent. While there was a significant decline in individual living standards, the state was able to meet some of its "economic objectives."

Comparison with capitalist corporations

Taken as a whole, a centrally planned economy would attempt to substitute a number of firms with a single firm for an entire economy. As such, the stability of a planned economy has implications with the Theory of the firm. After all, most corporations are essentially 'centrally planned economies', aside from some token intra-corporate pricing (not to mention that the politics in some corporations resemble that of the Soviet Politburo). That is, corporations are essentially miniature centrally planned economies and seem to do just fine in a free market. As pointed out by Kenneth Arrow and others, the existence of firms in free markets shows that there is a need for firms in free markets; opponents of planned economies would simply argue that there is no need for a sole firm for the entire economy.

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Disadvantages of economic planning

Cannot determine and prioritize social goods better than the market can

Some who oppose comprehensive planned economies argue that some central planning is justified. In particular, it is possible to create unprofitable but socially useful goods within the context of a market economy. For example, one could produce a new drug by having the government collect taxes and then spend the money for the social good. On the other hand, opponents of such central planning say that "absent the data about priorities conveyed through price signals created by freely acting individuals, [it is questionable] whether determinations about what is socially important can even be made at all." Opponents do not dispute that something useful can be produced if money is expropriated from private businesses and individuals, but their complaint is that "it's far from certain that those monies could not have been spent better" if individuals were allowed to spend and invest as they wished according to their own wants.

We can see things of value being produced by the state taxing and using those funds to undertake projects which are believed to be social goods, but we cannot see what social goods have *not* been produced due to wealth taken out of the hands of those who would have invested and spent their money in other ways according to their own goals. These opponents of central planning argue that the only way to determine what society actually wants is by allowing private enterprise to use their resources in competing to meet the needs of consumers, rather those taking resources away and allowing government to direct investment without responding to market signals. According to Tibor R. Machan, "Without a market in which allocations can be made in obedience to the law of supply and demand, it is difficult or impossible to funnel resources with respect to actual human preferences and goals."

If the government in question is democratic, democratically-determined social priorities may be considered legitimate social objectives in which the government is justified in intervening in the economy. It must be noted that to date, most if not all countries employing command economies have been dictatorships or oligarchies -- few or none were democracies. Many democratic nations, however, have a mixed economy, where the government intervenes to a certain extent and in certain aspects of the economy, although other aspects of the economy are left to the free market.

Lack of incentive for innovation

Another criticism some make of central planning is that it is less likely to promote innovation than a free market economy. In the latter, inventors can reap huge benefits by patenting new technology, so there is arguably much more incentive to innovate. Conversely a planned economy can deliver vast national resources into research and development if it gets the idea that a particular field is critical to its interests, usually military technology. The Soviet Union's ability to maintain fierce competition versus the United States during the space race and cold war, despite its smaller economy, is an example of this.

Infringement on individual freedoms

The top down structure of a centrally planned economy dictates a hegemonic operating culture - whereas in a free market economy several models of operating can compete simultaneously in a manner similar to organisms in an ecosystem.

Critics also hold that certain types of command economies may require a state which intervenes highly in people's personal lives. For example, if the state directs all employment then one's career options may be more limited. If goods are allocated by the state rather than by a market economy, citizens cannot, for example, move to another location without state permission because they would not be able to acquire food or housing in the new location, as the necessary resources were not preplanned.

Likewise, because of the state's controls over an individual's personal choices, critics contend that central planning intrinsically results in a top-down, dictatorial state where politicians and bureaucrats use the state to achieve their own ends, which are in turn described as the "social" objectives of the state. In essence, critics contend that socialism has nothing to do with the preferences of the individuals that comprise a society, but rather the abstract goals of some group.

This criticism is supported by Rummel's Law which states that the less freedom a people have, the more likely their rulers are to murder them. R. J. Rummel's top three examples of 20th century "Megamurders" were Soviet Russia, People's Republic of China and Nazi Germany, all planned economies with limited individual freedom.

The Road to Serfdom is a book written by Friedrich Hayek and critical of collectivism, presenting the argument that a central planned economy must ultimately result in tyranny. An idea similar to this is the idea of the iron cage presented even earlier by Max Weber in The Protestant Ethic and the Spirit of Capitalism.

Suppression of Economic Democracy and Self-Management

Centrally planning is also criticized by elements of the radical left. Libertarian socialist economist Robin Hahnel notes that even if central planning overcame its inherent inhibitions of incentives and innovation it would nevertheless be unable to maximize economic democracy and self-management, which he believes are concepts that are more intellectually coherent, consistent and just than mainstream notions of economic freedom. As Hahnel explains, "Combined with a more democratic political system, and redone to closer approximate a best case version, centrally planned economies no doubt would have performed better. But they could never have delivered economic self-management, they would always have been slow to innovate as apathy and frustration took their inevitable toll, and they would always have been susceptible to growing inequities and inefficiencies as the effects of differential economic power grew. Under central planning neither planners, managers, nor workers had incentives to promote the social economic interest. Nor did impending markets for final goods to the planning system enfranchise consumers in meaningful ways. But central planning would have been incompatible with economic democracy even if it had overcome its information and incentive liabilities. And the truth is that it survived as long as it did only because it was propped up by unprecedented totalitarian political power."

Corruption

A planned economy creates social conditions favoring political corruption. Particularly, command economies have been notoriously corrupt. First, centralized decision-making predisposes planners to abuses of power. Second, the inherent inefficiency of plans drawn with insufficient information creates a need for bypassing or subverting the official decision-making process. For example, the Soviet Gosplan could not create plans that were feasible, and other means were used to meet the quotas. A gift economy featuring corruption, *blat*, developed. The Chinese *guanxi* is somewhat similar.

Planned economies and socialism

In the 20th century, most planned economies were implemented by states that called themselves socialist. Also, the greatest support for planned economics comes from socialist authors. For these reasons, the notion of a planned economy is often directly associated with socialism. However, they do not entirely overlap. There are branches of socialism such as libertarian socialism, that reject a centralized state, and all of these tendencies reject economic planning as well and instead favour decentralised collective ownership of the economy and property.

Furthermore, planned economies are not unique to Communist states. There is a Trotskyist theory of permanent arms economy, put forward by Michael Kidron, which leads on from the contention that war and accompanying industrialisation is a continuing feature of capitalist states and that central planning and other features of the war economy are ever present.

Transition from a planned economy to a market economy

The shift from a command economy to a market economy has proven to be difficult; in particular, there were no theoretical guides for doing so before the 1990s. One transition from a command economy to a market economy that a few consider successful is that of the People's Republic of China, in which there was a period of some years lasting roughly until the early 1990s during which both the command economy and the market economy coexisted, so that nobody would be much worse off under a mixed economy than a command economy, while some people would be much better off. Gradually, the parts of the economy under the command economy decreased until the mid-1990s when resource allocation was almost completely determined by market mechanisms.

By contrast, the Soviet Union's transition was much more problematic and its successor republics faced a sharp decline in GDP during the early 1990s. While the transition to a market economy proved difficult, many of the post-Soviet states have been experiencing strong, resource-based economic growth in recent years, though the levels vary substantially. However, a majority of the former Soviet Republics have not yet reached pre-collapse levels of economic development.

Transition from a market economy to a planned economy

Government market regulation

Central governments are tempted to solve problems quickly by introducing additional market regulation. Once such regulation is introduced, it is rarely removed, ratcheting towards a gradual increase in government power and a constraint on the mechanism of the free market. Usually, big business has an advantage over small business in a strongly regulated market, because big business can cope with the bureaucracy and small business cannot take advantage of adaptivity.

Franklin D. Roosevelt's New Deal was an example of market regulation used by the American government in an attempt to escape the Great Depression of the 1930s.

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Corporate monopoly

The process of wealth condensation results in a small number of people controlling large sections of the economy.

The British East India Company is an example of government-granted monopoly.

American Telephone & Telegraph (formerly Bell Telephone Company), was regarded as a natural monopoly until it was broken up by the U.S. Department of Justice in 1974. This is an example of United States antitrust law being used to discourage centralization of corporate power.

Amalgamated trade unions

Small trade unions have limited power, especially against larger international corporations. Amalgamation of trade unions leads to an industry-wide group with more bargaining power but less individual interest in any particular worker. Such a union will bargain directly with government on an industry-wide basis and thus create a form of central planning that is distinct from typical (Laissez-faire) capitalism.

Similar economic models

A palace economy may be considered as a subsistence economy augmented with elements of a command economy.

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Poverty threshold

2008/9 Schools Wikipedia Selection. Related subjects: Citizenship; Economics

The **poverty threshold**, or **poverty line**, is the minimum level of income deemed necessary to achieve an adequate standard of living in a given country. In practice, like the definition of poverty, the official or common understanding of the poverty line is significantly higher in developed countries than in developing countries.

Almost all societies have citizens living in poverty. The poverty threshold is useful as an economic tool with which to measure such people and consider socioeconomic reforms such as welfare and unemployment insurance to reduce poverty.

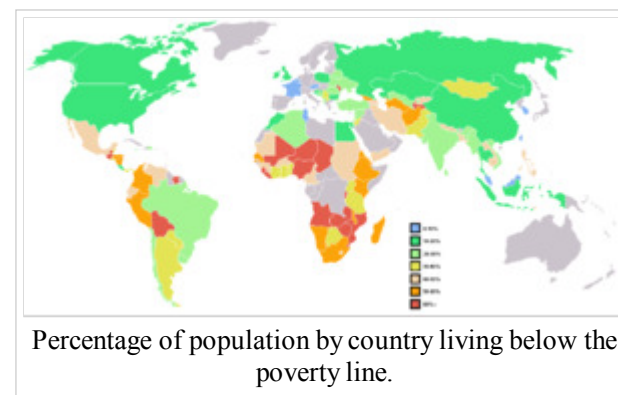
Determining the poverty line is usually done by finding the total cost of all the essential resources that an average human adult consumes in one year. This approach is needs-based in that an assessment is made of the minimum expenditure needed to maintain a tolerable life. This was the original basis of the poverty line in the United States, whose poverty threshold has since been raised due to inflation. In developing countries, the most expensive of these resources is typically the rent required to live in an apartment. Economists thus pay particular attention to the real estate market and housing prices because of their strong influence on the poverty threshold.

Individual factors are often used to account for various circumstances, such as whether one is a parent, elderly, a child, married, etc. The poverty threshold is adjusted each year. In 2007, in the United States of America, the poverty threshold for a single person under 65 was US\$10,787; the threshold for a family group of four, including two children, was US\$21,027.

Defining poverty thresholds

Poverty thresholds can be defined in different ways:

- Social Security benefit based. If a government guarantees to make income up to some particular level then it may be presumed that that level is the poverty threshold. This is a problematic definition, because an uncharitable government may reduce the guaranteed income, thus reducing the incidence of poverty so defined while increasing the incidence of actual poverty.
- A relative income line, related to some fraction of typical incomes. This excludes the wealthiest individuals from the calculation. For example, the OECD and the European Union uses 60% of national median equivalised household income.
- A relative figure fixed in time and only adjusted for inflation - thus avoiding the possibility that if income inequality increases, then poverty may



otherwise also increase.

- When the World Bank calculates its "\$1 a day" statistics, it uses a poverty threshold.
- A basket of goods deemed necessary to live at the socially accepted minimum, such as the U.S. government uses.

Absolute poverty

A measure of *absolute poverty* quantifies the number of people below a poverty threshold, and this poverty threshold is independent of time and place. For the measure to be absolute, the line must be the same in different countries, cultures, and technological levels. Such an absolute measure should look only at the individual's power to consume and it should be independent of any changes in income distribution. Such a measure is only possible when all consumed goods and services are counted and when PPP-exchange rates are used (see purchasing power parity). The intuition behind an absolute measure is that mere survival takes essentially the same amount of resources across the world and that everybody should be subject to the same standards if meaningful comparisons of policies and progress are to be made. Notice that if everyone's real income in an economy increases, and the income distribution does not change, absolute poverty will decline.

Measuring poverty by an absolute threshold has the advantage of applying the same standard across different locations and time periods, making comparisons easier. On the other hand, it suffers from the disadvantage that any absolute poverty threshold is to some extent arbitrary; the amount of wealth required for survival is not the same in all places and time periods. For example, a person living in far northern Scandinavia requires a source of heat during colder months, while a person living on a tropical island does not.

This type of measure is often contrasted with measures of relative poverty (see below), which classify individuals or families as "poor" not by comparing them to a fixed cutoff point, but by comparing them to others in the population under study.

The term *absolute poverty* is also sometimes used as a synonym for extreme poverty.

According to a UN declaration that resulted from the World Summit on Social Development in Copenhagen in 1995, absolute poverty is "a condition characterised by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to services."

David Gordon's paper, "Indicators of Poverty & Hunger", for the United Nations, further explains that absolute poverty is the absence of any two of the following eight basic needs:

- *Food*: Body Mass Index must be above 16.
- *Safe drinking water*: Water must not come from solely rivers and ponds, and must be available nearby (less than 15 minutes' walk each way).



Women washing clothes in a ditch alongside a main road in Mumbai, India.

- *Sanitation facilities*: Toilets or latrines must be accessible in or near the home.
- *Health*: Treatment must be received for serious illnesses and pregnancy.
- *Shelter*: Homes must have fewer than four people living in each room. Floors must not be made of dirt, mud, or clay.
- *Education*: Everyone must attend school or otherwise learn to read.
- *Information*: Everyone must have access to newspapers, radios, televisions, computers, or telephones at home.
- *Access to services*: This item is undefined by Gordon, but normally is used to indicate the complete panoply of education, health, legal, social, and financial (credit) services.

For example, a person who lives in a home with a mud floor is considered severely deprived of shelter. A person who never attended school and cannot read is considered severely deprived of education. A person who has no newspaper, radio, television, or telephone is considered severely deprived of information. All people who meet any two of these conditions — for example, they live in homes with mud floors *and* cannot read — are considered to be living in absolute poverty.

Relative poverty

A measure of *relative poverty* defines "poverty" as being below some relative poverty threshold. For example, the statement that "households with an accumulated income less than 50% of the median income are living in poverty" uses a relative measure to define poverty. In this system, if everyone's real income in an economy increases, but the income distribution stays the same, then the rate of relative poverty will also stay the same.

Relative poverty measurements can produce odd results in small or unusual populations. For example, if the median household in a wealthy neighborhood earns US\$1 million each year, then a family that earns US\$100,000 would be considered poor on the relative poverty scale, even though such a family could meet all of its basic needs. At the other end of the scale, if the median household in a very poor neighbourhood earned only 50% of what it needs to buy food, then a person who earned the median income would not be considered poor on a relative poverty scale, even though the person is clearly poor on an absolute poverty scale.

Measures of relative poverty are almost the same as measuring income inequality: If a society gets a more equal income distribution, relative poverty will fall. Following this, some argue that the term *relative poverty* is itself misleading and that *income inequality* should be used instead. They point out that if society changed in a way that hurt high earners more than low ones, then relative poverty would decrease, but every citizen of the society would be worse off. Likewise in the reverse direction: it is possible to reduce absolute poverty while increasing relative poverty.

The term *relative poverty* can also be used in a different sense to mean "moderate poverty" — for example, a standard of living or level of income that is high enough to satisfy basic needs (like water, food, clothing, shelter, and basic health care), but still significantly lower than that of the majority of the population under consideration.

Basic needs

Some measurements combine certain aspects of absolute and relative measures. For example, the Fraser Institute publishes a basic needs poverty measure for Canada. According to the Fraser Institute, "the basic-needs approach is partly absolute (the list [of necessities] is limited to items required for long-term physical well-being) and partly relative, reflecting the standards that apply in the individual's own society at the present time." The Fraser Institute's list of necessities for living creditably in Canada includes not only food, shelter, clothing, and health care, but also personal care, furniture, transportation, communication, laundry, and home insurance. It is criticized for not including any entertainment items like cable television, daily newspapers, and tickets to movies or sporting events.

Criticisms

Using a poverty threshold is problematic because having an income marginally above it is not substantially different from having an income marginally below it: the negative effects of poverty tend to be continuous rather than discrete, and the same low income affects different people in different ways. To overcome this problem, poverty indices are sometimes used instead; see income inequality metrics.

A poverty threshold relies on a quantitative, or purely numbers-based measure of income. If other human development-indicators like health and education are used, they must be quantified, which is not a simple (if even achievable) task.

Overstating poverty

Public and private charitable gifts are not counted when calculating a poverty threshold. For example, if a parent pays the rent on an apartment for an adult daughter, that money does not count as income to the daughter. If a church or non-profit organization gives food to an elderly person, that also does not count as income. Rea Hederman, a senior policy analyst in the Centre for Data Analysis at the Heritage Foundation, a conservative think tank in the United States, complained,

The official poverty measure counts only monetary income. It considers antipoverty programs such as food stamps, housing assistance, the Earned Income Tax Credit, Medicaid and school lunches, among others, "in-kind benefits" -- and hence not income. So, despite everything these programs do to relieve poverty, they aren't counted as income when Washington measures the *poverty rate*.

Studies measuring the difference between income before and after taxes and government transfers, however, have found that without these programs poverty would be roughly 30% to 40% higher than the official poverty line indicates - despite many of their benefits not being counted as income.

Understating poverty

The U.S. poverty threshold in particular has been criticized for understating poverty, by using an outdated "basket of goods" to set the standard. While cost of these goods is adjusted for inflation every year, the basket of goods itself remains the same. It excludes the cost of items that were rare among poor Americans in the 1950s, but which are now common, such as a telephone, a car and a microwave oven. Mollie Orshansky, who devised the original goods basket and methodology to measure poverty, used by the U.S. government, in 1963-65, suggested an updated list in 2000. She found that the point where a person is excluded from the nation's prevailing consumption patterns, is roughly 170% of the official poverty threshold.

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Furthermore, in developed countries, such as the U.S., poverty tends to be cyclical. Thus, the poverty line only indicates how many people are poor at any one point in time. It does not report the number of people who will experience poverty during their lifetimes. In the U.S. for example, roughly 12%-13% fall below the poverty line in any given year, but roughly 40% will experience poverty at some point over a ten-year timespan.

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Service (economics)

2008/9 Schools Wikipedia Selection. Related subjects: Economics

A **service** is the non-material equivalent of a good. A service provision is an economic activity that does not result in ownership, and this is what differentiates it from providing physical goods. It is claimed to be a process that creates benefits by facilitating either a change in customers, a change in their physical possessions, or a change in their intangible assets.

By supplying some level of skill, ingenuity, and experience, providers of a service participate in an economy without the restrictions of carrying stock (inventory) or the need to concern themselves with bulky raw materials. On the other hand, their investment in expertise does require marketing and upgrading in the face of competition which has equally few physical restrictions.

Providers of services make up the Tertiary sector of industry.

Key characteristics

Services can be paraphrased in terms of their main attributes. They are intangible and insubstantial; they cannot be handled, smelled, tasted, heard, etc. There is neither potential nor need for storage and they are said to be inseparable and perishable. Because services are difficult to conceptualize, marketing them requires creative visualization to effectively evoke a concrete image in the customer's mind. From the customer's point of view, this characteristic makes it difficult to evaluate or compare services prior to experiencing the service delivery. They are perishable, unsold service time is a lost economic opportunity. For example a doctor who is booked for only two hours a day cannot later work those hours— she has lost her economic opportunity. Other service examples are airplane seats (once the plane departs, those empty seats cannot be sold), and theatre seats (sales end at a certain point). There is a lack of transportability as services tend to be consumed at the point of "production" although this does not apply to outsourced business services. There is a lack of homogeneity as services are typically modified for each consumer or each new situation (consumerised). Mass production of services is very difficult. This can be seen as a problem of inconsistent quality. Both inputs and outputs to the processes involved providing services are highly variable, as are the relationships between these processes, making it difficult to maintain consistent quality. There is labor intensity as services usually involve considerable human activity, rather than a precisely determined process. Human resource management is important. The human factor is often the key success factor in service industries. It is difficult to achieve economies of scale or gain dominant market share. There are demand fluctuations and it can be difficult to forecast demand which is also true of many goods. Demand can vary by season, time of day, business cycle, etc. There is buyer involvement as most service provision requires a high degree of interaction between service consumer and service provider. There is a client-based relationship based on creating long-term business relationships. Accountants, attorneys, and financial advisers maintain long-term relationships with their clientes for decades. These repeat consumers refer friends and family, helping to create a client-based relationship.

Service definition

The clear-cut, consistent, generic definition of the service term reads as follows:

A service is a set of benefits delivered from the accountable service provider, mostly in close coaction with his service suppliers, generated by the functions of technical systems and/or by distinct activities of individuals, respectively, commissioned according to the needs of his service consumers by the service customer from the accountable service provider, rendered individually to the authorized service consumers on their dedicated request, and, finally, utilized by the requesting service consumers for executing and/or supporting their day-to-day business tasks or private activities.

Service specification

Any service can be completely, consistently and clearly specified by means of the following 12 standard attributes

1. Service Consumer Benefit(s)
2. Service-specific Functional Parameter(s)
3. Service Delivery Point
4. Service Consumer Count
5. Service Readiness Time(s)
6. Service Support Time(s)
7. Service Support Language(s)
8. Service Fulfillment Target
9. Maximum Impairment Duration per Incident
10. Service Delivering Duration
11. Service Delivery Unit
12. Service Delivering Price

The meaning and content of these attributes are:

1. Service Consumer Benefits describe the (set of) benefits which are callable, receivable and effectively utilizable for any authorized service consumer and which are provided to him as soon as he requests the offered service. The description of these benefits must be phrased in the terms and wording of the intended service consumers.

2. Service-specific Functional Parameters specify the functional parameters which are essential and unique to the respective service and which describe the most important dimension of the service output, e.g. maximum e-mailbox capacity per registered and authorized e-mail service consumer.

3. Service Delivery Point describes the physical location and/or logical interface where the benefits of the service are made accessible, callable and receivable

to the authorized service consumers. At this point and/or interface, the preparedness for service delivery can be assessed as well as the effective delivery of the service itself can be monitored and controlled.

4. Service Consumer Count specifies the number of intended, identified, named, registered and authorized service consumers which are allowed and enabled to call and utilize the defined service for executing and/or supporting their business tasks or private activities.

5. Service Readiness Times specify the distinct agreed times of day when

- the described service consumer benefits are
 - accessible and callable for the authorized service consumers at the defined service delivery point
 - receivable and utilizable for the authorized service consumers at the respective agreed service level
- all service-relevant processes and resources are operative and effective
- all service-relevant technical systems are up and running and attended by the operating team
- the specified service benefits are comprehensively delivered to any authorized requesting service consumer without any delay or friction.

The time data are specified in 24 h format per local working day and local time, referring to the location of the intended service consumers.

6. Service Support Times specify the determined and agreed times of day when the usage and consumption of the contracted services is supported by the service desk team for all identified, registered and authorized service consumers within the service customer's organizational unit or area. The service desk is the single point of contact for any service consumer inquiry regarding the contracted and delivered services. During the defined service support times, the service desk can be reached by phone, e-mail, web-based entries and/or fax, respectively. The time data are specified in 24 h format per local working day and local time, referring to the location of the intended service consumers.

7. Service Support Languages specifies the languages which are spoken by the service desk team(s) to the service consumers calling them.

8. Service Fulfillment Target specifies the service provider's promise of effective and seamless delivery of the defined benefits to any authorized service consumer requesting the service within the defined service times. It is expressed as the promised minimum ratio of the counts of successful individual service deliveries related to the counts of called individual service deliveries. The effective service fulfillment ratio can be measured and calculated per single service consumer or per consumer group and may be referred to different time periods (workday, calendarweek, workmonth, etc.)

9. Maximum Impairment Duration per Incident specifies the allowable maximum elapsing time [hh:mm] between

- the first occurrence of a service impairment, i.e. service quality degradation or service delivery disruption, whilst the service consumer consumes and utilizes the delivered service,
- and the full resumption and complete execution of the service delivery to the content of the affected service consumer.

10. Service Delivering Duration specifies the promised and agreed maximum period of time for effectively delivering all specified service consumer benefits to the requesting service consumer at the defined service delivery point.

11. Service Delivery Unit specifies the basic portion for delivering the defined service consumer benefits. The service delivery unit is the reference and mapping object for all cost for service generation and delivery as well as for charging and billing the consumed service volume to the service customer who has ordered the service delivery.

12. Service Delivering Price specifies the amount of money the service customer has to pay for the consumption of distinct service volumes. Normally, the service delivering price comprises two portions

- a fixed basic price portion for basic efforts and resources which provide accessibility and usability of the service delivery functions, i.e. service access price
- a price portion covering the service consumption based on
 - fixed flat rate price per authorized service consumer and delivery period without regard on the consumed service volumes,
 - staged prices depending on consumed service volumes,
 - fixed price per particularly consumed service delivering unit.

Service delivery

The delivery of a service typically involves six factors:

- The accountable service provider and his service suppliers (e.g. the people)
- Equipment used to provide the service (e.g. vehicles, cash registers)
- The physical facilities (e.g. buildings, parking, waiting rooms)
- The requesting service consumer
- Other customers at the service delivery location
- Customer contact

The service encounter is defined as all activities involved in the service delivery process. Some service managers use the term "moment of truth" to indicate that defining point in a specific service encounter where interactions are most intense.

Many business theorists view service provision as a performance or act (sometimes humorously referred to as *dramalurgy*, perhaps in reference to dramaturgy). The location of the service delivery is referred to as the stage and the objects that facilitate the service process are called props. A script is a sequence of behaviours followed by all those involved, including the client(s). Some service dramas are tightly scripted, others are more ad lib. Role congruence occurs when each actor follows a script that harmonizes with the roles played by the other actors.

In some service industries, especially health care, dispute resolution, and social services, a popular concept is the idea of the caseload, which refers to the total number of patients, clients, litigants, or claimants that a given employee is presently responsible for. On a daily basis, in all those fields, employees must balance the needs of any individual case against the needs of all other current cases as well as their own personal needs.

Under English law, if a service provider is induced to deliver services to a dishonest client by a deception, this is an offence under the Theft Act 1978.

The service-goods continuum

The dichotomy between physical goods and intangible services should not be given too much credence. These are not discrete categories. Most business theorists see a continuum with pure service on one terminal point and pure commodity good on the other terminal point. Most products fall between these two extremes. For example, a restaurant provides a physical good (the food), but also provides services in the form of ambience, the setting and clearing of the table, etc. And although some utilities actually deliver physical goods — like water utilities which actually deliver water — utilities are usually treated as services.

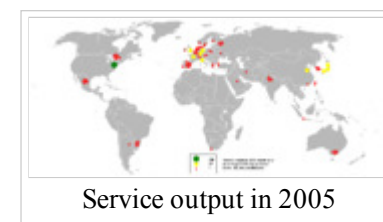
In a narrower sense, service refers to quality of customer service: the measured appropriateness of assistance and support provided to a customer. This particular usage occurs frequently in retailing.

List of economic services

In 2005, USA was the largest producer of services followed by Japan and Germany, reports the International Monetary Fund. 50% of the U.S. Economy consists of services compared to 20% in 1947.

The following is an incomplete list of service industries, grouped into rough sectors. Parenthetical notations indicate how specific occupations and organizations can be regarded as service industries to the extent they provide an intangible service, as opposed to a tangible good.

- business functions (that apply to all organizations in general)
 - consulting
 - customer service
 - human resources administrators (providing services like ensuring that employees are paid accurately)
- child care
- cleaning, repair and maintenance services
 - janitors (who provide cleaning services)
 - gardeners
 - mechanics
- construction
 - carpentry
 - electricians (offering the service of making wiring work properly)
 - plumbing
- death care



- coroners (who provide the service of identifying corpses and determining time and cause of death)
- funeral homes (who prepare corpses for public display, cremation or burial)
- dispute resolution and prevention services
 - arbitration
 - courts of law (who perform the service of dispute resolution backed by the power of the state)
 - diplomacy
 - incarceration (provides the service of keeping criminals out of society)
 - law enforcement (provides the service of identifying and apprehending criminals)
 - lawyers (who perform the services of advocacy and decisionmaking in many dispute resolution and prevention processes)
 - mediation
 - military (performs the service of protecting states in disputes with other states)
 - negotiation (not really a service unless someone is negotiating on behalf of another)
- education (institutions offering the services of teaching and access to information)
 - library
 - museum
 - school
- entertainment (when provided live or within a highly specialized facility)
 - gambling
 - movie theatres (providing the service of showing a movie on a big screen)
 - performing arts productions
 - sexual services
 - sports
 - television
- fabric care
 - dry cleaning
 - laundromat (offering the service of automated fabric cleaning)
- financial services
 - accounting
 - banks and building societies (offering lending services and safekeeping of money and valuables)
 - real estate
 - stock brokerages
 - tax return preparation
- foodservice industry
- hairdressing
- health care (all health care professions provide services)
- hospitality industry
- information services

- data processing
- database services
- language interpretation
- language translation
- risk management
 - insurance
 - security
- social services
 - social work
- transport
- utilities
 - electric power
 - natural gas
 - telecommunications
 - waste management
 - water industry

Finding related topics

- list of marketing topics
- list of management topics
- list of economics topics
- list of finance topics
- list of human resource management topics
- list of accounting topics
- list of information technology management topics
- list of business law topics
- list of production topics
- list of business ethics, political economy, and philosophy of business topics
- list of business theorists
- list of economists
- list of corporate leaders

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Stock market

2008/9 Schools Wikipedia Selection. Related subjects: Economics

A **stock market**, or generally referred to as **equity market**, is a private or public market for the trading of company stock and derivatives of company stock at an agreed price; these are securities listed on a stock exchange as well as those only traded privately.

The definition

The expression "stock market" refers to the market that enables the trading of company stocks (collective shares), other securities, and derivatives. Bonds are still traditionally traded in an informal, over-the-counter market known as the bond market. Commodities are traded in commodities markets, and derivatives are traded in a variety of markets (but, like bonds, mostly 'over-the-counter').

The size of the worldwide "bond market" is estimated at \$45 trillion. The size of the "stock market" is estimated at about \$51 trillion. The world derivatives market has been estimated at about \$480 trillion "face" or nominal value, 30 times the size of the U.S. economy...and 12 times the size of the entire world economy. It must be noted though that the value of the derivatives market, because it is stated in terms of *notional* values, cannot be directly compared to a stock or a fixed income security, which traditionally refers to an *actual* value. (Many such relatively illiquid securities are valued as *marked to model*, rather than an actual market price.)

The stocks are listed and traded on stock exchanges which are entities (a corporation or mutual organization) specialized in the business of bringing buyers and sellers of stocks and securities together. The stock market in the United States includes the trading of all securities listed on the NYSE, the NASDAQ, the Amex, as well as on the many regional exchanges, e.g. OTCBB and Pink Sheets. European examples of stock exchanges include the Paris Bourse (now part of Euronext), the London Stock Exchange and the Deutsche Borse.

Trading

Participants in the stock market range from small individual stock investors to large hedge fund traders, who can be based anywhere. Their orders usually end up with a professional at a stock exchange, who executes the order.

Financial markets



Bond market

- Fixed income
- Corporate bond
- Government bond
- Municipal bond
- Bond valuation
- High-yield debt

Stock market

- Stock
- Preferred stock
- Common stock
- Registered share
- Voting share
- Stock exchange

Foreign exchange market

Some exchanges are physical locations where transactions are carried out on a trading floor, by a method known as open outcry. This type of auction is used in stock exchanges and commodity exchanges where traders may enter "verbal" bids and offers simultaneously. The other type of exchange is a virtual kind, composed of a network of computers where trades are made electronically via traders.

Actual trades are based on an auction market paradigm where a potential buyer *bids* a specific price for a stock and a potential seller *asks* a specific price for the stock. (Buying or selling *at market* means you will accept *any* ask price or bid price for the stock, respectively.) When the bid and ask prices match, a sale takes place on a first come first served basis if there are multiple bidders or askers at a given price.

The purpose of a stock exchange is to facilitate the exchange of securities between buyers and sellers, thus providing a marketplace (virtual or real). The exchanges provide real-time trading information on the listed securities, facilitating price discovery.

The New York Stock Exchange is a physical exchange, also referred to as a *listed* exchange — only stocks listed with the exchange may be traded. Orders enter by way of exchange members and flow down to a specialist, who goes to the floor trading post to trade stock. The specialist's job is to match buy and sell orders using open outcry. If a spread exists, no trade immediately takes place--in this case the specialist should use his/her own resources (money or stock) to close the difference after his/her judged time. Once a trade has been made the details are reported on the "tape" and sent back to the brokerage firm, which then notifies the investor who placed the order. Although there is a significant amount of human contact in this process, computers play an important role, especially for so-called "program trading".

The NASDAQ is a virtual listed exchange, where all of the trading is done over a computer network. The process is similar to the New York Stock Exchange. However, buyers and sellers are electronically matched. One or more NASDAQ market makers will always provide a bid and ask price at which they will always purchase or sell 'their' stock. .

The Paris Bourse, now part of Euronext, is an order-driven, electronic stock exchange. It was automated in the late 1980s. Prior to the 1980s, it consisted of an open outcry exchange. Stockbrokers met on the trading floor or the Palais Brongniart. In 1986, the CATS trading system was introduced, and the order matching process was fully automated.

From time to time, active trading (especially in large blocks of securities) have moved away from the 'active' exchanges. Securities firms, led by UBS AG, Goldman Sachs Group Inc. and Credit Suisse Group, already steer 12 percent of U.S. security trades away from the exchanges to their internal systems. That share probably will increase to 18 percent by 2010 as more investment banks bypass the NYSE and NASDAQ and pair buyers and sellers of securities themselves, according to data compiled by Boston-based Aite Group LLC, a brokerage-industry consultant [citation needed].

Now that computers have eliminated the need for trading floors like the Big Board's, the balance of power in equity markets is shifting. By bringing more orders in-house, where clients can move big blocks of stock *anonymously*, brokers pay the exchanges less in fees and capture a bigger share of the \$11 billion a year

Derivatives market

- Credit derivative
- Hybrid security
- Options
- Futures
- Forwards
- Swaps

Other Markets

- Commodity market
- Money market
- OTC market
- Real estate market
- Spot market

Finance series

- Financial market
- Financial market participants
- Corporate finance
- Personal finance
- Public finance
- Banks and Banking
- Financial regulation

that institutional investors pay in trading commissions.

Market participants

Many years ago, worldwide, buyers and sellers were individual investors, such as wealthy businessmen, with long family histories (and emotional ties) to particular corporations. Over time, markets have become more "institutionalized"; buyers and sellers are largely institutions (e.g., pension funds, insurance companies, mutual funds, hedge funds, investor groups, and banks). The rise of the institutional investor has brought with it some improvements in market operations. Thus, the government was responsible for "fixed" (and exorbitant) fees being markedly reduced for the 'small' investor, but only after the large institutions had managed to break the brokers' solid front on fees (they then went to 'negotiated' fees, but only for large institutions).

However, corporate governance (at least in the West) has been very much adversely affected by the rise of (largely 'absentee') institutional 'owners'.

History

Historian Fernand Braudel suggests that in Cairo in the 11th century Muslim and Jewish merchants had already set up every form of trade association and had knowledge of many methods of credit and payment, disproving the belief that these were invented later by Italians. In 12th century France the *courratiers de change* were concerned with managing and regulating the debts of agricultural communities on behalf of the banks. Because these men also traded with debts, they could be called the first brokers. In late 13th century Bruges commodity traders gathered inside the house of a man called *Van der Beurse*, and in 1309 they became the "Brugse Beurse", institutionalizing what had been, until then, an informal meeting. The idea quickly spread around Flanders and neighboring counties and "Beurzen" soon opened in Ghent and Amsterdam.

In the middle of the 13th century Venetian bankers began to trade in government securities. In 1351 the Venetian government outlawed spreading rumors intended to lower the price of government funds. Bankers in Pisa, Verona, Genoa and Florence also began trading in government securities during the 14th century. This was only possible because these were independent city states not ruled by a duke but a council of influential citizens. The Dutch later started joint stock companies, which let shareholders invest in business ventures and get a share of their profits - or losses. In 1602, the Dutch East India Company issued the first shares on the Amsterdam Stock Exchange. It was the first company to issue stocks and bonds.

The Amsterdam Stock Exchange (or Amsterdam Beurs) is also said to have been the first stock exchange to introduce continuous trade in the early 17th century. The Dutch "pioneered short selling, option trading, debt-equity swaps, merchant banking, unit trusts and other speculative instruments, much as we know them" (Murray Sayle, "Japan Goes Dutch", *London Review of Books* XXIII.7, April 5, 2001). There are now stock markets in virtually every developed and most developing economies, with the world's biggest markets being in the United States, Canada, China (Hongkong), India, UK, Germany, France and Japan.

Importance of stock market

Function and purpose

The **stock market** is one of the most important sources for companies to raise money. This allows businesses to be publicly traded, or raise additional capital for expansion by selling shares of ownership of the company in a public market. The liquidity that an exchange provides affords investors the ability to quickly and easily sell securities. This is an attractive feature of investing in stocks, compared to other less liquid investments such as real estate.

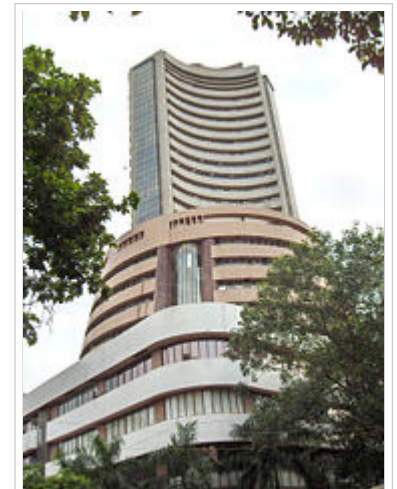
History has shown that the price of shares and other assets is an important part of the dynamics of economic activity, and can influence or be an indicator of social mood. Rising share prices, for instance, tend to be associated with increased business investment and vice versa. Share prices also affect the wealth of households and their consumption. Therefore, central banks tend to keep an eye on the control and behaviour of the stock market and, in general, on the smooth operation of financial system functions. Financial stability is the *raison d'être* of central banks.

Exchanges also act as the clearinghouse for each transaction, meaning that they collect and deliver the shares, and guarantee payment to the seller of a security. This eliminates the risk to an individual buyer or seller that the counterparty could default on the transaction.

The smooth functioning of all these activities facilitates economic growth in that lower costs and enterprise risks promote the production of goods and services as well as employment. In this way the financial system contributes to increased prosperity.

Relation of the stock market to the modern financial system

The financial system in most western countries has undergone a remarkable transformation. One feature of this development is disintermediation. A portion of the funds involved in saving and financing flows directly to the financial markets instead of being routed via banks' traditional lending and deposit operations. The general public's heightened interest in investing in the stock market, either directly or through mutual funds, has been an important component of this process. Statistics show that in recent decades shares have made up an increasingly large proportion of households' financial assets in many countries. In the 1970s, in Sweden, deposit accounts and other very liquid assets with little risk made up almost 60 per cent of households' financial wealth, compared to less than 20 per cent in the 2000s. The major part of this adjustment in financial portfolios has gone directly to shares but a good deal now takes the form of various kinds of institutional investment for groups of individuals, e.g., pension funds, mutual funds, hedge funds, insurance investment of premiums, etc. The trend towards forms of saving with a higher risk has been accentuated by new rules for most funds and insurance, permitting a higher proportion of shares to bonds. Similar tendencies are to be found in other industrialized countries. In all developed economic systems, such as the European Union, the United States, Japan and other developed nations, the trend has been the same: saving has moved away from traditional (government insured) bank deposits to more risky securities of one sort or another.



The Bombay Stock Exchange in India.

The stock market, individual investors, and financial risk

Riskier long-term saving requires that an individual possess the ability to manage the associated increased risks. Stock prices fluctuate widely, in marked contrast to the stability of (government insured) bank deposits or bonds. This is something that could affect not only the individual investor or household, but also the economy on a large scale. The following deals with some of the risks of the financial sector in general and the stock market in particular. This is certainly more important now that so many newcomers have entered the stock market, or have acquired other 'risky' investments (such as 'investment' property, i.e., real estate and collectables).

With each passing year, the noise level in the stock market rises. Television commentators, financial writers, analysts, and market strategists are all overtalking each other to get investors' attention. At the same time, individual investors, immersed in chat rooms and message boards, are exchanging questionable and often misleading tips. Yet, despite all this available information, investors find it increasingly difficult to profit. Stock prices skyrocket with little reason, then plummet just as quickly, and people who have turned to investing for their children's education and their own retirement become frightened. Sometimes there appears to be no rhyme or reason to the market, only folly.

This is a quote from the preface to a published biography about the long-term value-oriented stock investor Warren Buffett. Buffett began his career with \$100, and \$105,000 from seven limited partners consisting of Buffett's family and friends. Over the years he has built himself a multi-billion-dollar fortune. The quote illustrates some of what has been happening in the stock market during the end of the 20th century and the beginning of the 21st.

The behaviour of the stock market

From experience we know that investors may temporarily pull financial prices away from their long term trend level. Over-reactions may occur—so that excessive optimism (euphoria) may drive prices unduly high or excessive pessimism may drive prices unduly low. New theoretical and empirical arguments have been put forward against the notion that financial markets are efficient.

According to the efficient market hypothesis (EMH), only changes in fundamental factors, such as profits or dividends, ought to affect share prices. (But this largely theoretic academic viewpoint also predicts that little or no trading should take place—contrary to fact—since prices are already at or near equilibrium, *having priced in all public knowledge*.) But the efficient-market hypothesis is sorely tested by such events as the stock market crash in 1987, when the Dow Jones index plummeted 22.6 percent—the largest-ever one-day fall in the United States. This event demonstrated that share prices can fall dramatically even though, to this day, it is impossible to fix a definite cause: a thorough search failed to detect *any* specific or unexpected development that might account for the crash. It also seems to be the case more generally that many price movements are not occasioned by new information; a study of the fifty largest one-day share price movements in the United States in the post-war period confirms this. Moreover, while the EMH predicts that all price movement (in the absence of change in fundamental information) is random (i.e., non-trending), many studies have shown a marked tendency for the stock market to trend over time periods of weeks or longer.

Various explanations for large price movements have been promulgated. For instance, some research has shown that changes in estimated risk, and the use of certain strategies, such as stop-loss limits and Value at Risk limits, theoretically could cause financial markets to overreact.

Other research has shown that psychological factors may result in exaggerated stock price movements. Psychological research has demonstrated that people are predisposed to 'seeing' patterns, and often will perceive a pattern in what is, in fact, just *noise*. (Something like seeing familiar shapes in *clouds* or *ink blots*.) In the present context this means that a succession of good news items about a company may lead investors to overreact positively (unjustifiably driving the price up). A period of good returns also boosts the investor's self-confidence, reducing his (psychological) risk threshold.

Another phenomenon—also from psychology—that works against an objective assessment is *group thinking*. As social animals, it is not easy to stick to an opinion that differs markedly from that of a majority of the group. An example with which one may be familiar is the reluctance to enter a restaurant that is empty; people generally prefer to have their opinion validated by those of others in the group.

In one paper the authors draw an analogy with gambling. In normal times the market behaves like a game of roulette; the probabilities are known and largely independent of the investment decisions of the different players. In times of market stress, however, the game becomes more like poker (herding behaviour takes over). The players now must give heavy weight to the psychology of other investors and how they are likely to react psychologically.

The stock market, as any other business, is quite unforgiving of amateurs. Inexperienced investors rarely get the assistance and support they need. In the period running up to the recent Nasdaq crash, less than 1 per cent of the analyst's recommendations had been to sell (and even during the 2000 - 2002 crash, the



NASDAQ in Times Square, New York City.

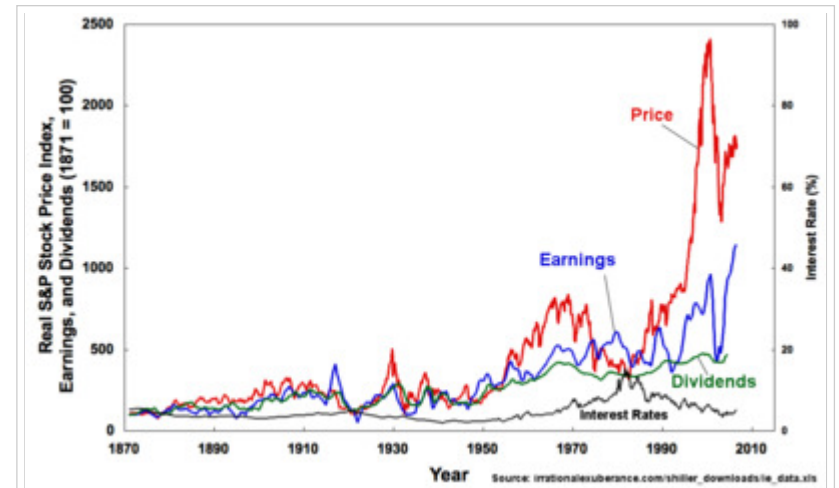
average did not rise above 5%). The media amplified the general euphoria, with reports of rapidly rising share prices and the notion that large sums of money could be quickly earned in the so-called new economy stock market. (And later amplified the gloom which descended during the 2000 - 2002 crash, so that by summer of 2002, predictions of a DOW average below 5000 were quite common.)

Irrational behaviour

Sometimes the market tends to react irrationally to economic news, even if that news has no real effect on the technical value of securities itself. Therefore, the stock market can be swayed tremendously in either direction by press releases, rumors, euphoria and mass panic.

Over the short-term, stocks and other securities can be battered or buoyed by any number of fast market-changing events, making the stock market difficult to predict.

Crashes

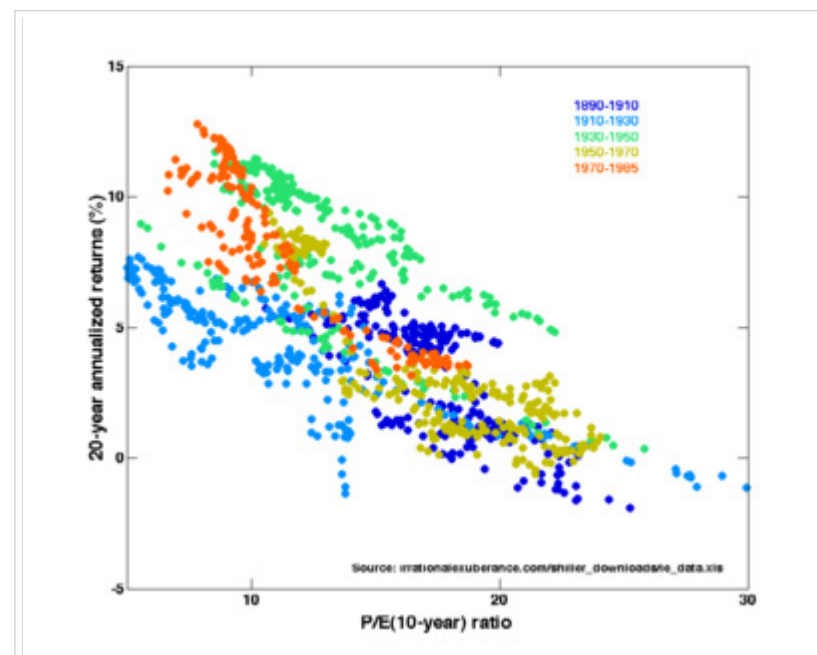


Robert Shiller's plot of the S&P Composite Real Price Index, Earnings, Dividends, and Interest Rates, from *Irrational Exuberance*, 2d ed. In the preface to this edition, Shiller warns that "[t]he stock market has not come down to historical levels: the price-earnings ratio as I define it in this book is still, at this writing [2005], in the mid-20s, far higher than the historical average. . . . People still place too much confidence in the markets and have too strong a belief that paying attention to the gyrations in their investments will someday make them rich, and so they do not make conservative preparations for possible bad outcomes."

A stock market crash is often defined as a sharp dip in share prices of equities listed on the stock exchanges. In parallel with various economic factors, a reason for stock market crashes is also due to panic. Often, stock market crashes end up with speculative economic bubbles.

There have been famous stock market crashes that have ended in the loss of billions of dollars and wealth destruction on a massive scale. An increasing number of people are involved in the stock market, especially since the social security and retirement plans are being increasingly privatized and linked to stocks and bonds and other elements of the market. There have been a number of famous stock market crashes like the Wall Street Crash of 1929, the stock market crash of 1973–4, the Black Monday of 1987, the Dot-com bubble of 2000. But those stock market crashes did not begin in 1929, or 1987. They actually started years or months before the crash really hit hard.

One of the most famous stock market crashes started October 24, 1929 on Black Thursday. The Dow Jones Industrial lost 50% during this stock market crash. It was the beginning of the Great Depression. Another famous crash took place on October 19, 1987 – Black Monday. On Black Monday itself, the Dow Jones fell by 22.6% after completing a 5 year continuous rise in share prices. This event not only shook the USA, but quickly spread across the world. Thus, by the end of October, stock exchanges in Australia lost 41.8%, Canada lost 22.5%, Hong Kong lost 45.8% and Great Britain lost 26.4%. Names “Black Monday” and “Black Tuesday” are also used for October 28-29, 1929, which followed Terrible Thursday – starting day of the stock market crash in 1929. The crash in 1987 raised some mysticism – main news or events did not predict the catastrophe and visible reasons for the collapse were not identified. This event had put many important assumptions, of modern economics, under uncertainty, namely, the theory of rational conduct of human being, the theory of market equilibrium and the hypothesis of market efficiency. For some time after the crash, trading in stock exchanges worldwide was halted, since the exchange's computers did not perform well owing to enormous quantity of trades being received at one time. This halt in trading allowed the Federal Reserve system and central banks of other countries to take measures to control the spreading of worldwide financial crisis. In the United States the SEC introduced several new measures of control into the stock market in an attempt to prevent a re-occurrence of the events of Black Monday. Computer systems were upgraded in the stock exchanges to handle larger trading volumes in a more accurate and controlled manner. The SEC modified the margin requirements in an attempt to lower the volatility of common stocks, stock options and the futures market. The New York Stock Exchange and the Chicago Mercantile Exchange introduced the concept of a circuit breaker. The circuit breaker halts trading if the Dow declines a prescribed number of points for a prescribed amount of time.



Price-Earnings ratios as a predictor of twenty-year returns based upon the plot by Robert Shiller (Figure 10.1, source). The horizontal axis shows the real price-earnings ratio of the S&P Composite Stock Price Index as computed in *Irrational Exuberance* (inflation adjusted price divided by the prior ten-year mean of inflation-adjusted earnings). The vertical axis shows the geometric average real annual return on investing in the S&P Composite Stock Price Index, reinvesting dividends, and selling twenty years later. Data from different twenty year periods is colour-coded as shown in the key. See also ten-year returns. Shiller states that this plot "confirms that long-term investors —investors who commit their money to an investment for ten full years—did do well when prices were low relative to earnings at the beginning of the ten years. Long-term investors would be well advised, individually, to lower their exposure to the stock market when it is high, as it has been recently, and get into the market when it is low."

Stock market index

The movements of the prices in a market or section of a market are captured in price indices called stock market indices, of which there are many, e.g., the S&P, the FTSE and the Euronext indices. Such indices are usually market capitalization (the total market value of floating capital of the company) weighted, with the weights reflecting the contribution of the stock to the index. The constituents of the index are reviewed frequently to include/exclude stocks in order to reflect the changing business environment.

Derivative instruments

Financial innovation has brought many new financial instruments whose pay-offs or values depend on the prices of stocks. Some examples are exchange-traded funds (ETFs), stock index and stock options, equity swaps, single-stock futures, and stock index futures. These last two may be traded on futures exchanges (which are distinct from stock exchanges—their history traces back to commodities futures exchanges), or traded over-the-counter. As all of these products are only *derived* from stocks, they are sometimes considered to be traded in a (hypothetical) derivatives market, rather than the (hypothetical) stock market.

Leveraged Strategies

Stock that a trader does not actually own may be traded using short selling; margin buying may be used to purchase stock with borrowed funds; or, *derivatives* may be used to control large blocks of stocks for a much smaller amount of money than would be required by outright purchase or sale.

Short selling

In short selling, the trader borrows stock (usually from his brokerage which holds its clients' shares or its own shares on account to lend to short sellers) then sells it on the market, hoping for the price to fall. The trader eventually buys back the stock, making money if the price fell in the meantime or losing money if it rose. Exiting a short position by buying back the stock is called "covering a short position." This strategy may also be used by unscrupulous traders to artificially lower the price of a stock. Hence most markets either prevent short selling or place restrictions on when and how a short sale can occur. The practice of naked shorting is illegal in most (but not all) stock markets.

Margin buying

In margin buying, the trader borrows money (at interest) to buy a stock and hopes for it to rise. Most industrialized countries have regulations that require that if the borrowing is based on collateral from other stocks the trader owns outright, it can be a maximum of a certain percentage of those other stocks' value. In the United States, the margin requirements have been 50% for many years (that is, if you want to make a \$1000 investment, you need to put up \$500, and there is often a maintenance margin below the \$500). A margin call is made if the total value of the investor's account cannot support the loss of the trade. (Upon a decline in the value of the margined securities additional funds may be required to maintain the account's equity, and with or without notice the margined

security or any others within the account may be sold by the brokerage to protect its loan position. The investor is responsible for any shortfall following such forced sales.) Regulation of margin requirements (by the Federal Reserve) was implemented after the Crash of 1929. Before that, speculators typically only needed to put up as little as 10 percent (or even less) of the total investment represented by the stocks purchased. Other rules may include the prohibition of *free-riding*: putting in an order to buy stocks without paying initially (there is normally a three-day grace period for delivery of the stock), but then selling them (before the three-days are up) and using part of the proceeds to make the original payment (assuming that the value of the stocks has not declined in the interim).

New issuance

Global issuance of equity and equity-related instruments totaled \$505 billion in 2004, a 29.8% increase over the \$389 billion raised in 2003. Initial public offerings (IPOs) by US issuers increased 221% with 233 offerings that raised \$45 billion, and IPOs in Europe, Middle East and Africa (EMEA) increased by 333%, from \$ 9 billion to \$39 billion.

Investment strategies

One of the many things people always want to know about the stock market is, "How do I make money investing?" There are many different approaches; two basic methods are classified as either fundamental analysis or technical analysis. Fundamental analysis refers to analyzing companies by their financial statements found in SEC Filings, business trends, general economic conditions, etc. Technical analysis studies price actions in markets through the use of charts and quantitative techniques to attempt to forecast price trends regardless of the company's financial prospects. One example of a technical strategy is the Trend following method, used by John W. Henry and Ed Seykota, which uses price patterns, utilizes strict money management and is also rooted in risk control and diversification.

Additionally, many choose to invest via the index method. In this method, one holds a weighted or unweighted portfolio consisting of the entire stock market or some segment of the stock market (such as the S&P 500 or Wilshire 5000). The principal aim of this strategy is to maximize diversification, minimize taxes from too frequent trading, and ride the general trend of the stock market (which, in the U.S., has averaged nearly 10%/year, compounded annually, since World War II).

Taxation

According to each national or state legislation, a large array of fiscal obligations must be respected regarding capital gains, and taxes are charged by the state over the transactions, dividends and capital gains on the stock market, in particular in the stock exchanges. However, these fiscal obligations may vary from jurisdiction to jurisdiction because, among other reasons, it could be assumed that taxation is already incorporated into the stock price through the different taxes companies pay to the state, or that tax free stock market operations are useful to boost economic growth.

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Stock

2008/9 Schools Wikipedia Selection. Related subjects: Business; Economics

A share (also referred to as equity shares) of **stock** represents a share of ownership in a corporation.

Types of stock

Stock typically takes the form of shares of common stock (or voting shares). As a unit of ownership, common stock typically carries voting rights that can be exercised in corporate decisions. Preferred stock differs from common stock in that it typically does not carry voting rights but is legally entitled to receive a certain level of dividend payments before any dividends can be issued to other shareholders. Convertible preferred stock is preferred stock that includes an option for the holder to convert the preferred shares into a fixed number of common shares, usually anytime after a predetermined date. Shares of such stock are called "convertible preferred shares" (or "convertible preference shares" in the United Kingdom).

Although there is a great deal of commonality between the stocks of different companies, each new equity issue can have legal clauses attached to it that make it dynamically different from the more general cases. Some shares of common stock may be issued without the typical voting rights being included, for instance, or some shares may have special rights unique to them and issued only to certain parties. Note that not all equity shares are the same.

Stock derivatives

A stock derivative is any financial instrument which has a value that is dependent on the price of the underlying stock. Futures and options are the main types of derivatives on stocks. The underlying security may be a stock index or an individual firm's stock, e.g. single-stock futures.

Stock futures are contracts where the buyer is long, i.e., takes on the obligation to buy on the contract maturity date, and the seller is short, i.e., takes on the obligation to sell. Stock index futures are generally not delivered in the usual manner, but by cash settlement.

A stock option is a class of option. Specifically, a call option is the right (*not* obligation) to buy stock in the future at a fixed price and a put option is the right (*not* obligation) to sell stock in the future at a fixed price. Thus, the value of a stock option changes in reaction to the underlying stock of which it is a derivative. The most popular method of valuing stock options is the Black

Financial markets



Bond market

- Fixed income
- Corporate bond
- Government bond
- Municipal bond
- Bond valuation
- High-yield debt

Stock market

- Stock
- Preferred stock
- Common stock
- Registered share
- Voting share
- Stock exchange

Foreign exchange market

Scholes model. Apart from call options granted to employees, most stock options are transferable.

History

During Roman times, the empire contracted out many of its services to private groups called publicani. Shares in publicani were called "socii" (for large cooperatives) and "particulae" which were analogous to today's Over-The-Counter shares of small companies. Though the records available for this time are incomplete, Edward Chancellor states in his book *Devil Take the Hindmost* that there is some evidence that a speculation in these shares became increasingly widespread and that perhaps the first ever speculative bubble in "stocks" occurred.

The first company to issue shares of stock after the Middle Ages was the Dutch East India Company in 1606. The innovation of joint ownership made a great deal of Europe's economic growth possible following the Middle Ages. The technique of pooling capital to finance the building of ships, for example, made the Netherlands a maritime superpower. Before adoption of the joint-stock corporation, an expensive venture such as the building of a merchant ship could be undertaken only by governments or by very wealthy individuals or families.

Economic historians find the Dutch stock market of the 1600s particularly interesting: there is clear documentation of the use of stock futures, stock options, short selling, the use of credit to purchase shares, a speculative bubble that crashed in 1695, and a change in fashion that unfolded and reverted in time with the market (in this case it was headdresses instead of hemlines). Dr. Edward Stringham also noted that the uses of practices such as short selling continued to occur during this time despite the government passing laws against it. This is unusual because it shows individual parties fulfilling contracts that were not legally enforceable and where the parties involved could incur a loss. Stringham argues that this shows that contracts can be created and enforced without state sanction or, in this case, in spite of laws to the contrary.

Shareholder

A **shareholder** (or *stockholder*) is an individual or company (including a corporation) that legally owns one or more shares of stock in a joint stock company. Companies listed at the stock market are expected to strive to enhance shareholder value.

Shareholders are granted special privileges depending on the class of stock, including the right to vote (usually one vote per share owned) on matters such as elections to the board of directors, the right to share in distributions of the company's income, the right to purchase new shares issued by the company, and the right to a company's assets during a liquidation of the company. However, shareholder's rights to a company's assets are subordinate to the rights of the company's creditors.

Shareholders are considered by some to be a partial subset of stakeholders, which may include anyone who has a direct or indirect equity interest in the business

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entity or someone with even a non-pecuniary interest in a non-profit organization. Thus it might be common to call volunteer contributors to an association stakeholders, even though they are not shareholders.

Although directors and officers of a company are bound by fiduciary duties to act in the best interest of the shareholders, the shareholders themselves normally do not have such duties towards each other.

However, in a few unusual cases, some courts have been willing to imply such a duty between shareholders. For example, in California, USA, majority shareholders of closely held corporations have a duty to not destroy the value of the shares held by minority shareholders.

The largest shareholders (in terms of percentages of companies owned) are often mutual funds, and especially passively managed exchange-traded funds.

Application

The owners of a company may want additional capital to invest in new projects within the company. They may also simply wish to reduce their holding, freeing up capital for their own private use.

By selling shares they can sell part or all of the company to many part-owners. The purchase of one share entitles the owner of that share to literally share in the ownership of the company, a fraction of the decision-making power, and potentially a fraction of the profits, which the company may issue as dividends.

In the common case of a publicly traded corporation, where there may be thousands of shareholders, it is impractical to have all of them making the daily decisions required to run a company. Thus, the shareholders will use their shares as votes in the election of members of the board of directors of the company.

In a typical case, each share constitutes one vote. Corporations may, however, issue different classes of shares, which may have different voting rights. Owning the majority of the shares allows other shareholders to be out-voted - effective control rests with the majority shareholder (or shareholders acting in concert). In this way the original owners of the company often still have control of the company.

Shareholder rights

Although ownership of 51% of shares does result in 51% ownership of a company, it does not give the shareholder the right to use a company's building, equipment, materials, or other property. This is because the company is considered a legal person, thus it owns all its assets itself. This is important in areas such as insurance, which must be in the name of the company and not the main shareholder.

In most countries, including the United States, boards of directors and company managers have a fiduciary responsibility to run the company in the interests of its stockholders. Nonetheless, as Martin Whitman writes:

...it can safely be stated that there does not exist any publicly traded company where management works exclusively in the best interests of OPMI [Outside Passive Minority Investor] stockholders. Instead, there are both "communities of interest" and "conflicts of interest" between stockholders

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :562 of 626.

(principal) and management (agent). This conflict is referred to as the principal/agent problem. It would be naive to think that any management would forgo management compensation, and management entrenchment, just because some of these management privileges might be perceived as giving rise to a conflict of interest with OPMIs.

Even though the board of directors runs the company, the shareholder has some impact on the company's policy, as the shareholders elect the board of directors. Each shareholder typically has a percentage of votes equal to the percentage of shares he or she owns. So as long as the shareholders agree that the management (agent) are performing poorly they can elect a new board of directors which can then hire a new management team. In practice, however, genuinely contested board elections are rare. Board candidates are usually nominated by insiders or by the board of the directors themselves, and a considerable amount of stock is held and voted by insiders.

Owning shares does not mean responsibility for liabilities. If a company goes broke and has to default on loans, the shareholders are not liable in any way. However, all money obtained by converting assets into cash will be used to repay loans and other debts first, so that shareholders cannot receive any money unless and until creditors have been paid (most often the shareholders end up with nothing).

Means of financing

Financing a company through the sale of stock in a company is known as equity financing. Alternatively, debt financing (for example issuing bonds) can be done to avoid giving up shares of ownership of the company. Unofficial financing known as trade financing usually provides the major part of a company's working capital (day-to-day operational needs). Trade financing is provided by vendors and suppliers who sell their products to the company at short-term, unsecured credit terms, usually 30 days. Equity and debt financing are usually used for longer-term investment projects such as investments in a new factory or a new foreign market. Customer provided financing exists when a customer pays for services before they are delivered, e.g. subscriptions and insurance.

Trading

A stock exchange is an organization that provides a marketplace for either physical or virtual trading shares, bonds and warrants and other financial products where investors (represented by stock brokers) may buy and sell shares of a wide range of companies. A company will usually list its shares by meeting and maintaining the listing requirements of a particular stock exchange. In the United States, through the inter-market quotation system, stocks listed on one exchange can also be bought or sold on several other exchanges, including relatively new so-called ECNs (Electronic Communication Networks like Archipelago or Instinet).

In the USA stocks used to be broadly grouped into NYSE-listed and NASDAQ-listed stocks. Until a few years ago there was a law that NYSE listed stocks were not allowed to be listed on the NASDAQ or vice versa.

Many large non-U.S companies choose to list on a U.S. exchange as well as an exchange in their home country in order to broaden their investor base. These companies have then to ship a certain amount of shares to a bank in the US (a certain percentage of their principal) and put it in the safe of the bank. Then the bank where they deposited the shares can issue a certain amount of so-called American Depositary Shares, short ADS (singular). If someone buys now a certain

amount of ADSs the bank where the shares are deposited issues an American Depository Receipt (ADR) for the buyer of the ADSs.

Likewise, many large U.S. companies list themselves at foreign exchanges to raise capital abroad.

Arbitrage trading

Although it makes sense for some companies to raise capital by offering stock on more than one exchange, a keen investor with access to information about such discrepancies could invest in expectation of their eventual convergence, known as an arbitrage trade. In today's era of electronic trading, these discrepancies, if they exist, are both shorter-lived and more quickly acted upon. As such, arbitrage opportunities disappear quickly due to the efficient nature of the market.

Buying

There are various methods of buying and financing stocks. The most common means is through a stock broker. Whether they are a full service or discount broker, they arrange the transfer of stock from a seller to a buyer. Most trades are actually done through brokers listed with a stock exchange, such as the New York Stock Exchange.

There are many different stock brokers from which to choose, such as full service brokers or discount brokers. The full service brokers usually charge more per trade, but give investment advice or more personal service; the discount brokers offer little or no investment advice but charge less for trades. Another type of broker would be a bank or credit union that may have a deal set up with either a full service or discount broker.

There are other ways of buying stock besides through a broker. One way is directly from the company itself. If at least one share is owned, most companies will allow the purchase of shares directly from the company through their investor relations departments. However, the initial share of stock in the company will have to be obtained through a regular stock broker. Another way to buy stock in companies is through Direct Public Offerings which are usually sold by the company itself. A direct public offering is an initial public offering in which the stock is purchased directly from the company, usually without the aid of brokers.

When it comes to financing a purchase of stocks there are two ways: purchasing stock with money that is currently in the buyer's ownership, or by buying stock on margin. Buying stock on margin means buying stock with money borrowed against the stocks in the same account. These stocks, or collateral, guarantee that the buyer can repay the loan; otherwise, the stockbroker has the right to sell the stock (collateral) to repay the borrowed money. He can sell if the share price drops below the margin requirement, at least 50% of the value of the stocks in the account. Buying on margin works the same way as borrowing money to buy a car or a house, using the car or house as collateral. Moreover, borrowing is not free; the broker usually charges 8-10% interest.

Selling

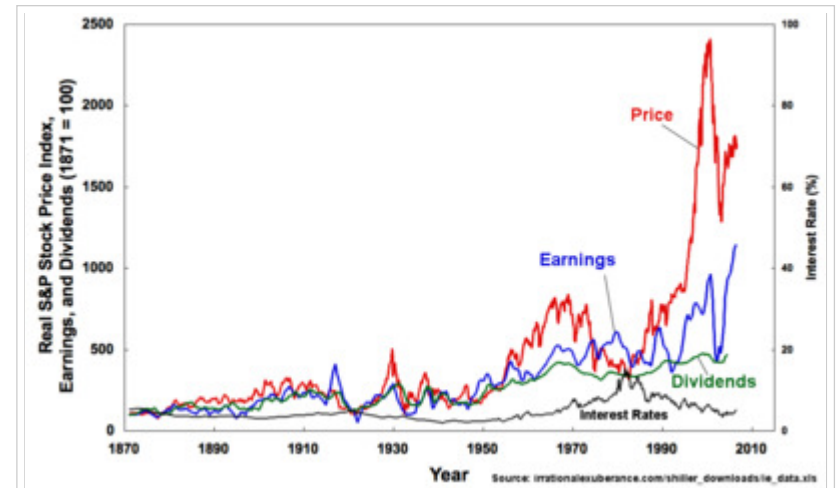
Selling stock is procedurally similar to buying stock. Generally, the investor wants to buy low and sell high, if not in that order (short selling); although a

number of reasons may induce an investor to sell at a loss, e.g., to avoid further loss.

As with buying a stock, there is a transaction fee for the broker's efforts in arranging the transfer of stock from a seller to a buyer. This fee can be high or low depending on which type of brokerage, full service or discount, handles the transaction.

After the transaction has been made, the seller is then entitled to all of the money. An important part of selling is keeping track of the earnings. Importantly, on selling the stock, in jurisdictions that have them, capital gains taxes will have to be paid on the additional proceeds, if any, that are in excess of the cost basis.

Stock price fluctuations

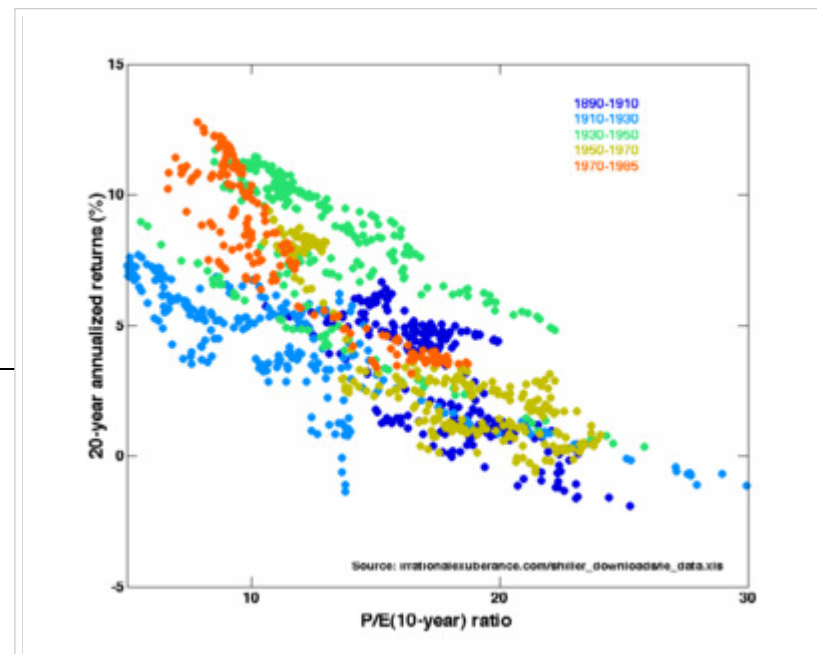


Robert Shiller's plot of the S&P Composite Real Price Index, Earnings, Dividends, and Interest Rates, from *Irrational Exuberance*, 2d ed. In the preface to this edition, Shiller warns that "[t]he stock market has not come down to historical levels: the price-earnings ratio as I define it in this book is still, at this writing [2005], in the mid-20s, far higher than the historical average. . . . People still place too much confidence in the markets and have too strong a belief that paying attention to the gyrations in their investments will someday make them rich, and so they do not make conservative preparations for possible bad outcomes."

The price of a stock fluctuates fundamentally due to the theory of supply and demand. Like all commodities in the market, the price of a stock is directly proportional to the demand. However, there are many factors on the basis of which the demand for a particular stock may increase or decrease. These factors are studied using methods of fundamental analysis and technical analysis to predict the changes in the stock price. A recent study shows that customer satisfaction, as measured by the American Customer Satisfaction Index (ACSI), is significantly correlated to the stock market value. Stock price is also changed based on the forecast for the company and whether their profits are expected to increase or decrease.

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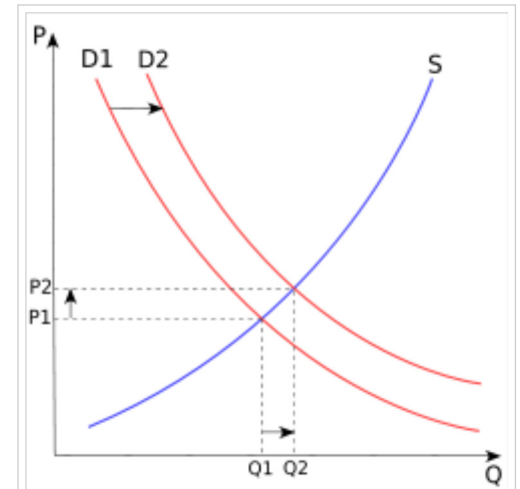
Price-Earnings ratios as a predictor of twenty-year returns based upon the plot by Robert Shiller (Figure 10.1, source). The horizontal axis shows the real price-earnings ratio of the S&P Composite Stock Price Index as computed in *Irrational Exuberance* (inflation adjusted price divided by the prior ten-year mean of inflation-adjusted earnings). The vertical axis shows the geometric average real annual return on investing in the S&P Composite Stock Price Index, reinvesting dividends, and selling twenty years later. Data from different twenty year periods is colour-coded as shown in the key. See also ten-year returns. Shiller states that this plot "confirms that long-term investors —investors who commit their money to an investment for ten full years—did do well when prices were low relative to earnings at the beginning of the ten years. Long-term investors would be well advised, individually, to lower their exposure to the stock market when it is high, as it has been recently, and get into the market when it is low."

Supply and demand

2008/9 Schools Wikipedia Selection. Related subjects: Economics

In economics, **supply and demand** describes market relations between prospective sellers and buyers of a good. The *supply and demand model* determines price and quantity sold in a market. This model is fundamental in microeconomic analysis, and is used as a foundation for other economic models and theories. It predicts that in a competitive market, price will function to equalize the quantity demanded by consumers, and the quantity supplied by producers, resulting in an economic equilibrium of price and quantity. The model incorporates other factors changing equilibrium as a shift of demand and/or supply.

The fundamentals



The price P of a product is determined by a balance between production at each price (supply S) and the desires of those with purchasing power at each price (demand D). The graph depicts an increase in demand from D_1 to D_2 , along with a consequent increase in price and quantity Q sold of the product.

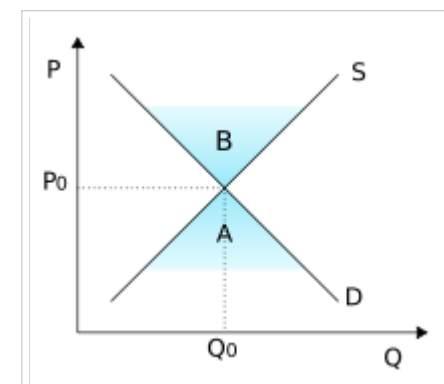
Strictly speaking, the model of supply and demand applies to a type of market called perfect competition in which no single buyer or seller has much effect on prices, and prices are known. The quantity of a product supplied by the producer and the quantity demanded by the consumer are dependent on the market price of the product. The **law of supply** states that quantity supplied is related to price. It is often depicted as directly proportional to price: the higher the price of the product, the more the producer will supply, *ceteris paribus* ("all other things being equal"). The **law of demand** is normally depicted as an inverse relation of quantity demanded and price: the higher the price of the product, the less the consumer will demand, *ceteris paribus*. The respective relations are called the *supply curve* and *demand curve*, or *supply* and *demand* for short.

The **laws of supply and demand** state that the *equilibrium* market price and quantity of a commodity is at the intersection of consumer demand and producer supply. At this point, quantity supplied equals quantity demanded (as shown in the figure). If the price for a good is below equilibrium, consumers demand more of the good than producers are prepared to supply. This defines a *shortage* of the good. A shortage results in producers increasing the price until equilibrium is reached. If the price of a good is above equilibrium, there is a *surplus* of the good. Producers are motivated to eliminate the surplus by lowering the price, until equilibrium is reached.

Supply schedule

The supply schedule, graphically represented by the supply curve, is the relationship between market price and amount of goods produced. In short-run analysis, where some input variables are fixed, a positive slope can reflect the law of diminishing marginal returns, which states that beyond some level of output, additional units of output require larger amounts of input. In the long-run, where no input variables are fixed, a positively-sloped supply curve can reflect diseconomies of scale.

For a given firm in a perfectly competitive industry, if it is more profitable to produce than to not produce, profit is maximized by producing just enough so that the producer's marginal cost is equal to the market price of the good.

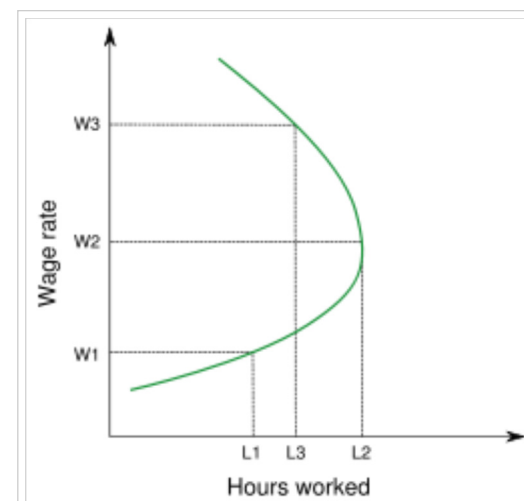


The intersection of supply and demand curves determines equilibrium price (P_0) and quantity (Q_0).

Occasionally, supply curves bend backwards. A well known example is the backward bending supply curve of labour. Generally, as a worker's wage increases, he is willing to work longer hours, since the higher wages increase the marginal utility of working, and the opportunity cost of not working. But when the wage reaches an extremely high amount, the employee may experience the law of diminishing marginal utility. The large amount of money he is making will make further money of little value to him. Thus, he will work less and less as the wage increases, choosing instead to spend his time in leisure. The backwards-bending supply curve has also been observed in non-labor markets, including the market for oil: after the skyrocketing price of oil caused by the 1973 oil crisis, many oil-exporting countries decreased their production of oil.

The supply curve for public utility production companies is unusual. A large portion of their total costs are in the form of fixed costs. The supply curve for these firms is often constant (shown as a horizontal line).

Another postulated variant of a supply curve is that for child labor. Supply will increase as wages increase, but at a certain point a child's parents will pull the child from the child labor force due to cultural pressures and a desire to concentrate on education. The supply will not increase as the wage increases, up to a point where the wage is high enough to offset these concerns. For a normal demand curve, this can result in two stable equilibrium points - a high wage and a low wage equilibrium point.



The supply curve of labour is an example of increasing net input (e.g., wages) above a certain point resulting in decreased net output (hours worked).

Demand schedule

The demand schedule, depicted graphically as the demand curve, represents the amount of goods that buyers are willing and able to purchase at various prices, assuming all other non-price factors remain the same. The demand curve is almost always represented as downwards-sloping, meaning that as price decreases, consumers will buy more of the good.

Just as the supply curves reflect marginal cost curves, demand curves can be described as marginal utility curves.

The main determinants of individual demand are: the price of the good, level of income, personal tastes, the population (number of people), the government policies, the price of substitute goods, and the price of complementary goods.

The shape of the aggregate demand curve can be convex or concave, possibly depending on income distribution.

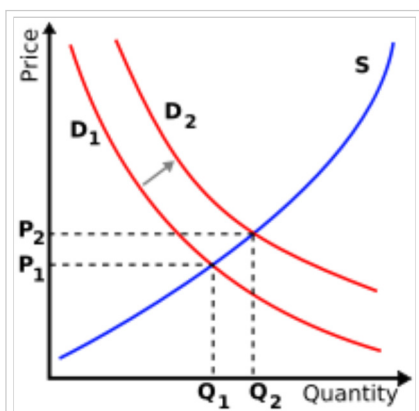
As described above, the demand curve is generally downward sloping. There may be rare examples of goods that have upward sloping demand curves. Two different hypothetical types of goods with upward-sloping demand curves are a Giffen good (a sweet inferior, but staple, good) and a Veblen good (a good made more fashionable by a higher price).

Changes in market equilibrium

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Practical uses of supply and demand analysis often centre on the different variables that change equilibrium price and quantity, represented as shifts in the respective curves. Comparative statics of such a shift traces the effects from the initial equilibrium to the new equilibrium.

Demand curve shifts



An out-ward or right-ward shift in demand increases both equilibrium price and quantity

When consumers increase the quantity demanded *at a given price*, it is referred to as an *increase in demand*. Increased demand can be represented on the graph as the curve being shifted outward. At each price point, a greater quantity is demanded, as from the initial curve D_1 to the new curve D_2 . More people wanting coffee is an example. In the diagram, this raises the equilibrium price from P_1 to the higher P_2 . This raises the equilibrium quantity from Q_1 to the higher Q_2 . A movement along the curve is described as a "change in the quantity demanded" to distinguish it from a "change in demand," that is, a shift of the curve. In the example above, there has been an *increase* in demand which has caused an increase in (equilibrium) quantity. The increase in demand could also come from changing tastes, incomes, product information, fashions, and so forth.

If the *demand decreases*, then the opposite happens: an inward shift of the curve. If the demand starts at D_2 , and *decreases* to D_1 , the price will decrease, and the quantity will decrease. This is an effect of demand changing. The quantity supplied at each price is the same as before the demand shift (at both Q_1 and Q_2). The equilibrium quantity, price and demand are different. At each point, a greater amount is demanded (when there is a shift from D_1 to D_2).

Supply curve shifts

When the suppliers' costs change for a given output, the supply curve shifts in the same direction. For example, assume that someone invents a better way of growing wheat so that the cost of wheat that can be grown for a given quantity will decrease. Otherwise stated, producers will be willing to supply more wheat at every price and this shifts the supply curve S_1 outward, to S_2 —an *increase in supply*. This increase in supply causes the equilibrium price to decrease from P_1 to P_2 . The equilibrium quantity increases from Q_1 to Q_2 as the quantity demanded increases at the new lower prices. In a supply curve shift, the price and the quantity move in opposite directions.

If the quantity supplied *decreases* at a given price, the opposite happens. If the supply curve starts at S_2 , and shifts inward to S_1 , the equilibrium price will increase, and the quantity will decrease. This is an effect of supply changing. The quantity demanded at each price is the same as before the supply shift (at both Q_1 and Q_2). The equilibrium quantity, price and *supply* changed.

When there is a change in supply or demand, there are four possible movements. The demand curve can move inward or outward. The supply curve can also move inward or outward.

See also: Induced demand

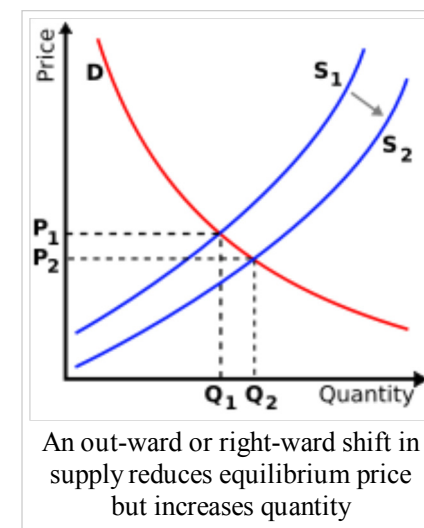
Elasticity

A very important concept in understanding supply and demand theory is **elasticity**. In this context, it refers to how supply and demand respond to various factors. One way to define elasticity is the percentage change in one variable divided by the percentage change in another variable (known as *arc elasticity*, which calculates the elasticity over a range of values, in contrast with *point elasticity*, which uses differential calculus to determine the elasticity at a specific point). It is a measure of *relative* changes.

Often, it is useful to know how the quantity demanded or supplied will change when the price changes. This is known as the **price elasticity of demand** and the **price elasticity of supply**. If a monopolist decides to increase the price of their product, how will this affect their sales revenue? Will the increased unit price offset the likely decrease in sales volume? If a government imposes a tax on a good, thereby increasing the effective price, how will this affect the quantity demanded?

Another distinguishing feature of elasticity is that it is more than just the slope of the function. For example, a line with a constant slope will have different elasticity at various points. Therefore, the measure of elasticity is independent of arbitrary units (such as gallons vs. quarts, say for the response of quantity demanded of milk to a change in price), whereas the measure of slope only is not.

One way of calculating elasticity is the percentage change in quantity over the associated percentage change in price. For example, if the price moves from \$1.00 to \$1.05, and the quantity supplied goes from 100 pens to 102 pens, the slope is $2/0.05$ or 40 pens per dollar. Since the elasticity depends on the percentages, the quantity of pens increased by 2%, and the price increased by 5%, so the price elasticity of supply is $2/5$ or 0.4.



Since the changes are in percentages, changing the unit of measurement or the currency will not affect the elasticity. If the quantity demanded or supplied changes a lot when the price changes a little, it is said to be elastic. If the quantity changes little when the prices changes a lot, it is said to be inelastic. An example of perfectly inelastic supply, or zero elasticity, is represented as a vertical supply curve. (See that section below)

Elasticity in relation to variables other than price can also be considered. One of the most common to consider is income. How would the demand for a good change if income increased or decreased? This is known as the **income elasticity of demand**. For example, how much would the demand for a luxury car increase if average income increased by 10%? If it is positive, this increase in demand would be represented on a graph by a positive shift in the demand curve. At all price levels, more luxury cars would be demanded.

Another elasticity sometimes considered is the **cross elasticity of demand**, which measures the responsiveness of the quantity demanded of a good to a change in the price of another good. This is often considered when looking at the relative changes in demand when studying **complement** and **substitute goods**. Complement goods are goods that are typically utilized together, where if one is consumed, usually the other is also. Substitute goods are those where one can be substituted for the other, and if the price of one good rises, one may purchase less of it and instead purchase its substitute.

Cross elasticity of demand is measured as the percentage change in demand for the first good that occurs in response to a percentage change in price of the second good. For an example with a complement good, if, in response to a 10% increase in the price of fuel, the quantity of new cars demanded decreased by 20%, the cross elasticity of demand would be -2.0.

Vertical supply curve (Perfectly Inelastic Supply)

It is sometimes the case that a supply curve is vertical: that is the quantity supplied is fixed, no matter what the market price. For example, the surface area or land of the world is fixed. No matter how much someone would be willing to pay for an additional piece, the extra cannot be created. Also, even if no one wanted all the land, it still would exist. Land therefore has a vertical supply curve, giving it zero elasticity (i.e., no matter how large the change in price, the quantity supplied will not change).

Supply-side economics argues that the aggregate supply function – the total supply function of the entire economy of a country – is relatively vertical. Thus, supply-siders argue against government stimulation of demand, which would only lead to inflation with a vertical supply curve.

Other markets

The model of supply and demand also applies to various specialty markets.

The model applies to wages, which are determined by the market for labor. The typical roles of supplier and consumer are reversed. The suppliers are individuals, who try to sell their labor for the highest price. The consumers of labors are businesses, which try to buy the type of labor they need at the lowest price. The equilibrium price for a certain type of labor is the wage.

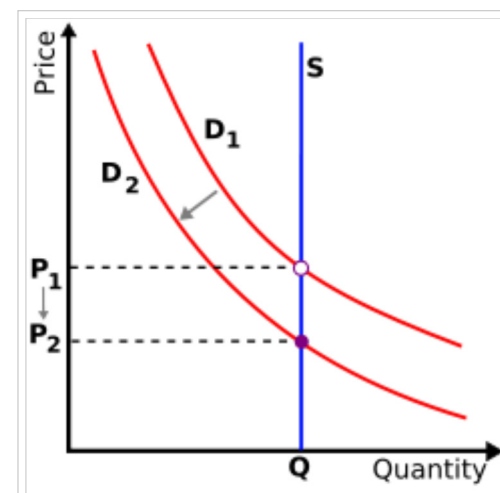
The model applies to interest rates, which are determined by the money market. In the short term, the money supply is a vertical supply curve, which the central bank of a country can control through monetary policy. The demand for money intersects with the money supply to determine the interest rate.

Other market forms

The supply and demand model is used to explain the behaviour of perfectly competitive markets, but its usefulness as a standard of performance extends to other types of markets. In such markets, there may be no supply curve, such as above, except by analogy. Rather, the supplier or suppliers are modeled as interacting with demand to determine price and quantity. In particular, the decisions of the buyers and sellers are interdependent in a way different from a perfectly competitive market.

A *monopoly* is the case of a single supplier that can adjust the supply or price of a good at will. The profit-maximizing monopolist is modeled as adjusting the price so that its profit is maximized given the amount that is demanded at that price. This price will be higher than in a competitive market. A similar analysis can be applied when a good has a single *buyer*, a *monopsony*, but many sellers. *Oligopoly* is a market with so few suppliers that they must take account of their actions on the market price or each other. *Game theory* may be used to analyze such a market.

The supply curve does not have to be linear. However, if the supply is from a profit-maximizing firm, it can be proven that curves-downward sloping supply curves (i.e., a price decrease increasing the quantity supplied) are inconsistent with perfect competition in equilibrium. Then supply curves from profit-



When demand D_1 is in effect, the price will be P_1 . When D_2 is occurring, the price will be P_2 . Notice that at both values the quantity is Q . Since the supply is fixed, any shifts in demand will only affect price.

maximizing firms can be vertical, horizontal or upward sloping.

Positively-sloped demand curves?

Standard microeconomic assumptions cannot be used to disprove the existence of upward-sloping demand curves. However, despite years of searching, no generally agreed upon example of a good that has an upward-sloping demand curve (also known as a **Giffen good**) has been found. Some suggest that luxury cosmetics can be classified as a Giffen good. As the price of a high end luxury cosmetic drops, consumers see it as a low quality good compared to its peers. The price drop may indicate lower quality ingredients, thus consumers would not want to apply such an inferior product to their face.

Lay economists sometimes believe that certain common goods have an upward-sloping curve. For example, people will sometimes buy a prestige good (eg. a luxury car) because it is expensive, a drop in price may actually reduce demand. However, in this case, the good purchased is actually prestige, and not the car itself. So, when the price of the luxury car decreases, it is actually decreasing the amount of prestige associated with the good (see also **Veblen good**). However, even with downward-sloping demand curves, it is possible that an increase in income may lead to a decrease in demand for a particular good, probably due to the existence of more attractive alternatives which become affordable: a good with this property is known as an **inferior good**.

Negatively-sloped supply curve

There are cases where the price of goods gets cheaper, but more of those goods are produced. This is usually related to economies of scale and mass production. One special case is computer software where creating the first instance of a given computer program has a high cost, but the marginal cost of copying this program and distributing it to many consumers is low (almost zero).

Empirical estimation

Demand and supply relations in a market can be statistically estimated from price, quantity, and other data with sufficient information in the model. This can be done with *simultaneous-equation methods of estimation* in econometrics. Such methods allow solving for the model-relevant "structural coefficients," the estimated algebraic counterparts of the theory. The *Parameter identification problem* is a common issue in "structural estimation." Typically, data on exogenous variables (that is, variables other than price and quantity, both of which are endogenous variables) are needed to perform such an estimation. An alternative to "structural estimation" is reduced-form estimation, which regresses each of the endogenous variables on the respective exogenous variables.

Macroeconomic uses of demand and supply

Demand and supply have also been generalized to explain macroeconomic variables in a market economy, including the quantity of total output and the general price level. The Aggregate Demand-Aggregate Supply model may be the most direct application of supply and demand to macroeconomics, but other macroeconomic models also use supply and demand. Compared to microeconomic uses of demand and supply, different (and more controversial) theoretical

considerations apply to such macroeconomic counterparts as *aggregate demand* and *aggregate supply*. Demand and supply may also be used in macroeconomic theory to relate money supply to demand and interest rates.

Demand shortfalls

A demand shortfall results from the actual demand for a given product being lower than the projected, or estimated, demand for that product. Demand shortfalls are caused by demand overestimation in the planning of new products. Demand overestimation is caused by optimism bias and/or strategic misrepresentation.

History

The phrase "supply and demand" was first used by James Denham-Steuart in his *Inquiry into the Principles of Political Economy*, published in 1767. Adam Smith used the phrase in his 1776 book *The Wealth of Nations*, and David Ricardo titled one chapter of his 1817 work *Principles of Political Economy and Taxation* "On the Influence of Demand and Supply on Price".

In *The Wealth of Nations*, Smith generally assumed that the supply price was fixed but that its "merit" (value) would decrease as its "scarcity" increased, in effect what was later called the law of demand. Ricardo, in *Principles of Political Economy and Taxation*, more rigorously laid down the idea of the assumptions that were used to build his ideas of supply and demand. Antoine Augustin Cournot first developed a mathematical model of supply and demand in his 1838 *Recherches on the Mathematical Principles of the Theory of Wealth*.

During the late 19th century the marginalist school of thought emerged. This field mainly was started by Stanley Jevons, Carl Menger, and Léon Walras. The key idea was that the price was set by the most expensive price, that is, the price at the margin. This was a substantial change from Adam Smith's thoughts on determining the supply price.

In his 1870 essay "On the Graphical Representation of Supply and Demand", Fleeming Jenkin drew for the first time the popular graphic of supply and demand which, through Marshall, eventually would turn into the most famous graphic in economics.

The model was further developed and popularized by Alfred Marshall in the 1890 textbook *Principles of Economics*. Along with Léon Walras, Marshall looked at the equilibrium point where the two curves crossed. They also began looking at the effect of markets on each other.

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Tax

2008/9 Schools Wikipedia Selection. Related subjects: Economics

A **tax** is a financial charge or other levy imposed on an individual or a legal entity by a state or a functional equivalent of a state (for example, secessionist movements or revolutionary movements). Taxes are also imposed by many subnational entities. Taxes consist of direct tax or indirect tax, and may be paid in money or as its labour equivalent (often but not always unpaid). A tax may be defined as a "pecuniary burden laid upon individuals or property to support the government [...] a payment exacted by legislative authority." A tax "is not a voluntary payment or donation, but an enforced contribution, exacted pursuant to legislative authority" and is "any contribution imposed by government [...] whether under the name of toll, tribute, tallage, gabel, impost, duty, custom, excise, subsidy, aid, supply, or other name."

In modern taxation systems, taxes are levied in money, but in-kind and *corvée* taxation are characteristic of traditional or pre-capitalist states and their functional equivalents. The method of taxation and the government expenditure of taxes raised is often highly debated in politics and economics. Tax collection is performed by a government agency such as Canada Revenue Agency, the Internal Revenue Service (IRS) in the United States, or Her Majesty's Revenue and Customs (HMRC) in the UK. When taxes are not fully paid, civil penalties (such as fines or forfeiture) or criminal penalties (such as incarceration) may be imposed on the non-paying entity or individual.

Tax can result in anything from the mechanisms of slavery to the fruits of re-distributive social revolution, depending on the details of its implementation.

Purposes and effects

Funds provided by taxation have been used by states and their functional equivalents throughout history to carry out many functions. Some of these include expenditures on war, the enforcement of law and public order, protection of property, economic infrastructure (roads, legal tender, enforcement of contracts, etc.), public works, social engineering, and the operation of government itself. Most modern governments also use taxes to fund welfare and public services. These services can include education systems, health care systems, pensions for the elderly, unemployment benefits, and public transportation. Energy, water and waste management systems are also common public utilities. Colonial and modernizing states have also used cash taxes to draw or force reluctant subsistence producers into cash economies.

Governments use different kinds of taxes and vary the tax rates. This is done to distribute the tax burden among individuals or classes of the population involved in taxable activities, such as business, or to redistribute resources between individuals or classes in the population. Historically, the nobility were supported by taxes on the poor; modern social security systems are intended to support the poor, the disabled, or the retired by taxes on those who are still working. In addition, taxes are applied to fund foreign and military aid, to influence the macroeconomic performance of the economy (the government's strategy for doing this is called its fiscal policy - see also tax exemption), or to modify patterns of consumption or employment within an economy, by making some classes of transaction more or less attractive.

<http://cd3wd.com/wikipedia-for-schools> <http://gutenberg.org> page :577 of 626.

A country's tax system is often a reflection of its communal values or the values of those in power. To create a system of taxation, a nation must make choices regarding the distribution of the tax burden — who will pay taxes and how much they will pay — and how the taxes collected will be spent. In democratic nations where the public elects those in charge of establishing the tax system, these choices reflect the type of community which the public wishes to create. In countries where the public does not have a significant amount of influence over the system of taxation, that system may be more of a reflection on the values of those in power.

The resource collected from the public through taxation is always greater than the amount which can be used by the government. The difference is called *compliance cost*, and includes for example the labour cost and other expenses incurred in complying with tax laws and rules. The collection of a tax in order to spend it on a specified purpose, for example collecting a tax on alcohol to pay directly for alcoholism rehabilitation centres, is called hypothecation. This practice is often disliked by finance ministers, since it reduces their freedom of action. Some economic theorists consider the concept to be intellectually dishonest since (in reality) money is fungible. Furthermore, it often happens that taxes or excises initially levied to fund some specific government programs are then later diverted to the government general fund. In some cases, such taxes are collected in fundamentally inefficient ways, for example highway tolls.

Some economists, especially neo-classical economists, argue that all taxation creates market distortion and results in economic inefficiency. They have therefore sought to identify the kind of tax system that would minimize this distortion. Also, one of every government's most fundamental duties is to administer possession and use of land in the geographic area over which it is sovereign, and it is considered economically efficient for government to recover for public purposes the additional value it creates by providing this unique service.

Since governments also resolve commercial disputes, especially in countries with common law, similar arguments are sometimes used to justify a sales tax or value added tax. Others (e.g. libertarians) argue that most or all forms of taxes are immoral due to their involuntary (and therefore eventually coercive/violent) nature. The most extreme anti-tax view is anarcho-capitalism, in which the provision of *all* social services should be a matter of voluntary private contracts.

The Four "R"s

Taxation has four main purposes or effects: Revenue, Redistribution, Repricing, and Representation.

The main purpose is revenue: taxes raise money to spend on roads, schools and hospitals, and on more indirect government functions like good regulation or justice systems. This is the most widely known function.

A second is redistribution. Normally, this means transferring wealth from the richer sections of society to poorer sections, and this function is widely accepted in most democracies, although the extent to which this should happen is always controversial.

A third purpose of taxation is repricing. Taxes are levied to address externalities: tobacco is taxed, for example, to discourage smoking, and many people advocate policies such as implementing a carbon tax.

A fourth, consequential effect of taxation in its historical setting has been representation. The American revolutionary slogan "no taxation without representation" implied this: rulers tax citizens, and citizens demand accountability from their rulers as the other part of this bargain. Several studies have shown

that direct taxation (such as income taxes) generates the greatest degree of accountability and better governance, while indirect taxation tends to have smaller effects.

Proportional, progressive, and regressive

An important feature of tax systems is the percentage of the tax burden as it relates to income or consumption. The terms progressive, regressive, and proportional are used to describe the way the rate progresses from low to high, from high to low, or proportionally. The terms describe a distribution effect, which can be applied to any type of tax system (income or consumption) that meets the definition. A progressive tax is a tax imposed so that the effective tax rate increases as the amount to which the rate is applied increases. The opposite of a progressive tax is a regressive tax, where the effective tax rate decreases as the amount to which the rate is applied increases. In between is a proportional tax, where the effective tax rate is fixed as the amount to which the rate is applied increases. The terms can also be used to apply meaning to the taxation of select consumption, such as a tax on luxury goods and the exemption of basic necessities may be described as having progressive effects as it increases a tax burden on high end consumption and decreases a tax burden on low end consumption.

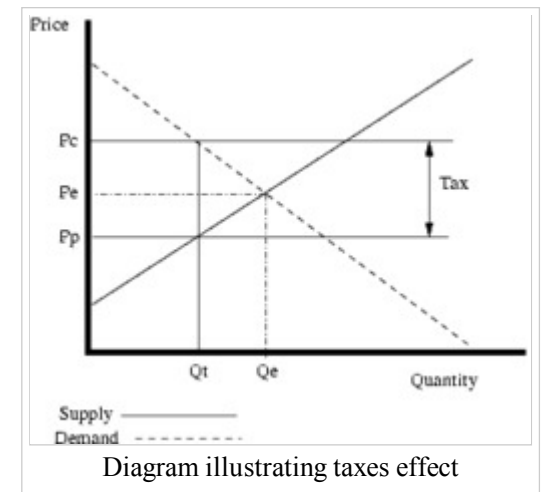
Direct and indirect

Taxes are sometimes referred to as direct tax or indirect tax. The meaning of these terms can vary in different contexts, which can sometimes lead to confusion. In economics, *direct* taxes refer to those taxes that are collected from the people or organizations on whom they are ostensibly imposed. For example, income taxes are collected from the person who earns the income. By contrast, *indirect* taxes are collected from someone other than the person ostensibly responsible for paying the taxes. In law, the terms may have different meanings. In U.S. constitutional law, for instance, direct taxes refer to poll taxes and property taxes, which are based on simple existence or ownership. Indirect taxes are imposed on rights, privileges, and activities. Thus, a tax on the sale of property would be considered an indirect tax, whereas the tax on simply owning the property itself would be a direct tax. The distinction can be subtle between direct and indirect taxation, but can be important under the law.

Tax burden

Law establishes from whom a tax is collected. In many countries, taxes are imposed on business (such as corporate taxes or portions of payroll taxes). However, who ultimately pays the tax (the tax "burden") is determined by the marketplace as taxes become embedded into production costs. Depending on how quantities supplied and demanded vary with price (the "elasticities" of supply and demand), a tax can be absorbed by the seller (in the form of lower pre-tax prices), or by the buyer (in the form of higher post-tax prices). If the elasticity of supply is low, more of the tax will be paid by the supplier. If the elasticity of demand is low, more will be paid by the customer. And contrariwise for the cases where those elasticities are high. If the seller is a competitive firm, the tax burden flows back to the factors of production depending on the elasticities thereof; this includes workers (in the form of lower wages), capital investors (in the form of loss to shareholders), landowners (in the form of lower rents) and entrepreneurs (in the form of lower wages of superintendence).

To illustrate this relationship, suppose the market price of a product is US\$1.00, and that a \$0.50 tax is imposed on the product that, by law, is to be collected from the seller. If the product is a luxury (in the economic sense of the term), a greater portion of the tax will be absorbed by the seller. For example, the seller might drop the price of the product to \$0.70 so that, after adding in the tax, the buyer pays a total of \$1.20, or \$0.20 more than he did before the \$0.50 tax was imposed. In this example, the buyer has paid \$0.20 of the \$0.50 tax (in the form of a post-tax price) and the seller has paid the remaining \$0.30 (in the form of a lower pre-tax price).



Morality

According to many political views, activities funded by taxes can be beneficial to society and progressive taxation can be used in modern nation-states to the benefit of the majority of the population and social development. Most arguments about taxation revolve around the degree and method of taxation and associated government spending, not taxation itself.

Some people, however, argue that compulsory taxation itself is inherently immoral, as it is the theft of property by the government since people are forced to pay. These include objectivists, anarcho-capitalists and classical liberals.

Government theft

Because payment of tax is usually compulsory and enforced by the police and justice system, some capitalist political philosophies view taxation by force as institutionalized violence equivalent to theft, accusing the government of levying taxes via coercive means. Individualist anarchists, objectivists, anarcho-capitalists, and some libertarians see taxation as government aggression (see Zero Aggression Principle). The libertarian writer Jason C. Reeher echoed the sentiments of Murray Rothbard on these grounds; in criticizing his local school district's relatively small property tax increase, Reeher said that "(t)he thief who steals the least is still a thief." Under this view, taxes are paid individually and therefore, to be considered voluntary, in any meaningful way, should be levied only with the consent of the individual. Some libertarians recommend a minimal level of taxation in order to maximize the protection of liberty, while others prefer market alternatives such as private defense agencies, arbitration agencies or voluntary contributions. Others claim that the examples where taxation and the state function of civil protection has collapsed and replaced by private defense agencies (such as in countries like Somalia), the results have been largely

positive.

Democratic defense

One counter-argument is that in a democracy, because the government is the party performing the act of imposing taxes, society as a whole decides how the tax system should be organised. The American Revolution's "No taxation without representation" slogan implied this view. The same argument could be made from a monarchist perspective: since the King embodies the nation, the nation as a whole decides how the tax system should be organised. Similar arguments can be made to justify taxation under any form of government, including dictatorships and oligarchies.

According to Ludwig von Mises, "society as a whole" should not make such decisions, due to methodological individualism. Under this view, the moral stature of an act, such as enslavement or theft is not contingent upon its legality or popularity, but rather its morality. Thomas Jefferson argued that, "A direct democracy is nothing more than mob rule, where fifty-one percent of the people may take away the rights of the other forty-nine."

Land Tax defense

Advocates of land value taxation argue that sovereign rights over the products of labour and capital do not apply to land. John Locke wrote in *Essay on Civil Government* (1690) that: "When the sacredness of property is talked of, it should be remembered that any such sacredness does not belong in the same degree to landed property." Henry George elaborated this to claim: "Here are two simple principles, both of which are self-evident: I.—That all men have equal rights to the use and enjoyment of the elements provided by Nature. II.—That each man has an exclusive right to the use and enjoyment of what is produced by his own labor" (*Protection or Free Trade*, 1886).

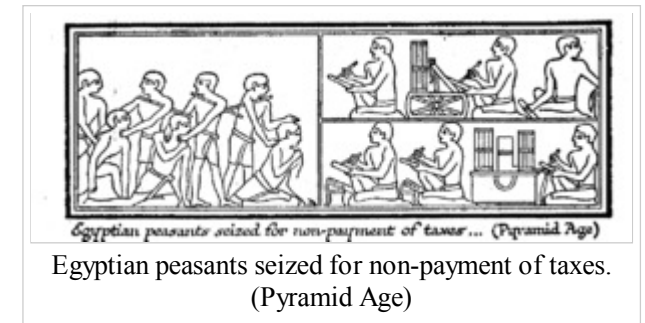
Justification

Defenders of taxation argue that taxation of business is justified on the grounds that the commercial activity necessarily involves use of publicly established and maintained economic infrastructure, and that businesses are in effect charged for this use. Compulsory taxation of individuals, such as income tax, is argued to be justified on similar grounds, including territorial sovereignty, and the social contract. A libertarian response is that government services used by people are either already paid for directly or are services that ought to be provided by a free market. Such taxes, they argue, are a way for the rulers to exploit the people.

History

Taxation levels

The first known system of taxation was in Ancient Egypt around 3000 BC - 2800 BC in the first dynasty of the Old Kingdom. Records from the time document that the pharaoh would conduct a biennial tour of the kingdom, collecting tax revenues from the people. Early taxation is also described in the Bible. In Genesis (chapter 47, verse 24 - the New International Version), it states "But when the crop comes in, give a fifth of it to Pharaoh. The other four-fifths you may keep as seed for the fields and as food for yourselves and your households and your children." Joseph was telling the people of Egypt how to divide their crop, providing a portion to the Pharaoh. A share (20%) of the crop was the tax.



Quite a few records of government tax collection in Europe since at least the 17th century are still available today. But taxation levels are hard to compare to the size and flow of the economy since production numbers are not as readily available. Government expenditures and revenue in France during the 17th century went from about 24.30 million *livres* in 1600-10 to about 126.86 million *livres* in 1650-59 to about 117.99 million *livres* in 1700-10 when government debt had reached 1.6 billion *livres*. In 1780-89 it reached 421.50 million *livres*. Taxation as a percentage of production of final goods may have reached 15% - 20% during the 17th century in places like France, the Netherlands, and Scandinavia. During the war-filled years of the eighteenth and early nineteenth century, tax rates in Europe increased dramatically as war became more expensive and governments became more centralized and adept at gathering taxes. This increase was greatest in England, Peter Mathias and Patrick O'Brien found that the tax burden increased by 85% over this period. Another study confirmed this number, finding that per capita tax revenues had grown almost sixfold over the eighteenth century, but that steady economic growth had made the real burden on each individual only double over this period before the industrial revolution. Average tax rates were higher in Britain than France the years before the French Revolution, twice in per capita income comparison, but they were mostly placed on international trade. In France, taxes were lower but the burden was mainly on landowners, individuals, and internal trade and thus created far more resentment.

Taxation as a percentage of GDP in 2003 was 56.1% in Denmark, 54.5% in France, 49.0% in the Euro area, 42.6% in the United Kingdom, 35.7% in the United States, 35.2% in The Republic of Ireland, and among all OECD members an average of 40.7%.

Forms of taxation

In monetary economies prior to fiat banking, a critical form of taxation was seigniorage, the tax on the creation of money.

Other obsolete forms of taxation include:

- Scutage - paid in lieu of military service; strictly speaking a commutation of a non-tax obligation rather than a tax as such, but functioning as a tax in practice
- Tallage - a tax on feudal dependents
- Tithe - a tax-like payment (one tenth of one's earnings or agricultural produce), paid to the Church (and thus too specific to be a tax in strict technical terms). This should not be confused with the modern practice of the same name which is normally voluntary, although churches have sought it forcefully at times.
- Aids - During feudal times a feudal aid was a type of tax or due paid by a vassal to his lord.

- Danegeld - medieval land tax originally raised to pay off raiding Danes and later used to fund military expenditures.
- Carucage - tax which replaced the danegeld in England.
- Tax Farming - the principle of assigning the responsibility for tax revenue collection to private citizens or groups.

Some principalities taxed windows, doors, or cabinets to reduce consumption of imported glass and hardware. Armoires, hutches, and wardrobes were employed to evade taxes on doors and cabinets. In extraordinary circumstances, taxes are also used to enforce public policy like congestion charge (to cut road traffic and encourage public transport) in London. In Tsarist Russia, taxes were clamped on beards. Today, one of the most complicated taxation-systems worldwide is in Germany. Three quarters of the world's taxation-literature refers to the German system. There are 118 laws, 185 forms, and 96,000 regulations, spending €3.7 billion to collect the income tax. Today, governments of advanced economies of EU, North America, and others rely more on direct taxes, while those of developing economies of India, Africa, and others rely more on indirect taxes.

Tax rates

Taxes are most often levied as a percentage, called the *tax rate*. An important distinction when talking about tax rates is to distinguish between the marginal rate and the effective (average) rate. The effective rate is the total tax paid divided by the total amount the tax is paid on, while the marginal rate is the rate paid on the next dollar of income earned. For example, if income is taxed on a formula of 5% from \$0 up to \$50,000, 10% from \$50,000 to \$100,000, and 15% over \$100,000, a taxpayer with income of \$175,000 would pay a total of \$18,750 in taxes.

Tax calculation

$$((0.05*50,000) + (0.10*50,000) + (0.15*75,000)) = 18,750$$

The "effective rate" would be 10.7%:

$$(18,750/175,000) = 0.107$$

The "marginal rate" would be 15%.

Economics of taxation

In economic terms, taxation transfers wealth from households or businesses to the government of a nation. The side-effects of taxation and theories about how best to tax are an important subject in microeconomics. Taxation is almost never a simple transfer of wealth. Economic theories of taxation approach the question of how to minimise the loss of economic welfare through taxation and also discuss how a nation can perform redistribution of wealth in the most efficient manner.

Deadweight costs of taxation

For goods supplied in a perfectly competitive market, tax reduces economic efficiency, by introducing a deadweight loss. In a perfect market, the price of a particular economic good adjusts to make sure that all trades which benefit both the buyer and the seller of a good occur. After introducing a tax, the price received by the seller is less than the cost to the buyer. This means that fewer trades occur and that the individuals or businesses involved gain less from participating in the market. This destroys value, and is known as the 'deadweight cost of taxation'.

The deadweight cost is dependent on the elasticity of supply and demand for a good.

Most taxes — including income tax and sales tax — can have significant deadweight costs. The only way to avoid deadweight costs in an economy which is generally competitive is to find taxes which do not change economic incentives, such as the Land value tax, where the tax is on a good in completely inelastic supply, or a lump sum tax. To do so is very difficult: the closest approximations are a poll tax paid by all adults regardless of their choices, or a windfall tax which is entirely unanticipated and so cannot affect decisions.

Double dividend taxes

In some cases where the economy is not perfectly competitive, the existence of a tax can *increase* economic efficiency. If there is a negative externality associated with a good, meaning that it has negative effects not felt by the consumer, then the free market will trade too much of that good. By putting a tax on the good, the government can increase overall welfare as well as raising revenue in taxation. This is known as a 'double dividend'.

There are a wide range of goods where there is, or is claimed to be, a negative externality. Polluting fuels (like petrol), goods which incur public healthcare costs (such as alcohol or tobacco), and charges for existing 'free' public goods (like congestion charging) all offer the possibility of a double dividend. This type of tax is a Pigovian tax, sometimes colloquially known as a 'sin tax'. It is worthwhile noting that taxation is not necessarily the only, or the best, method of dealing with negative externalities.

Optimal taxation theory

Most governments need revenue which exceeds that which can be provided by non-distortionary taxes or through taxes which give a double dividend. Optimal taxation theory is the branch of economics that considers how taxes can be structured to give the least deadweight costs, or to give the best outcomes in terms of social welfare.

Ramsey optimal taxation deals with minimising deadweight costs. Because deadweight costs are related to the elasticity of supply and demand for a good, it follows that putting the highest tax rates on the goods for which there is most inelastic supply and demand will result in the least overall deadweight costs.

Some economists have sought to integrate optimal tax theory with the social welfare function, which is the economic expression of the idea that equality is valuable to a greater or lesser extent. If individuals experience diminishing returns from income, then the optimum distribution of income for society involves a progressive income tax. Mirrlees optimal income tax is a detailed theoretical model of the optimum progressive income tax along these lines.

Over the last years the validity of the theory of optimal taxation was discussed by many political economists. Canegrati (2007) demonstrated that if we move

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from the assumption that governments do not maximise the welfare of society but the probability of winning elections, in equilibrium tax rates are lower for the most powerful groups of society (and not for the poorest as in the optimal theory of direct taxation developed by Atkinson and Stiglitz).

Transparency and simplicity

Another concern is that the complicated tax codes of developed economies offer perverse economic incentives. The more details of tax policy there are, the more opportunities for legal tax avoidance and illegal tax evasion; these not only result in lost revenue, but involve additional deadweight costs: for instance, payments made for tax advice are essentially deadweight costs because they add no wealth to the economy. Perverse incentives also occur because of non-taxable 'hidden' transactions; for instance, a sale from one company to another might be liable for sales tax, but if the same goods were shipped from one branch of a corporation to another, no tax would be payable.

To address these issues, economists often suggest simple and transparent tax structures which avoid providing loopholes. Sales tax, for instance, can be replaced with a value added tax which disregards intermediate transactions.

Economics of tax incidence

Economic theory suggests that the economic effect of tax does not necessarily fall at the point where it is legally levied. For instance, a tax on employment paid by employers will impact on the employee, at least in the long run. The greatest share of the tax burden tends to fall on the most inelastic factor involved - the part of the transaction which is affected least by a change in price. So, for instance, a tax on wages in a town will (at least in the long run) affect property-owners in that area.

Costs of compliance

Although governments must spend money on tax collection activities, some of the costs, particularly for keeping records and filling out forms, are borne by businesses and by private individuals. These are collectively called costs of compliance. More complex tax systems tend to have higher costs of compliance. This fact can be used as the basis for practical or moral arguments in favour of tax simplification (see, for example, FairTax), or tax elimination (in addition to moral arguments described above).

Kinds of taxes

The Organisation for Economic Co-operation and Development (OECD) publishes perhaps the most comprehensive analysis of worldwide tax systems. In order to do this it has created a comprehensive categorisation of all taxes in all regimes which it covers:

Ad valorem

An *ad valorem* tax is one where the tax base is the value of a good, service, or property. Sales taxes, tariffs, property taxes, inheritance taxes, and value added taxes are different types of ad valorem tax. An ad valorem tax is typically imposed at the time of a transaction (sales tax or value added tax (VAT)) but it may be imposed on an annual basis (property tax) or in connection with another significant event (inheritance tax or tariffs). An alternative to ad valorem taxation is an excise tax, where the tax base is the quantity of something, regardless of its price. For example, in the United Kingdom, a tax is collected on the sale of alcoholic drinks that is calculated by volume and beverage type, rather than the price of the drink.

Environment Affecting Tax

This includes natural resources consumption tax, GreenHouse gas tax (Carbon tax, "sulfuric tax", etc), and others. see Ecotax, Gas-guzzler, and Polluter pays principle for more information.

Capital gains tax

A capital gains tax is the tax levied on the profit released upon the sale of a capital asset. In many cases, the amount of a capital gain is treated as income and subject to the marginal rate of income tax. However, in an inflationary environment, capital gains may be to some extent illusory: if prices in general have doubled in five years, then selling an asset for twice the price it was purchased for five years earlier represents no gain at all. Partly to compensate for such changes in the value of money over time, some jurisdictions, such as the United States, give a favorable capital gains tax rate based on the length of holding. European jurisdictions have a similar rate reduction to nil on certain property transactions that qualify for the participation exemption. In Canada, 50% of the gain is taxable income. In India, Short Term Capital Gains Tax (arising before 1 year) is 10% flat rate of the gains and Long Term Capital Gains Tax is nil for stocks & mutual fund units held 1 year or more and 20% for any other assets held 3 years or more. If such a tax is levied on inherited property, it can act as a *de facto* probate or inheritance tax.

Consumption tax

A consumption tax is a tax on non-investment spending, and can be implemented by means of a sales tax or by modifying an income tax to allow for unlimited deductions for investment or savings.

Corporation tax

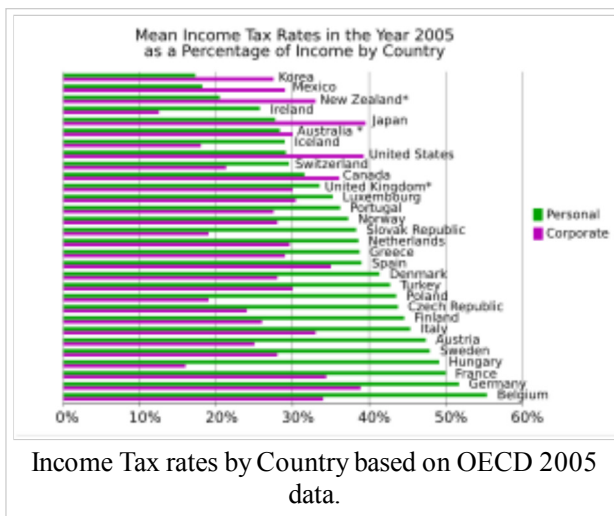
Corporate tax refers to a direct tax levied by various jurisdictions on the profits made by companies or associations and often includes capital gains of a company. Earnings are generally considered gross revenue less expenses. Corporate expenses that relate to capital expenditures are usually deducted in full (for example, trucks are fully deductible in the Canadian tax system, while a corporate sports car is only partly deductible). They are often deducted over the useful life of the asset purchase. Notably, accounting rules about deductible expenses and tax rules about deductible expense will differ at times, giving rise to book-tax differences. If the book-tax difference is carried over more than a year, it is referred to as a temporary difference, which then creates deferred tax assets and liabilities for the corporation, which are carried on the balance sheet.

Excises

Unlike an *ad valorem*, an excise is not a function of the value of the product being taxed. Excise taxes are based on the quantity, not the value, of product purchased. For example, in the United States, the Federal government imposes an excise tax of 18.4 cents per US gallon (4.86¢/L) of gasoline, while state governments levy an additional 8 to 28 cents per US gallon. Excises on particular commodities are frequently hypothecated. For example, a fuel excise (use tax) is often used to pay for public transportation, especially roads and bridges and for the protection of the environment. A special form of hypothecation arises where an excise is used to compensate a party to a transaction for alleged uncontrollable abuse; for example, a blank media tax is a tax on recordable media such as CD-Rs, whose proceeds are typically allocated to copyright holders. Critics charge that such taxes blindly tax those who make legitimate and illegitimate usages of the products; for instance, a person or corporation using CD-R's for data archival should not have to subsidize the producers of popular music.

Excises (or exemptions from them) are also used to modify consumption patterns (social engineering). For example, a high excise is used to discourage alcohol consumption, relative to other goods. This may be combined with hypothecation if the proceeds are then used to pay for the costs of treating illness caused by alcohol abuse. Similar taxes may exist on tobacco, pornography, etc., and they may be collectively referred to as " sin taxes". A carbon tax is a tax on the consumption of carbon-based non-renewable fuels, such as petrol, diesel-fuel, jet fuels, and natural gas. The object is to reduce the release of carbon into the atmosphere. In the United Kingdom, vehicle excise duty is an annual tax on vehicle ownership.

Income tax



An income tax is a tax levied on the financial income of persons, corporations, or other legal entities. Various income tax systems exist, with varying degrees of tax incidence. Income taxation can be progressive, proportional, or regressive. When the tax is levied on the income of companies, it is often called a corporate tax, corporate income tax, or corporation tax. Individual income taxes often tax the total income of the individual (with some deductions permitted), while corporate income taxes often tax net income (the difference between gross receipts, expenses, and additional write-offs).

The "tax net" refers to the types of payment that are taxed, which included personal earnings (wages), capital gains, and business income. The rates for different types of income may vary and some may not be taxed at all. Capital gains may be taxed when realized (e.g. when shares are sold) or when incurred (e.g. when shares appreciate in value). Business income may only be taxed if it is significant or based on the manner in which it is paid. Some types of income, such as interest on bank savings, may be considered as personal earnings (similar to wages) or as a realized property gain (similar to selling shares). In some tax systems, personal earnings may be strictly defined where labor, skill, or investment is required (e.g. wages); in others, they may be defined broadly to include windfalls (e.g. gambling wins).

Personal income tax is often collected on a pay-as-you-earn basis, with small corrections made soon after the end of the tax year. These corrections take one of

two forms: payments to the government, for taxpayers who have not paid enough during the tax year; and tax refunds from the government for those who have overpaid. Income tax systems will often have deductions available that lessen the total tax liability by reducing total taxable income. They may allow losses from one type of income to be counted against another. For example, a loss on the stock market may be deducted against taxes paid on wages. Other tax systems may isolate the loss, such that business losses can only be deducted against business tax by carrying forward the loss to later tax years.

Inheritance tax

Inheritance tax, estate tax, and death tax or duty are the names given to various taxes which arise on the death of an individual. In United States tax law, there is a distinction between an estate tax and an inheritance tax: the former taxes the personal representatives of the deceased, while the latter taxes the beneficiaries of the estate. However, this distinction does not apply in other jurisdictions; for example, if using this terminology UK inheritance tax would be an estate tax.

Poll tax

A poll tax, also called a *per capita tax*, or *capitation tax*, is a tax that levies a set amount per individual. One of the earliest taxes mentioned in the Bible of a half-shekel per annum from each adult Jew (Ex. 30:11-16) was a form of poll tax. Poll taxes are administratively cheap because they are easy to compute and collect and difficult to cheat. Economists have considered poll taxes economically efficient because people are presumed to be in fixed supply. However, poll taxes are very unpopular because poorer people pay a higher proportion of their income than richer people. In addition, the supply of people is in fact not fixed over time: on average, couples will choose to have fewer children if a poll tax is imposed. The introduction of a poll tax in medieval England was the primary cause of the 1381 Peasants' Revolt, and in England and Wales in 1990 the change from a progressive local taxation based on property values to a single-rate form of taxation regardless of ability to pay (the Community Charge, but more popularly referred to as the Poll Tax).

Property tax

A property tax is a tax imposed on property by reason of its ownership. A property tax is usually levied on the value of property owned. There are three species of property: land, improvements to land (immovable man-made things, e.g. buildings) and personal property (movable things). Real estate or realty is the combination of land and improvements to land.

Property taxes may be charged on a recurrent basis (e.g., yearly). A common type of property tax is an annual charge on the ownership of real estate, where the tax base is the estimated value of the property. For a period of over 150 years from 1695 a window tax was levied in England, with the result that one can still see listed buildings with windows bricked up in order to save their owners money. A similar tax on hearths existed in France and elsewhere, with similar results. The two most common type of event driven property taxes are stamp duty, charged upon change of ownership, and inheritance tax, which is imposed in many countries on the estates of the deceased.

In contrast with a tax on real estate (land and buildings), a land value tax is levied only on the unimproved value of the land ("land" in this instance may mean either the economic term, i.e., all natural resources, or the natural resources associated with specific areas of the earth's surface: "lots" or "land parcels").

When real estate is held by a higher government unit or some other entity not subject to taxation by the local government, the taxing authority may receive a payment in lieu of taxes to compensate it for some or all of the foregone tax revenue.

In many jurisdictions (including many American states), there is a general tax levied periodically on residents who own personal property (personalty) within the jurisdiction. Vehicle and boat registration fees are subsets of this kind of tax. The tax is often designed with blanket coverage and large exceptions for things like food and clothing. Household goods are often exempt when kept or used within the household. Any otherwise non-exempt object can lose its exemption if regularly kept outside the household. Thus, tax collectors often monitor newspaper articles for stories about wealthy people who have lent art to museums for public display, because the artworks have then become subject to personal property tax. If an artwork had to be sent to another state for some touch-ups, it may have become subject to personal property tax in *that* state as well.

Retirement tax

Some countries with social security systems, which provide income to retired workers, fund those systems with specific dedicated taxes. These often differ from comprehensive income taxes in that they are levied only on specific sources of income, generally wages and salary (in which case they are called payroll taxes). A further difference is that the total amount of the taxes paid by or on behalf of a worker is typically considered in the calculation of the retirement benefits to which that worker is entitled. Examples of retirement taxes include the FICA tax, a payroll tax that is collected from employers and employees in the United States to fund the country's Social Security system; and the National Insurance Contributions (NICs) collected from employers and employees in the United Kingdom to fund the country's national insurance system.

These taxes are sometimes regressive in their immediate effect. For example, in the United States, each worker, whatever his or her income, pays at the same rate up to a specified cap, but income over the cap is not taxed. A further regressive feature is that such taxes often exclude investment earnings and other forms of income that are more likely to be received by the wealthy. The regressive effect is somewhat offset, however, by the eventual benefit payments, which typically replace a higher percentage of a lower-paid worker's pre-retirement income.

Sales tax

Sales taxes are a form of excise levied when a commodity is sold to its final consumer. Retail organizations contend that such taxes discourage retail sales. The question of whether they are generally progressive or regressive is a subject of much current debate. People with higher incomes spend a lower proportion of them, so a flat-rate sales tax will tend to be regressive. It is therefore common to exempt food, utilities and other necessities from sales taxes, since poor people spend a higher proportion of their incomes on these commodities, so such exemptions would make the tax more progressive. This is the classic "You pay for what you spend" tax, as only those who spend money on non-exempt (i.e. luxury) items pay the tax.

A small number of US states rely entirely on sales taxes for state revenue, as those states do not levy a state income tax. Such states tend to have a moderate to large amount of tourism or inter-state travel that occurs within their borders, allowing the state to benefit from taxes from people the state would otherwise not tax. In this way, the state is able to reduce the tax burden on its citizens. The US states that do not levy a state income tax are Alaska, Tennessee, Florida, Nevada, South Dakota, Texas, Washington state, and Wyoming. Additionally, New Hampshire and Tennessee levy state income taxes only on dividends and

interest income. Of the above states, only Alaska and New Hampshire do not levy a state sales tax. Additional information can be obtained at the Federation of Tax Administrators website.

In the United States, there is a growing movement for the replacement of all federal payroll and income taxes (both corporate and personal) with a national retail sales tax and monthly tax rebate to households of citizens and legal resident aliens. The tax proposal is named FairTax. In Canada, the federal sales tax is called the Goods and Services tax (GST) and now stands at 5%. The provinces of British Columbia, Saskatchewan, Manitoba, Ontario and Prince Edward Island also have a provincial sales tax [PST]. The provinces of Nova Scotia, New Brunswick, and Newfoundland & Labrador have harmonized their provincial sales taxes with the GST - Harmonized Sales Tax [HST]. The province of Quebec collects the Quebec Sales Tax [QST] which is based on the GST with certain differences. Most businesses can claim back the GST, HST and QST they pay, and so effectively it is the final consumer who pays the tax.

Tariffs

An import or export tariff (also called customs duty or impost) is a charge for the movement of goods through a political border. Tariffs discourage trade, and they may be used by governments to protect domestic industries. A proportion of tariff revenues is often hypothecated to pay government to maintain a navy or border police. The classic ways of cheating a tariff are smuggling or declaring a false value of goods. Tax, tariff and trade rules in modern times are usually set together because of their common impact on industrial policy, investment policy, and agricultural policy. A trade bloc is a group of allied countries agreeing to minimize or eliminate tariffs against trade with each other, and possibly to impose protective tariffs on imports from outside the bloc. A customs union has a common external tariff, and, according to an agreed formula, the participating countries share the revenues from tariffs on goods entering the customs union.

Toll

A toll is a tax or fee charged to travel via a road, bridge, tunnel or other route. Historically tolls have been used to pay for state bridge, road and tunnel projects. They have also been used in privately constructed transport links. The toll is likely to be a fixed charge, possibly graduated for vehicle type, or for distance on long routes.

Shunpiking is the practice of finding another route to avoid payment of tolls. In some situations where tolls were increased or felt to be unreasonably high, informal shunpiking by individuals escalated into a form of boycott by regular users, with the goal of applying the financial stress of lost toll revenue to the authority determining the levy.

Transfer tax

Historically, in many countries, a contract needed to have a stamp affixed to make it valid. The charge for the stamp was either a fixed amount or a percentage of the value of the transaction. In most countries the stamp has been abolished but stamp duty remains. Stamp duty is levied in the UK on the purchase of shares and securities, the issue of bearer instruments, and certain partnership transactions. Its modern derivatives, stamp duty reserve tax and stamp duty land tax, are respectively charged on transactions involving securities and land. Stamp duty has the effect of discouraging speculative purchases of assets by decreasing liquidity. In the US transfer tax is often charged by the state or local government and (in the case of real property transfers) can be tied to the recording of the

deed or other transfer documents. Taxes on currency transactions are known as Tobin taxes.

Value Added Tax / Goods and Services Tax

A value added tax (VAT), also known as 'Goods and Services Tax' (G.S.T), or 'Impuesto Indirecto sobre la Prestacion de Servicios' (I.S.I.), Single Business Tax, or Turnover Tax in some countries, applies the equivalent of a sales tax to every operation that creates value. To give an example, sheet steel is imported by a machine manufacturer. That manufacturer will pay the VAT on the purchase price, remitting that amount to the government. The manufacturer will then transform the steel into a machine, selling the machine for a higher price to a wholesale distributor. The manufacturer will collect the VAT on the higher price, but will remit to the government only the excess related to the "value added" (the price over the cost of the sheet steel). The wholesale distributor will then continue the process, charging the retail distributor the VAT on the entire price to the retailer, but remitting only the amount related to the distribution mark-up to the government. The last VAT amount is paid by the eventual retail customer who cannot recover any of the previously paid VAT. For a VAT and sales tax of identical rates, the total tax paid is the same, but it is paid at differing points in the process.

VAT is usually administrated by requiring the company to complete a VAT return, giving details of VAT it has been charged (referred to as input tax) and VAT it has charged to others (referred to as output tax). The difference between output tax and input tax is payable to the Local Tax Authority. If input tax is greater than output tax the company can claim back money from the Local Tax Authority. VAT was historically used to counter evasion in a sales tax or excise. By collecting the tax at each production level, the theory is that the entire economy helps in the enforcement. However, forged invoices and similar evasion methods have demonstrated that there are always those who will attempt to evade taxation.

Economic theorists have argued that the collection process of VAT minimises the market distortion resulting from the tax, compared to a sales tax. However, VAT is held by some to discourage production.

Wealth (net worth) tax

Some countries' governments will require declaration of the tax payers' balance sheet (assets and liabilities), and from that exact a tax on net worth (assets minus liabilities), as a percentage of the net worth, or a percentage of the net worth exceeding a certain level. The tax is in place for both " natural" and in some cases legal "persons".

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Thomas Malthus

2008/9 Schools Wikipedia Selection. Related subjects: Economics; Historical figures

The English political economist and demographer the Reverend Dr **Thomas Robert Malthus** FRS lived from 13 February 1766 to 23 December 1834). He expressed views on population growth and noted the potential for populations to increase rapidly.

Modern commentators generally refer to him as **Thomas Malthus**, but during his lifetime he went by his middle name, **Robert**.

Biography

Thomas Robert Malthus, the second son of eight children (six of them girls) born to Daniel and Henrietta Malthus near Guildford, Surrey, came into a prosperous family, with his father a personal friend of the philosopher David Hume and an acquaintance of Jean-Jacques Rousseau. The young Malthus received his education at home in Bramcote, Nottinghamshire and at the Dissenting Academy, Warrington until his admission to Jesus College, Cambridge in 1784. There he studied many subjects and took prizes in English declamation, Latin and Greek, but he majored in mathematics. He earned a masters degree in 1791 and won election as a fellow of Jesus College two years later. In 1797, he took orders and became an Anglican country parson.

Malthus married his first-cousin once removed, Harriet Eckersall, on April 12, 1804, and had three children: Henry, Emily and Lucy. In 1805 he became Britain's first professor in political economy at the East India Company College (now known as Haileybury) in Hertfordshire. His students affectionately referred to him as "Pop" or "Population" Malthus. In 1818 Malthus became a Fellow of the Royal Society.

Malthus refused to have his portrait painted until 1833 because of embarrassment over a cleft lip. Malthus also had a cleft palate that affected his speech. These cleft-related birth defects occurred relatively commonly in his family.

Bath Abbey in England hosts Malthus's tomb.

History of economics Classical economics



Thomas Robert Malthus

Name: Thomas Robert Malthus

Birth: February 13, 1766
(Surrey, England)

Death: December 23, 1834 (aged 68)
(Bath, England)

Nationality: British

Field: demography, macroeconomics,
evolutionary economics

Influences: Adam Smith, David Ricardo

Opposed: William Godwin, Marquis de
Condorcet, Jean-Jacques Rousseau,
David Ricardo

The Principle of Population

Between 1798 and 1826 Malthus published six editions of his famous treatise, *An Essay on the Principle of Population*, updating each edition to incorporate new material, to address criticism, and to convey changes in his own perspectives on the subject. He wrote the original text in reaction to the optimism of his father and his father's associates, (notably Rousseau) regarding the future improvement of society. Malthus also constructed his case as a specific response to writings of William Godwin (1756-1836) and of the Marquis de Condorcet (1743-1794).

<p>Influenced: Charles Darwin, Francis Place, Garrett Hardin, John Maynard Keynes, Pierre Francois Verhulst, Alfred Russel Wallace</p> <p>Contributions: Malthusian growth model</p>
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Malthus regarded ideals of future improvement in the lot of humanity with scepticism, considering that throughout history a segment of every human population seemed relegated to poverty. He explained this phenomenon by pointing out that population growth generally preceded expansion of the population's resources, in particular the primary resource of food:

"...in all societies, even those that are most vicious, the tendency to a virtuous attachment is so strong that there is a constant effort towards an increase of population. This constant effort as constantly tends to subject the lower classes of the society to distress and to prevent any great permanent improvement of their condition."

"The way in which, these effects are produced seems to be this. We will suppose the means of subsistence in any country just equal to the easy support of its inhabitants. The constant effort towards population... increases the number of people before the means of subsistence are increased. The food therefore which before supported seven millions must now be divided among seven millions and a half or eight millions. The poor consequently must live much worse, and many of them be reduced to severe distress. The number of labourers also being above the proportion of the work in the market, the price of labour must tend toward a decrease, while the price of provisions would at the same time tend to rise. The labourer therefore must work harder to earn the same as he did before. During this season of distress, the discouragements to marriage, and the difficulty of rearing a family are so great that population is at a stand. In the mean time the cheapness of labour, the plenty of labourers, and the necessity of an increased industry amongst them, encourage cultivators to employ more labour upon their land, to turn up fresh soil, and to manure and improve more completely what is already in tillage, till ultimately the means of subsistence become in the same proportion to the population as at the period from which we set out. The situation of the labourer being then again tolerably comfortable, the restraints to population are in some degree loosened, and the same retrograde and progressive movements with respect to happiness are repeated."

Malthus also saw that societies through history had experienced at one time or another epidemics, famines, or wars: events that masked the fundamental problem of populations overstretching their resource limitations:

"The power of population is so superior to the power of the earth to produce subsistence for man, that premature death must in some shape or other visit the human race. The vices of mankind are active and able ministers of depopulation. They are the precursors in the great army of destruction, and often finish the dreadful work themselves. But should they fail in this war of extermination, sickly seasons, epidemics, pestilence, and plague advance in terrific array, and sweep off their thousands and tens of thousands. Should success be still incomplete, gigantic inevitable famine stalks in the rear, and with one mighty blow levels the population with the food of the world."

To give a mathematical perspective to his observations, Malthus proposed the idea that population, if unchecked, increases at a geometric rate (i.e. 1, 2, 4, 8, 16,

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :593 of 626.

etc.), whereas the food-supply grows at an arithmetic rate (i.e. 1, 2, 3, 4, 5 etc.).

In the first edition of the *Essay*, Malthus suggested that only natural causes (such as accidents and old age), misery (war, pestilence, plague, and above all famine) [Book I, Ch. 2], and vice (which for Malthus included infanticide, murder, contraception and homosexuality) [Book I, Ch. 5.] could check excessive population-growth. In the second and subsequent editions, Malthus raised the possibility of moral restraint (marrying late or not at all, coupled with sexual abstinence prior to, and outside of, marriage) as a check on the growth of population. (Others criticised him, however, for implying that restraint applied only to the working and poor classes.) He also proposed the gradual abolition of poor laws that gave no incentive to birth control, supporting instead private charity.

Malthus took offence at criticism that he lacked a caring attitude towards the situation of the poor. He wrote in an addition to the 1817 edition:

"I have written a chapter expressly on the practical direction of our charity; and in detached passages elsewhere have paid a just tribute to the exalted virtue of benevolence. To those who have read these parts of my work, and have attended to the general tone and spirit of the whole, I willingly appeal, if they are but tolerably candid, against these charges ... which intimate that I would root out the virtues of charity and benevolence without regard to the exaltation which they bestow on the moral dignity of our nature.... (p. 607)

Some have argued that Malthus did not fully recognize the human capacity to increase food supply. On this subject Malthus wrote: "The main peculiarity which distinguishes man from other animals, is the means of his support, is the power which he possesses of very greatly increasing these means."

Malthus's expectations of growth in population

Since 1800, global food production has generally kept pace with population growth, but increasing numbers of humans call for new ways "to increase yields while preserving natural habitats and biodiversity".

Elwell states that Malthus made no specific prediction regarding the future; and that what some interpret as prediction merely constituted Malthus's illustration of the power of geometric (or exponential) population growth compared to the arithmetic growth of food-production. Rather than predicting the future, the *Essay* offers an evolutionary social theory. Eight major points regarding evolution appear in the *1798 Essay*:

1. subsistence severely limits population-level
2. when the means of subsistence increases, population increases
3. population-pressures stimulate increases in productivity
4. increases in productivity stimulate further population-growth
5. since this productivity can not keep up with the potential of population growth for long, population requires strong checks to keep it in line with carrying-capacity
6. individual cost/benefit decisions regarding sex, work, and children determine the expansion or contraction of population and production
7. checks will come into operation as population exceeds subsistence-level
8. the nature of these checks will have significant effect on the rest of the sociocultural system — Malthus points specifically to misery, vice, and poverty

Malthusian theory has had great influence on evolutionary theory, both in biology (as acknowledged by Darwin and Alfred Russel Wallace) and in the social sciences (compare Herbert Spencer). Malthus's population theory has also profoundly affected the modern-day ecological-evolutionary social theory of Gerhard Lenski and Marvin Harris. He can thus rank as a key contributing element of the canon of socioeconomic theory.

Influence

Malthus's theory of population has proven very influential. In 1978 Michael H. Hart published a book called *The 100: A Ranking of the Most Influential Persons in History*, which placed Malthus at number 80 in this worldwide ranking.

At Haileybury, Malthus developed a theory of demand-supply mismatches which he called **gluts**. Considered ridiculous at the time, his theory foreshadowed later theories about the Great Depression, and the works of admirer and economist John Maynard Keynes.

Before Malthus, commentators had regarded high fertility as an economic advantage, since it increased the number of workers available to the economy. Malthus, however, looked at fertility from a new perspective and convinced most economists that even though high fertility might increase the gross output, it tended to reduce output *per capita*. A number of other notable economists, such as David Ricardo (whom Malthus knew personally) and Alfred Marshall admired Malthus and/or came under his influence.

A distinguished early convert to Malthusianism, British Prime Minister William Pitt The Younger (in office: 1783 - 1801 and 1804 - 1806), after reading the work of Malthus promptly withdrew a bill he had introduced that called for the extension of Poor Relief. Pitt also launched the first modern census in the UK (conducted in 1801). In the 1830s Malthus's writings strongly influenced Whig reforms which overturned Tory paternalism and brought in the Poor Law Amendment Act of 1834.

Concerns about Malthus's theory helped promote the idea of a national population census in the UK. Government official John Rickman became instrumental in the carrying out of the first modern British census in 1801.

Malthus took pride in the fact that some of the earliest converts to his population theory included the leading creationist and natural theologian, Archdeacon William Paley, whose *Natural Theology* first appeared in 1802. Both men regarded Malthus's Principle of Population as additional proof of the existence of a deity.

Ironically, given Malthus's own opposition to contraception, his work exercised a strong influence on Francis Place (1771–1854), whose Neo-Malthusian movement became the first to advocate contraception. Place published his *Illustrations and Proofs of the Principles of Population* in 1822.

Malthus's idea of man's "struggle for existence" had an influence on the inception of Darwin's theory of evolution, along with A. P. de Candolle's idea of "nature's war". Other scientists related this idea to plants and animals, which helped to define a piece of the evolutionary puzzle. This struggle for existence of all creatures provides the catalyst by which natural selection produces the "survival of the fittest", a phrase coined by Herbert Spencer. Darwin, in his book *The Origin of Species*, called his theory an application of the doctrines of Malthus in an area without the complicating factor of human intelligence. Darwin, a

life-long admirer of Malthus, referred to Malthus as "*that great philosopher*" and wrote in his notebook that "*Malthus on Man should be studied*". Wallace called Malthus's essay "...*the most important book I read...*" and considered it "*the most interesting coincidence*" that reading Malthus led both himself and Darwin, independently, towards the idea of evolution.

Thanks to Malthus, Darwin recognized the significance of competition between populations of the same species, as well as the importance of competition between species. Malthusian thinking on population also explained how an incipient species could become a full-blown species in a very short time-frame. Robert M. Young, Professor of Psychotherapy and Psychoanalytic Studies at Sheffield University in England, perhaps best highlighted the significance of Malthus's influence on Darwin in *Darwin's Metaphor: Nature's Place in Victorian Culture* in 1965.

The first Director-General of UNESCO, evolutionist and humanist Julian Huxley, wrote of "The Crowded World" in his *Evolutionary Humanism* (1964), calling for a "World Population Policy". Huxley openly criticised Communist and Roman Catholic attitudes to birth control, population control and overpopulation. Today world organizations such as the United Nations Population Fund acknowledge that the debate over how many people the Earth can support effectively started with Malthus.

Julian Huxley's brother, the author Aldous Huxley, in his book *Brave New World*, refers to Malthusian theories on population. The inhabitants of his novel use a popular form of birth control known as the "Malthusian Belt". The females in the novel, including the female protagonist Lenina Crowne, mention it frequently.

Malthusian ideas continue to have considerable influence. Paul R. Ehrlich, author of *The Population Bomb* (1968), furnishes a recent example of this. (Ehrlich predicted, in the late 1960s, that hundreds of millions would die from a coming overpopulation-crisis in the 1970s, and that by 1980 inhabitants of the United States would have a life-expectancy of only 42 years.) Other examples of applied Malthusianism include the 1972 book *The Limits to Growth* published by the Club of Rome, and the Global 2000 report to the then President of the United States of America Jimmy Carter. Science-fiction author Isaac Asimov issued many appeals for population-control reflecting the perspective articulated by people from Thomas Malthus through Paul R. Ehrlich.

More recently, a school of "neo-Malthusian" scholars has begun to link population and economics to a third variable, political change and political violence, and to show how the variables interact. In the early 1980s, James Goldstone linked population variables to the English Revolution and David Lempert devised a model of demographics, economics, and political change in the multi-ethnic country of Mauritius. Goldstone has since modeled other revolutions by looking at demographics and economics and Lempert has explained Stalin's purges and the Russian Revolution of 1917 in terms of demographic factors that drive political economy. Ted Robert Gurr has also modeled political violence, such as in the Palestinian territories and in Rwanda/Congo (two of the world's regions of most rapidly-growing population) using similar variables in several comparative cases. These approaches compete with explanations of events as a result of political ideology and suggest that political ideology as a construct follows demographic forces.

Many regard Malthus as the founder of modern demography. Malthus proposed his Principle of Population as a universal natural law for all species, not just humans. Instead, today, commentators widely regard his theory as only an *approximate* natural law of population dynamics for all species: this because scientists have proven that nothing can sustain exponential growth at a constant rate indefinitely.

Malthus continues to inspire and influence futuristic visions, such as those of K Eric Drexler relating to space advocacy and molecular nanotechnology. As Drexler put it in *Engines of Creation* (1986): "In a sense, opening space will burst our limits to growth, since we know of no end to the universe. Nevertheless,

Malthus was essentially right."

Malthus has also inspired retired physics professor, Albert Bartlett, to lecture over 1,500 times on "Arithmetic, Population, and Energy", promoting sustainable living and explaining the mathematics of overpopulation.

The Malthusian growth model now bears Malthus's name. The logistic function of Pierre Francois Verhulst (1804-1849) results in the well-known S-curve. Verhulst developed the logistic growth model favored by so many critics of the Malthusian growth model in 1838 only after reading Malthus's essay.

Some commentators have disputed the efficacy of Malthus's arithmetic model of food-supply, noting that food supply has kept pace with population for the past two centuries.

Malthus's position as professor at the British East India Company training college, which he held until his death in 1834, gave his theories considerable influence over Britain's administration of India through most of the 19th century, continuing even under the Raj after the Company's dissolution in 1858. In a major result of this influence, the official response to India's periodic famines (which had occurred every decade or two for centuries) became one of not entirely benign neglect: the authorities regarded the famines as necessary to keep the "excess" population in check. In some cases administrators even banned private efforts to transport food into famine-stricken areas. However, this "Malthusian" policy did not take account of the enormous economic damage done by such famines through loss of human capital, collapse of credit structures and financial institutions, and the destruction of physical capital (especially in the form of livestock), social infrastructure and commercial relationships. As a (presumably unintended) consequence, production often did not recover to pre-famine levels in the affected areas for a decade or more after each disaster, well after the replacement of the lost population.

Malthusian theory also influenced British policies in Ireland during the 1840s: the government neglected relief-measures during the Irish Potato Famine (1845-1849), seeing mass starvation as a natural and inevitable consequence of the island's supposed over-population.

Although many people assume that Malthus's pessimistic views gave economics the nickname "the Dismal Science", the historian Thomas Carlyle actually coined the phrase in 1849 in reference to *laissez-faire* economic theories in general.

Criticism

Contemporaries of Malthus

William Godwin responded to Malthus's criticisms of his own arguments with *On Population* (1820).

Other theoretical and political critiques of Malthus and Malthusian thinking emerged soon after the publication of the first *Essay on Population*, most notably in the work of the reformist industrialist Robert Owen, of the essayist William Hazlitt and of the economists John Stuart Mill and Nassau William Senior, and moralist William Cobbett. Note also *True Law of Population* (1845) by politician Thomas Doubleday, an adherent of Cobbett's views.

Marxist

Much opposition to Malthus's ideas came in the middle of the nineteenth century with the writings of Karl Marx (*Capital*, 1867) and Friedrich Engels (*Outlines of a Critique of Political Economy*, 1844), who argued that what Malthus saw as the problem of the pressure of population on the means of production actually represented the pressure of the means of production on population. They thus viewed it in terms of their concept of the reserve army of labour. In other words, the seeming excess of population that Malthus attributed to the seemingly innate disposition of the poor to reproduce beyond their means actually emerged as a product of the very dynamic of capitalist economy.

Engels called Malthus's hypothesis "...the crudest, most barbarous theory that ever existed, a system of despair which struck down all those beautiful phrases about love thy neighbour and world citizenship."

Vladimir I. Lenin sharply criticized Malthusian theory and its neo-Malthusian version, calling it a "reactionary doctrine" and "an attempt on the part of bourgeois ideologists to exonerate capitalism and to prove the inevitability of privation and misery for the working class under any social system".

Biological

Biologist Ronald Fisher expressed criticism of the use of Malthus's theory as a basis for the theory of natural selection. John Maynard Smith criticised Malthus's hypothesis, doubting that famine functioned as the great leveler that Malthus saw it as.

Cornucopian

Some 19th-century economists believed that improvements in the division and specialization of labor, increased capital investment, and other factors had rendered some of Malthus's warnings implausible. In the absence of any improvement in technology or increase of capital equipment, an increased supply of labor may have a synergistic effect on productivity that overcomes the law of diminishing returns. As American land-economist Henry George observed with characteristic piquancy in dismissing Malthus: "Both the jayhawk and the man eat chickens; but the more jayhawks, the fewer chickens, while the more men, the more chickens."

Many 20th-century economists, such as Julian Lincoln Simon, have also criticised Malthus's conclusions. They note that despite the predictions of Malthus and the Neo-Malthusians, massive geometric population growth in the 20th century has not resulted in a Malthusian catastrophe, largely due to the influence of technological advances and the expansion of the market economy, division of labor, and stock of capital goods. The enviro-sceptic Bjørn Lomborg, echoes such arguments. Some, such as British physicist John Maddox, thus regard Malthus as a failed prophet of doom.

Anthropological

In *The Malthus Factor: Population, Poverty, and Politics in Capitalist Development*, anthropologist Eric Ross depicts Malthus's work as a rationalization of the social inequities produced by the Industrial Revolution, anti-immigration movements, the eugenics movement and the various international development

movements.

Economic

Malthus argued that as wages increase within an economy, the birth-rate increases while the death-rate decreases. He reasoned that high incomes allowed people to have sufficient means to raise their children, thus resulting in greater desire to have more children which increases the population. In addition, high incomes also allowed people to afford proper medication to fight off potentially harmful diseases, thus decreasing the death-rate. As a result, wage-increases caused population to grow as the birth-rate increases and the death-rate decreases. He further argued that as the supply of labor increases with the increased population-growth at a constant labor demand, the wages earned would decrease eventually to subsistence, where the birth-rate equals the death-rate, resulting in no growth in population. However, the world generally has experienced quite a different result than the one Malthus predicted. During the late 19th and early 20th century, the population (and wages) increased as the industrial revolution gathered pace. However, birth rates in highly-developed nations have dropped to bare replacement-levels, such that many Western nations like the US and Canada only grow due to immigration, and Japan faces a declining population when the post-World War II generation dies off.

Malthus assumed a constant labor-demand in his assessment of England, and in doing so he ignored the effects of industrialization. As the world became more industrialized, the level of technology and production grew, causing an increase in labor-demand. Thus, even though labor-supply increased, so did the demand for labor. In fact, the labor-demand arguably increased more than the supply, as measured by the historically observed increase in real wages globally with population growth.

Epitaph

Sacred to the memory of the Rev Thomas Robert Malthus, long known to the lettered world by his admirable writings on the social branches of political economy, particularly by his essay on population. One of the best men and truest philosophers of any age or country, raised by native dignity of mind above the misrepresentation of the ignorant and the neglect of the great, he lived a serene and happy life devoted to the pursuit and communication of truth. Supported by a calm but firm conviction of the usefulness of his labors. *Content with the approbation of the wise and good.* His writings will be a lasting monument of the extent and correctness of his understanding. The spotless integrity of his principles, the equity and candour of his nature, his sweetness of temper, urbanity of manners and tenderness of heart, his benevolence and his piety are still dearer recollections of his family and friends. Born Feb 14 1766 Died 29 Dec 1834.

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Trade union

2008/9 Schools Wikipedia Selection. Related subjects: Community organisations; Economics; Politics and government

A **trade union** or **labor union** is an organization of workers who have banded together to achieve common goals in key areas such as wages, hours, and working conditions, forming a cartel of labour. The trade union, through its leadership, bargains with the employer on behalf of union members (rank and file members) and negotiates labour contracts with employers. This may include the negotiation of wages, work rules, complaint procedures, rules governing hiring, firing and promotion of workers, benefits, workplace safety and policies. The agreements negotiated by the union leaders are binding on the rank and file members and the employer and in some cases on other non-member workers.

These organizations may comprise individual workers, professionals, past workers, or the unemployed. The most common, but by no means only, purpose of these organizations is "maintaining or improving the conditions of their employment"

Over the last three hundred years, many trade unions have developed into a number of forms, influenced by differing political and economic regimes. The immediate objectives and activities of trade unions vary, but may include:

- **Provision of benefits to members:** Early trade unions, like Friendly Societies, often provided a range of benefits to insure members against unemployment, ill health, old age and funeral expenses. In many developed countries, these functions have been assumed by the state; however, the provision of professional training, legal advice and representation for members is still an important benefit of trade union membership.
- **Collective bargaining:** Where trade unions are able to operate openly and are recognized by employers, they may negotiate with employers over wages and working conditions.
- **Industrial action:** Trade unions may enforce strikes or resistance to lockouts in furtherance of particular goals.
- **Political activity:** Trade unions may promote legislation favorable to the interests of their members or workers as a whole. To this end they may pursue campaigns, undertake lobbying, or financially support individual candidates or parties (such as the Labour Party in Britain) for public office.

History of trade unions

The traces of trade unions' existence could be traced from the eighteenth century, The rapid expansion of industrial society was to draw women, children, rural workers, and immigrants to the work force in larger numbers and in new roles. This pool of unskilled and semi-skilled labour spontaneously organized in fits and starts throughout its beginnings, and would later be an important arena for the development of trade unions.



The Lawrence textile strike (1912), with soldiers surrounding peaceful demonstrators

Part of a series on

Organized Labor

Origins and early history

Trade unions have sometimes been seen as successors to the guilds of medieval Europe, though the relationship between the two is disputed. Medieval guilds existed to protect and enhance their members' livelihoods through controlling the instructional capital of artisanship and the progression of members from apprentice to craftsman, journeyman, and eventually to master and grandmaster of their craft. They also labor union might include workers from only one trade or craft, or might combine several or all the workers in one company or industry. Since the publication of the *History of Trade Unionism* (1894) by Sidney and Beatrice Webb, the predominant historical view is that a trade union "is a continuous association of wage earners for the purpose of maintaining or improving the conditions of their employment." A modern definition by the Australian Bureau of Statistics states that a trade union is "an organization consisting predominantly of employees, the principal activities of which include the negotiation of rates of pay and conditions of employment for its members."

Yet historian R.A. Leeson, in *United we Stand* (1971), said:

“ Two conflicting views of the trade-union movement strove for ascendancy in the nineteenth century: one the defensive-restrictive guild-craft tradition passed down through journeymen's clubs and friendly societies,...the other the aggressive-expansionist drive to unite all 'labouring men and women' for a 'different order of things'... ”

Recent historical research by Bob James in *Craft, Trade or Mystery* (2001) puts forward the view that trade unions are part of a broader movement of benefit societies, which includes medieval guilds, Freemasons, Oddfellows, friendly societies, and other fraternal organizations.

The 18th century economist Adam Smith noted the imbalance in the rights of workers in regards to owners (or "masters"). In *The Wealth of Nations*, Book I, chapter 8, Smith wrote:

“ We rarely hear, it has been said, of the combinations of masters, though frequently of those of workmen. But whoever imagines, upon this account, that masters rarely combine, is as ignorant of the world as of the subject. Masters are always and everywhere in a sort of tacit, but constant and uniform combination, not to raise the wages of labour above their actual rate...

When workers combine, masters... never cease to call aloud for the assistance of the civil magistrate, and the rigorous execution of those laws which have been enacted with so much severity against the combinations of servants, labourers, and journeymen. ”

As Smith noted, unions were illegal for many years in most countries (and Smith argued that schemes to fix wages or prices, by employees or employers, should be). There were severe penalties for attempting to organize unions, up to and including execution. Despite this, unions were formed and began to acquire political power, eventually resulting in a body of labor law that not only legalized organizing efforts, but codified the relationship between employers and those employees organized into unions. Even after the legitimization of trade unions there was opposition, as the case of the Tolpuddle Martyrs shows.

The right to join a trade union is mentioned in article 23, subsection 4 of the Universal Declaration of Human Rights (UDHR), which also states in article 20, subsection 2 that "No one may be compelled to belong to an association". Prohibiting a person from joining or forming a union, as well as forcing a person to do the same (e.g. "closed shops" or "union shops", see below), whether by a government or by a business, is generally considered a human rights abuse. Similar

allegations can be leveled if an employer discriminates based on trade union membership. Attempts by an employer, often with the help of outside agencies, to prevent union membership amongst their staff is known as union busting.

19th century unionism

The National Labor Union was the first national union in the United States. It was created in 1866 and included many types of workers. This union did not accomplish any significant gains. After this union crumbled, the Knights of Labor became the leading countrywide union in the 1860s. This union did not include Chinese, and partially included blacks and women.

The Knights of Labor was founded in the United States in 1869. Eventually over 700,000 workers joined the Knights. They opposed child labor and demanded the eight-hour day. They hoped their union would give workers "a proper share of the wealth they create," more free time, and generally more benefits of society. They also tried to set up companies owned by the workers themselves. Although the Knights were against strikes, some radical members went on strike anyway when the railroads cut wages in 1884. After they won the fight, membership in the Knights boomed to 700,000, but then, at the time of the Haymarket Massacre, a fearful public opinion grouped them with anarchists and Communists, and membership then rapidly declined.

The American Federation of Labor (AFL) was founded by Samuel Gompers. By 1904, AFL-affiliated unions had a membership of over 1.4 million nationwide. Under Gompers's leadership, the AFL advocated an approach known as "business" or "pure and simple" unionism, which emphasized collective bargaining to reach its goals. Demands were centered around improvements to the immediate work environment, like better wages, hours and working conditions.

In France, Germany, and other European countries, socialist parties and democrats played a prominent role in forming and building up trade unions, especially from the 1870s onwards. This stood in contrast to the British experience, where moderate New Model Unions dominated the union movement from the mid-nineteenth century and where trade unionism was stronger than the political labour movement until the formation and growth of the Labour Party in the early years of the twentieth century.

Impact of unions

Proponents often credit trade unions with leading the labor movement in the early 20th century, which generally sought to end child labor practices, improve worker safety, increase wages for both union workers, raise the entire society's standard of living, reduce the hours in a work week, provide public education for children, and bring of other benefits to working class families.

Advocates of unions claim that the higher wages that unions bring come at the expense of profits. However, as Milton Friedman pointed out, profits aren't high enough. 80% of national income is wages, and only about 6% is profits after tax, providing very little room for higher wages, even if profits could be totally used up. Moreover, profits are invested leading to an increase in capital: which raises the value of labour, increasing wages. If profits were totally removed, this source of wage increase would be removed.

Instead of harming profits, unions increase the wages of about 10 to 15% of workers by about 10 to 15% by reducing the wages of the other 85 to 90% of

workers by about 4%. As the price of labour increases, the demand for it will decrease. Unions targets of industry protectionism and limits on immigration also have this effect, benefiting unionised workers at the cost of those without union membership.

The effect of union activities to influence pricing is potentially very harmful, making the market system ineffective. By raising the price of labour, above the market rate deadweight loss is created. Additional non-monetary benefits exacerbate the problem.

By causing wage increases above the market rate, unions increase the cost to businesses, causing them to raise their prices, leading to a general increase in the price level.

“ There can be little doubt that union activities lead to continuous and progressive inflation. ”

F. A. Hayek, the *Constitution of Liberty*

Austrian economists such as Robert P. Murphy, however, dispute this, arguing that the increase in the cost of labour simply means that less of other goods can be bought. He writes:

If unions succeed in wage hikes, and employers raise the prices they charge consumers to maintain their own profit margins, and the supply of money remains the same, then something else has to "give." Either the prices of goods and services in nonunion sectors have to fall and offset the union sector hikes, or people's cash balances need to fall, in terms of their purchasing power.

Unions today

Structure and politics

Union structures, politics, and legal status vary greatly from country to country. For specific country details see below.

Unions may organize a particular section of skilled workers (craft unionism), a cross-section of workers from various trades (general unionism), or attempt to organize all workers within a particular industry (industrial unionism). These unions are often divided into " locals", and united in national federations. These federations themselves will affiliate with Internationals, such as the International Trade Union Confederation.

In many countries, a union may acquire the status of a " juristic person" (an artificial legal entity), with a mandate to negotiate with employers for the workers it represents. In such cases, unions have certain legal rights, most importantly the right to engage in collective bargaining with the employer (or employers) over wages, working hours, and other terms and conditions of employment. The inability of the parties to reach an agreement may lead to industrial action, culminating in either strike action or management lockout, or binding arbitration. In extreme cases, violent or illegal activities may develop around these events.



A rally of the trade union UNISON in Oxford during a strike on 2006- 03-28.

In other circumstances, unions may not have the legal right to represent workers, or the right may be in question. This lack of status can range from non-recognition of a union to political or criminal prosecution of union activists and members, with many cases of violence and deaths having been recorded both historically and contemporarily.

Unions may also engage in broader political or social struggle. Social Unionism encompasses many unions that use their organizational strength to advocate for social policies and legislation favorable to their members or to workers in general. As well, unions in some countries are closely aligned with political parties.

Unions are also delineated by the service model and the organizing model. The service model union focuses more on maintaining worker rights, providing services, and resolving disputes. Alternately, the organizing model typically involves full-time union organizers, who work by building up confidence, strong networks, and leaders within the workforce; and confrontational campaigns involving large numbers of union members. Many unions are a blend of these two philosophies, and the definitions of the models themselves are still debated.

Although their political structure and autonomy varies widely, union leaderships are usually formed through democratic elections.

Some research, such as that conducted by the ACIRRT, argues that unionized workers enjoy better conditions and wages than those who are not unionized.

Shop types

Companies that employ workers with a union generally operate on one of several models:

- A **closed shop** (US) employs only people who are already union members. The compulsory hiring hall is an example of a closed shop — in this case the employer must recruit directly from the union.
- A **union shop** (US) or a **closed shop** (UK) employs non-union workers as well, but sets a time limit within which new employees must join a union.
- An **agency shop** requires non-union workers to pay a fee to the union for its services in negotiating their contract. This is sometimes called the Rand formula. In certain situations involving state public employees in the United States, such as California, "fair share laws" make it easy to require these sorts of payments.

- An **open shop** does not discriminate based on union membership in employing or keeping workers. Where a union is active, the open shop allows workers to be employed who do not contribute to a union or the collective bargaining process. In the United States, state level right-to-work laws mandate the open shop in some states.

Diversity of international unions

As labor law varies from country to country, so is the function of unions. For example, in Germany only open shops are legal; that is, all discrimination based on union membership is forbidden. This affects the function and services of the union. In addition, German unions have played a greater role in management decisions through participation in corporate boards and co-determination than have unions in the United States. ([newsletter/files/BTS012EN_12-15.pdf](#)).

In Britain a series of laws introduced during the 1980s by Margaret Thatcher's government restricted closed and union shops. All agreements requiring a worker to join a union are now illegal. In the United States, the Taft-Hartley Act of 1947 outlawed the closed shop, but permitted the union shop unless the state government chose to prohibit it.

In addition, unions' relations with political parties vary. In many countries unions are tightly bonded, or even share leadership, with a political party intended to represent the interests of working people. Typically this is a left-wing, socialist, or social democratic party, but many exceptions exist. In the United States, by contrast, although it is historically aligned with the Democratic Party, the labor movement is by no means monolithic on that point; the International Brotherhood of Teamsters has supported Republican Party candidates on a number of occasions and the Professional Air Traffic Controllers Organization (PATCO) endorsed Ronald Reagan in 1980. (However, when PATCO went on strike in violation of their "no strike" contract, President Reagan ordered them back to work. Those who didn't return to the job were fired and replaced, effectively destroying PATCO.) The AFL-CIO has been against liberalizing abortion, consistent with a Republican position, so as not to alienate its large Catholic constituency. In Britain the labor movement's relationship with the Labour Party is fraying as party leadership embarks on privatization plans at odds with what unions see as the worker's interests. On top of this in the past there as been a group known as the Conservative Trade Unionists or CTU. A group formed of people who sympathised with right wing Tory policy but were Trade Unionists.

In Western Europe, professional associations often carry out the functions of a trade union. In these cases, they may be negotiating for white-collar workers, such as physicians, engineers, or teachers. Typically such trade unions refrain from politics or pursue a more ordoliberal politics than their blue-collar counterparts.

In Germany the relation between individual employees and employers is considered to be asymmetrical. In consequence, many working conditions are not negotiable due to a strong legal protection of individuals. However, the German labor law or works legislation has as its main objective to create a balance of power between employees organized in unions and employers organized in employers associations. This allows much wider legal boundaries for collective bargaining, compared to the narrow boundaries for individual negotiations. As a condition to obtain the legal status of a trade union, employee associations need to prove that their leverage is strong enough to serve as a counterforce in negotiations with employers. If such an employees association is competing against another union, its leverage may be questioned by unions and then evaluated in a court trial. In Germany only very few professional associations obtained the right to negotiate salaries and working conditions for their members, notably the medical doctors association Marburger Bund and the pilots association Vereinigung Cockpit. The engineers association Verein Deutscher Ingenieure does not strive to act as a union, as it also represents the interests of engineering businesses.

Finally, the structure of employment laws affects unions' roles and how they carry out their business. In many western European countries wages and benefits are largely set by governmental action. The United States takes a more laissez-faire approach, setting some minimum standards but leaving most workers' wages and benefits to collective bargaining and market forces. Historically, the Republic of Korea has regulated collective bargaining by requiring employers to participate but collective bargaining has been legal only if held in sessions before the lunar new year. In totalitarian regimes such as Nazi Germany, Trade Unions were outlawed. In the Soviet Union and China, unions have typically been *de facto* government agencies devoted to smooth and efficient operation of government enterprises.

Criticism

Trade unions have been accused of benefiting the insider workers, those having secure jobs, at the cost of the outsider workers, consumers of the goods or services produced, and the shareholders of the unionized business. Those who are likely to be disadvantaged most from unionization are the unemployed, those at risk of unemployment or workers who are unable to get the job they want in a particular line of work.

Dr. Charles Baird of California State University East Bay argues that as labor is a commodity, and unions essentially operate by centralizing labor, forming a monopoly on the commodity. This monopoly on labor has the same negative effects as any other monopoly., of reducing the amount sold (in this case, this means increasing unemployment) raising the price in the short term and decreasing efficiency.

In the United States, the outsourcing of labor to Asia, Latin America, and Africa has been partially driven by increasing costs of union partnership, which gives other countries a comparative advantage in labor, making it more efficient to perform labor-intensive work there.

Milton Friedman, Nobel Prize winning economist and advocate of laissez-faire capitalism showed that unionization produces higher wages (for the union members) at the expense of fewer jobs, and that, if some industries are unionized while others are not, wages will decline in non-unionized industries.

In some cases, unions are regarded as a form of legalized conspiracy and extortion. American racketeering statutes still include an exemption for union activity.

Unions are sometimes accused of holding society to ransom by taking strike actions that result in the disruption of public services.

By causing wage increases above the market rate, unions increase the cost to businesses, causing them to raise their prices, leading to a general increase in the price level.

Further materials

Films

- The 2000 film *Bread and Roses* by British director Ken Loach depicted the struggle of cleaners in Los Angeles to fight for better pay, and working conditions, and the right to join a union.

- The 1985 documentary film *Final Offer* by Sturla Gunnarsson and Robert Collision shows the 1984 union contract negotiations with General Motors.
- The 1979 film *Norma Rae*, directed by Martin Ritt, is based on the true story of Crystal Lee Jordan's successful attempt to unionize her textile factory.
- Other documentaries: *Made in L.A.* (2007); *American Standoff* (2002); *The Fight in the Fields* (1997); *Harlan County USA* (1976); *The Inheritance'* (1964); ***With Babies and Banners: Story of the Women's Emergency Brigade (1959)***;
- Other dramatizations: *10,000 Black Men Named George* (2002); *Matewan* (1987); *American Playhouse--"The Killing Floor"*(1985); *Salt of the Earth* (1954); *The Grapes of Wrath* (1940); *Black Fury* (1935);

Books

- *The Government of British Trade Unions: A study of Apathy and the Democratic Process in the Transport and General Worker Union* by Joseph Goldstein"
- *The Early English Trade Unions: Documents from Home Office Papers in the Public Record Office* by A Aspinall
- *Magnificent Journey: The Rise of the Trade Unions*, by Francis Williams
- *Trade Unions* by Allan Flanders
- *Trade Union Government and Administration in Great Britain* by B C Roberts
- *Union Power: The Growth and Challenge in Perspective* by Claud Cockburn
- *Directory of Employer's Associations, Trade Unions, Joint Organisations & c - No author and produced in paperback*
- *The History of the TUC (Trades Union Congress) 1868-1968: A pictorial Survey of a Social Revolution - Illustrated with Contemporary Prints, Documents and Photographs* edited by Lionel Birch
- Clarke, T.; Clements, L. (1978). *Trade Unions under Capitalism*. Atlantic Highlands, NJ: Humanities Press. ISBN 0-391-00728-9.

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Trade

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Trade is the voluntary exchange of goods, services, or both. Trade is also called commerce. A mechanism that allows trade is called a market. The original form of trade was barter, the direct exchange of goods and services. Modern traders instead generally negotiate through a medium of exchange, such as money. As a result, **buying** can be separated from **selling**, or earning. The invention of money (and later credit, paper money and non-physical money) greatly simplified and promoted trade. Trade between two traders is called bilateral trade, while trade between more than two traders is called multilateral trade.

Trade exists for many reasons. Due to specialisation and division of labor, most people concentrate on a small aspect of production, trading for other products. Trade exists between regions because different regions have a comparative advantage in the production of some tradable commodity, or because different regions' size allows for the benefits of mass production. As such, trade at market prices between locations benefits both locations.

Trading can also refer to the action performed by traders and other market agents in the financial markets.

History of trade

Trade originated with the start of communication in prehistoric times. Trading was the main facility of prehistoric people, who bartered goods and services from each other before the innovation of the modern day currency. Peter Watson dates the history of long-distance commerce from circa 150,000 years ago.

Trade is believed to have taken place throughout much of recorded human history. There is evidence of the exchange of obsidian and flint during the stone age. Materials used for creating jewelry were traded with Egypt since 3000 BC. Long-range trade routes first appeared in the 3rd millennium BC, when Sumerians in Mesopotamia traded with the Harappan civilization of the Indus Valley. The Phoenicians were noted sea traders, traveling across the Mediterranean Sea, and as far north as Britain for sources of tin to manufacture bronze. For this purpose they established trade colonies the Greeks called emporia. From the beginning of Greek civilization until the fall of the Roman empire in the 5th century, a financially lucrative trade brought valuable spice to Europe from the far east, including China. Roman commerce allowed its empire to flourish and endure. The Roman empire produced a stable and secure transportation network that enabled the shipment of trade goods without fear of significant piracy.

The fall of the Roman empire, and the succeeding Dark Ages brought instability to Western Europe and a near collapse of the trade network. Nevertheless some trade did occur. For instance, Radhanites were a medieval guild or group (the precise meaning of the word is lost to history) of Jewish merchants who traded between the Christians in Europe and the Muslims of the Near East.

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :608 of 626.



A fruit stand at a market.

The Sogdians dominated the East-West trade route known as the Silk Road after the 4th century AD up to the 8th century AD, with Suyab and Talas ranking among their main centers in the north. They were the main caravan merchants of Central Asia.

From the 8th to the 11th century, the Vikings and Varangians traded as they sailed from and to Scandinavia. Vikings sailed to Western Europe, while Varangians to Russia. The Hanseatic League was an alliance of trading cities that maintained a trade monopoly over most of Northern Europe and the Baltic, between the 13th and 17th centuries.

Vasco da Gama restarted the European Spice trade in 1498. Prior to his sailing around Africa, the flow of spice into Europe was controlled by Islamic powers, especially Egypt. The spice trade was of major economic importance and helped spur the Age of Exploration. Spices brought to Europe from distant lands were some of the most valuable commodities for their weight, sometimes rivaling gold.

In the 16th century, Holland was the centre of free trade, imposing no exchange controls, and advocating the free movement of goods. Trade in the East Indies was dominated by Portugal in the 16th century, the Netherlands in the 17th century, and the British in the 18th century. The Spanish Empire developed regular trade links across both the Atlantic and the Pacific Oceans.

In 1776, Adam Smith published the paper *An Inquiry into the Nature and Causes of the Wealth of Nations*. It criticised Mercantilism, and argued that economic specialisation could benefit nations just as much as firms. Since the division of labour was restricted by the size of the market, he said that countries having access to larger markets would be able to divide labour more efficiently and thereby become more productive. Smith said that he considered all rationalisations of import and export controls "dupery", which hurt the trading nation at the expense of specific industries.

In 1799, the Dutch East India Company, formerly the world's largest company, became bankrupt, partly due to the rise of competitive free trade.

In 1817, David Ricardo, James Mill and Robert Torrens showed that free trade would benefit the industrially weak as well as the strong, in the famous theory of comparative advantage. In *Principles of Political Economy and Taxation* Ricardo advanced the doctrine still considered the most counterintuitive in economics:

When an inefficient producer sends the merchandise it produces best to a country able to produce it more efficiently, both countries benefit.

The ascendancy of free trade was primarily based on national advantage in the mid 19th century. That is, the calculation made was whether it was in any particular country's self-interest to open its borders to imports.

John Stuart Mill proved that a country with monopoly pricing power on the international market could manipulate the terms of trade through maintaining tariffs, and that the response to this might be reciprocity in trade policy. Ricardo and others had suggested this earlier. This was taken as evidence against the universal doctrine of free trade, as it was believed that more of the economic surplus of trade would accrue to a country following *reciprocal*, rather than completely free, trade policies. This was followed within a few years by the infant industry scenario developed by Mill promoting the theory that government had the "duty" to protect young industries, although only for a time necessary for them to develop full capacity. This became the policy in many countries attempting to industrialise and out-compete English exporters. Milton Freidman later continued this vein of thought, showing that in a few circumstances tariffs might be beneficial to the host country; but never for the world at large.

The Great Depression was a major economic recession that ran from 1929 to the late 1930s. During this period, there was a great drop in trade and other economic indicators.

The lack of free trade was considered by many as a principal cause of the depression. Only during the World War II the recession ended in United States. Also during the war, in 1944, 44 countries signed the Bretton Woods Agreement, intended to prevent national trade barriers, to avoid depressions. It set up rules and institutions to regulate the international political economy: the International Monetary Fund and the International Bank for Reconstruction and Development (later divided into the World Bank and Bank for International Settlements). These organisations became operational in 1946 after enough countries ratified the agreement. In 1947, 23 countries agreed to the General Agreement on Tariffs and Trade to promote free trade.

Free trade advanced further in the late 20th century and early 2000s:

- 1992 European Union lifted barriers to internal trade in goods and labour.
- January 1, 1994 NAFTA took effect
- 1994 The GATT Marrakech Agreement specified formation of the WTO.
- January 1, 1995 World Trade Organization was created to facilitate free trade, by mandating mutual most favoured nation trading status between all signatories.
- EC was transformed into the European Union, which accomplished the Economic and Monetary Union (EMU) in 2002, through introducing the Euro , and creating this way a real single market between 13 member states as of January 1, 2007.
- 2005, the Central American Free Trade Agreement was signed; It includes the United States and the Dominican Republic.

Development of money

The first instances of money were objects with intrinsic value. This is called commodity money and includes any commonly-available commodity that has intrinsic value; historical examples include pigs, rare seashells, whale's teeth, and (often) cattle. In medieval Iraq, bread was used as an early form of money. In Mexico under Montezuma cocoa beans were money.

Currency was introduced as a standardised money to facilitate a wider exchange of goods and services. This first stage of currency, where metals were used to represent stored value, and symbols to represent commodities, formed the basis of trade in the Fertile Crescent for over 1500 years.

Numismatists have examples of coins from the earliest large-scale societies, although these were initially unmarked lumps of precious metal.

Ancient Sparta minted coins from iron to discourage its citizens from engaging in foreign trade.

The system of commodity money in many instances evolved into a system of representative money. In this system, the material that constitutes the money itself had very little intrinsic value, but nonetheless such money achieves significant market value



Roman denarius

through scarcity or controlled supply.

Current trends

Doha rounds

The Doha round of World Trade Organization negotiations aims to lower barriers to trade around the world, with a focus on making trade fairer for developing countries. Talks have been hung over a divide between the rich, developed countries, and the major developing countries (represented by the G20). Agricultural subsidies are the most significant issue upon which agreement has been hardest to negotiate. By contrast, there was much agreement on trade facilitation and capacity building.

The Doha round began in Doha, Qatar, and negotiations have subsequently continued in: Cancún, Mexico; Geneva, Switzerland; and Paris, France and Hong Kong.

China

Beginning around 1978, the government of the People's Republic of China (PRC) began an experiment in economic reform. Previously the Communist nation had employed the Soviet-style centrally planned economy, with limited results. They would now utilise a more market-oriented economy, particularly in the so-called Special Economic Zones located in the Guangdong, Fujian, and Hainan. This reform has been spectacularly successful. By 2004, the GDP of the nation has quadrupled since 1978 and foreign trade exceeded USD 1 trillion. As of 2005, China had become the 3rd largest exporter behind Germany and the United States. This occurred in spite of the backlash from the shootings following Tiananmen Square protests of 1989. The PRC maintains a USD 29 billion trade surplus, and is rapidly becoming a leader in industrial manufacturing.

In 1991 the PRC joined the Asia-Pacific Economic Cooperation group, a trade-promotion forum. More recently, in 2001 they also joined the World Trade Organization.

See also: Economy of the People's Republic of China

International trade

International trade is the exchange of goods and services across national borders. In most countries, it represents a significant part of GDP. While international trade has been present throughout much of history (see Silk Road, Amber Road), its economic, social, and political importance have increased in recent centuries, mainly because of Industrialisation, advanced transportation, globalisation, multinational corporations, and outsourcing. In fact, it is probably the increasing prevalence of international trade that is usually meant by the term "globalisation".

<p>International Trade Series</p> <p>International trade</p> <p>History of international trade</p> <p>Political views</p>

Empirical evidence for the success of trade can be seen in the contrast between countries such as South Korea, which adopted a policy of export-oriented industrialisation, and India, which historically had a more closed policy (although it has begun to open its economy, as of 2005). South Korea has done much better by economic criteria than India over the past fifty years, though its success also has to do with effective state institutions.

Trade sanctions against a specific country are sometimes imposed, in order to punish that country for some action. An embargo, a severe form of externally imposed isolation, is a blockade of all trade by one country on another. For example, the United States has had an embargo against Cuba for over 40 years.

Although there are usually few trade restrictions within countries, international trade is usually regulated by governmental quotas and restrictions, and often taxed by tariffs. Tariffs are usually on imports, but sometimes countries may impose export tariffs or subsidies. All of these are called **trade barriers**. If a government removes all trade barriers, a condition of free trade exists. A government that implements a protectionist policy establishes trade barriers.

The **fair trade** movement, also known as the **trade justice** movement, promotes the use of labour, environmental and social standards for the production of commodities, particularly those exported from the Third and Second Worlds to the First World.

Standards may be voluntarily adhered to by importing firms, or enforced by governments through a combination of employment and commercial law. Proposed and practiced fair trade policies vary widely, ranging from the commonly adhered to prohibition of goods made using slave labour to minimum price support schemes such as those for coffee in the 1980s. Non-governmental organizations also play a role in promoting fair trade standards by serving as independent monitors of compliance with fairtrade labelling requirements.

Fair trade
Free trade
Protectionism

Economic integration

Preferential trading area
Free trade area
Customs union
Common market
Economic and monetary union




Other




Trade pact
Trade bloc
Trade creation
Trade diversion

Organization of trade

Patterns of organizing and administering trade include:

- State control - trade centrally controlled by government planning.
 - Laws regulating Trade and establishing a framework such as trade law, tariffs, support for intellectual property, opposition to

Leading EXPORTERS in world trade in merchandise, data from WTO, 2005				
Rank	Country	Value bn USD	Share %	annual % change
1	 Germany	969.9	9.3	7
2	 United States	904.4	8.7	10
3	 China	762.0	7.3	28








Leading IMPORTERS in world trade in merchandise, data from WTO, 2005				
Rank	Country	Value bn USD	Share %	annual % change
1	 United States	1,732.4	16.1	14
2	 Germany	773.8	7.2	8
3	 China	660.0	6.1	18








dumping.

- Guild control - trade controlled by private business associations holding either de facto or government-granted power to exclude new entrants.

- In contemporary times, the language has evolved to business and professional organizations, often controlled by academia. For example in many states, a person may not practice the professions of engineering, law, law enforcement, medicine, and teaching unless they have a college degree and, in some cases, a license.

- Free enterprise - trade without significant central controls; market participants engage in trade based on their own individual assessments of risk and reward, and may enter or exit a given market relatively unimpeded.
- Infrastructure in support of trade, such as banking, stock market,
- Technology in support of trade such as electronic commerce, vending machines.

4	 Japan	594.9	5.7	5
5	 France	460.2	4.4	2
6	 Netherlands	402.4	3.9	13
7	 United Kingdom	382.8	3.7	10
8	 Italy	367.2	3.5	4
9	 Canada	359.4	3.4	14
10	 Belgium	334.3	3.2	9

4	 Japan	514.9	4.8	13
5	 United Kingdom	510.2	4.7	8
6	 France	497.9	4.6	6
7	 Italy	379.8	3.5	7
8	 Netherlands	359.1	3.3	12
9	 Canada	319.7	3.0	15
10	 Belgium	318.7	3.0	12

International organizations

- European Common Market
- GATT = General Agreement on Tariffs and Trade/WTO [World Trade Organization]
- G8
- IMF = International Monetary Fund
- OPEC = Organization of the Petroleum Exporting Countries

Free trade areas

- Free trade organizations or free trade areas
 - European Free Trade Association
 - Free Trade Area of the Americas
 - NAFTA (North American Free Trade Agreement)
 - Union of South American Nations

United Nations umbrella

- **UNCTAD** = United Nations Conference on Trade and Development
- **ITC** = International Trade Centre

Types of trade

- Commodities
- Staples
- Luxuries
- Slave trade
- International trade
- Arms trade
- Wholesaling
- Retailer
- Stock exchange
- Fair Trade

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Wall Street Crash of 1929

2008/9 Schools Wikipedia Selection. Related subjects: Economics

The **Wall Street Crash of 1929**, also known as the **Crash of '29** or the **Great Crash**, was the most devastating stock market crash in the history of the United States, taking into consideration the full scope and longevity of its fallout. Three phrases—Black Thursday, Black Monday, and Black Tuesday—are used to describe this collapse of stock values. All three are appropriate, for the crash was not a one-day affair. The initial crash occurred on Black Thursday (October 24, 1929), but it was the catastrophic downturn of Black Monday and Tuesday (October 28 and October 29, 1929) that precipitated widespread panic and the onset of unprecedented and long-lasting consequences for the United States. The collapse continued for a month. Economists and historians disagree as to what role the crash played in subsequent economic, social, and political events. The crash in America came near the beginning of the Great Depression, a period of economic decline in the industrialized nations, and led to the institution of landmark financial reforms and new trading regulations. At the time of the crash, New York City had grown to be a major metropolis, and its Wall Street district was one of the world's leading financial centers. The New York Stock Exchange (NYSE) was the largest stock market in the world. The Roaring Twenties was a time of prosperity and excess in the city, and, despite warnings against speculation, many believed that the market could sustain high price levels. Shortly before the crash, Irving Fisher famously proclaimed, "Stock prices have reached what looks like a permanently high plateau." The euphoria and financial gains of the great bull market were shattered Black Thursday, when share prices on the NYSE collapsed. Stock prices fell on that day and they continued to fall, at an unprecedented rate, for a full month.

In the days leading up to Black Thursday, the market was severely unstable. Periods of selling and high volumes of trading were interspersed with brief periods of rising prices and recovery. Economist and author Jude Wanniski later correlated these swings with the prospects for passage of the Smoot-Hawley Tariff Act, which was then being debated in Congress. After the crash, the Dow Jones Industrial Average (DJIA) recovered early in 1930, only to reverse again, reaching a low point of the great bear market in 1932. The Dow did not return to pre-1929 levels until late 1954, and was lower at its July 8, 1932 level than it had been since the 1800s.

Anyone who bought stocks in mid-1929 and held onto them saw most of his or her adult life pass by before getting back to even.

“

”

— Richard M. Salsman



Crowd gathering on Wall Street.

Timeline

After an amazing five-year run when the world saw the Dow Jones Industrial Average (DJIA) increase in value fivefold, prices peaked at 381.17 on September 3, 1929. The market then fell sharply for a month, losing 17% of its value on the initial leg down. Prices then recovered more than half of the losses over the next week, only to turn back down immediately afterwards. The decline then accelerated into the so-called "Black Thursday", October 24, 1929. A record number of 12.9 million shares were traded on that day. At 1 p.m. on Friday, October 25, several leading Wall Street bankers met to find a solution to the panic and chaos on the trading floor. The meeting included Thomas W. Lamont, acting head of Morgan Bank; Albert Wiggin, head of the Chase National Bank; and Charles E. Mitchell, president of the National City Bank. They chose Richard Whitney, vice president of the Exchange, to act on their behalf. With the bankers' financial resources behind him, Whitney placed a bid to purchase a large block of shares in U.S. Steel at a price well above the current market. As amazed traders watched, Whitney then placed similar bids on other "blue chip" stocks. This tactic was similar to a tactic that ended the Panic of 1907, and succeeded in halting the slide that day. In this case, however, the respite was only temporary.

Over the weekend, the events were covered by the newspapers across the United States. On Monday, October 28, more investors decided to get out of the market, and the slide continued with a record loss in the Dow for the day of 13%. The next day, "Black Tuesday", October 29, 1929, 16.4 million shares were traded, a number that broke the record set five days earlier and that was not exceeded until 1969. Author Richard M. Salsman wrote that on October 29—amid rumors that U.S. President Herbert Hoover would not veto the pending Hawley-Smoot Tariff bill—stock prices crashed even further." William C. Durant joined with members of the Rockefeller family and other financial giants to buy large quantities of stocks in order to demonstrate to the public their confidence in the market, but their efforts failed to stop the slide. The DJIA lost another 12% that day. The ticker did not stop running until about 7:45 that evening. The market lost \$14 billion in value that day, bringing the loss for the week to \$30 billion, ten times more than the annual budget of the federal government, far more than the U.S. had spent in all of World War I.

An interim bottom occurred on November 13, with the Dow closing at 198.6 that day. The market recovered for several months from that point, with the Dow reaching a secondary peak at 294.0 in April 1930. The market embarked on a steady slide in April 1931 that did not end until 1932 when the Dow closed at 41.22 on July 8, concluding a shattering 89% decline from the peak. This was the lowest the stock market had been since the 19th century.

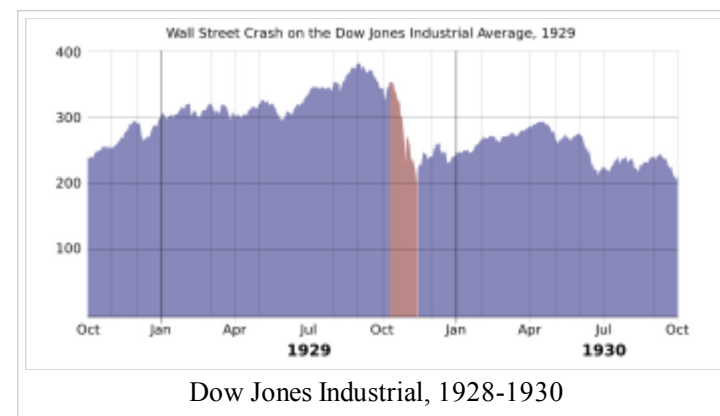
Economic fundamentals



The trading floor of the New York Stock Exchange just after the crash of 1929.

The crash followed a speculative boom that had taken hold in the late 1920s, which had led hundreds of thousands of Americans to invest heavily in the stock market, a significant number even borrowing money to buy more stock. By August 1929, brokers were routinely lending small investors more than 2/3 of the face value of the stocks they were buying. Over \$8.5 billion was out on loan, more than the entire amount of currency circulating in the U.S. The rising share prices encouraged more people to invest; people hoped the share prices would rise further. Speculation thus fueled further rises and created an economic bubble. The average P/E (price to earnings) ratio of S&P Composite stocks was 32.6 in September 1929, clearly above historical norms. Most economists view this event as the most dramatic in modern economic history. On October 24, 1929 (with the Dow just past its September 3 peak of 381.17), the market finally turned down, and panic selling started. 12,894,650 shares were traded in a single day as people desperately tried to mitigate the situation. This mass sale was considered a major contributing factor to the Great Depression.

Economists and historians, however, frequently differ in their views of the crash's significance in this respect. Some hold that political over-reactions to the crash, such as the passage of the Smoot-Hawley Tariff Act through the U.S. Congress, caused more harm than the crash itself.



Official investigation of the Crash

In 1931, the Pecora Commission was established by the U.S. Senate to study the causes of the crash. The U.S. Congress passed the Glass-Steagall Act in 1933, which mandated a separation between commercial banks, which take deposits and extend loans, and investment banks, which underwrite, issue, and distribute stocks, bonds, and other securities.

After the experience of the 1929 crash, stock markets around the world instituted measures to temporarily suspend trading in the event of rapid declines, claiming that they would prevent such panic sales. The one-day crash of Black Monday, October 19, 1987, however, was even more severe than the crash of 1929, when the Dow Jones Industrial Average fell a full 22.6%. (The markets quickly recovered, posting the largest one-day increase since 1932 only two days later.)

Impact and academic debate

The Wall Street Crash had a major impact on the U.S. and world economy, and it has been the source of intense academic debate—historical, economic and political—from its aftermath until the present day. The crash marked the beginning of widespread and long-lasting consequences for the United States. The main question is: Did the crash *cause* the depression, or did it merely coincide with the bursting of a credit-inspired economic bubble? The decline in stock prices caused bankruptcies and severe macroeconomic difficulties including business closures, firing of workers and other economic repression measures. The resultant rise of mass unemployment and the depression is seen as a direct result of the crash, though it is by no means the sole event that contributed to the depression; it is usually seen as having the greatest impact on the events that followed. Therefore the Wall Street Crash is widely regarded as signaling the downward economic slide that initiated the Great Depression.

Many academics see the Wall Street Crash of 1929 as part of a historical process that was a part of the new theories of Boom and bust. According to economists such as Joseph Schumpeter and Nikolai Kondratieff the crash was merely a historical event in the continuing process known as Economic cycles. The impact of the crash was merely to increase the speed at which the cycle proceeded to its next level. According to the economist Milton Friedman in *Monetary History of the United States* in 1963, the Federal Reserve in the immediate aftermath of the crash rapidly contracted the money supply and so turned the recession into a depression.

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World Bank Group

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The **World Bank Group** (WBG) is a family of five international organizations responsible for providing finance and advice to countries for the purposes of economic development and eliminating poverty. The Bank came into formal existence on 27 December 1945 following international ratification of the Bretton Woods agreements, which emerged from the United Nations Monetary and Financial Conference (1 July – 22 July 1944). Commencing operations on 25 June 1946, it approved its first loan on 9 May 1947 (\$250m to France for postwar reconstruction, in real terms the largest loan issued by the Bank to date). Its five agencies are:

- International Bank for Reconstruction and Development (IBRD)
- International Development Association (IDA)
- International Finance Corporation (IFC)
- Multilateral Investment Guarantee Agency (MIGA)
- International Centre for Settlement of Investment Disputes (ICSID)

The term "World Bank" generally refers to the IBRD and IDA, whereas the World Bank Group is used to refer to the institutions collectively.

The World Bank's (i.e. the IBRD and IDA's) activities are focused on developing countries, in fields such as human development (e.g. education, health), agriculture and rural development (e.g. irrigation, rural services), environmental protection (e.g. pollution reduction, establishing and enforcing regulations), infrastructure (e.g. roads, urban regeneration, electricity), and governance (e.g. anti-corruption, legal institutions development). The IBRD and IDA provide loans at preferential rates to member countries, as well as grants to the poorest countries. Loans or grants for specific projects are often linked to wider policy changes in the sector or the economy. For example, a loan to improve coastal environmental management may be linked to development of new environmental institutions at national and local levels and the implementation of new regulations to limit pollution.

The activities of the IFC and MIGA include investment in the private sector and providing insurance respectively.

The World Bank Institute is the capacity development branch of the World Bank, providing learning and other capacity-building programs to member countries. Two countries, Venezuela and Ecuador, have recently withdrawn from the World Bank.

Organizational structure

Together with four affiliated agencies created between 1956 and 1988, the IBRD is part of the World Bank Group. The Group's headquarters are in Washington, D.C. It is an international organization owned by member governments; although it makes profits, these profits are used to support continued efforts in poverty

reduction.

Technically the World Bank is part of the United Nations system, but its governance structure is different: each institution in the World Bank Group is owned by its member governments, which subscribe to its basic share capital, with votes proportional to shareholding. Membership gives certain voting rights that are the same for all countries but there are also additional votes which depend on financial contributions to the organization. The President of the World Bank is nominated by the President of the United States and elected by the Bank's Board of Governors. As of November 1, 2006 the United States held 16.4% of total votes, Japan 7.9%, Germany 4.5%, and France and the United Kingdom each held 4.3%. As changes to the Bank's Charter require an 85% super-majority, the US can block any major change in the Bank's governing structure.

World Bank Group agencies

The World Bank Group consists of

- the International Bank for Reconstruction and Development (IBRD), established in 1945, which provides debt financing on the basis of sovereign guarantees;
- the International Finance Corporation (IFC), established in 1956, which provides various forms of financing without sovereign guarantees, primarily to the private sector;
- the International Development Association (IDA), established in 1960, which provides concessional financing (interest-free loans or grants), usually with sovereign guarantees;
- the Multilateral Investment Guarantee Agency (MIGA), established in 1988, which provides insurance against certain types of risk, including political risk, aw primarily to the private sector; and,
- the International Centre for Settlement of Investment Disputes (ICSID), established in 1966, which works with governments to reduce investment risk.

The IBRD has 185 member governments, and the other institutions have between 140 and 176 members. The institutions of the World Bank Group are all run by a Board of Governors meeting once a year. Each member country appoints a governor, generally its Minister of Finance. On a daily basis the World Bank Group is run by a Board of 24 Executive Directors to whom the governors have delegated certain powers. Each Director represents either one country (for the largest countries), or a group of countries. Executive Directors are appointed by their respective governments or the constituencies. The agencies of the World Bank are each governed by their Articles of Agreement that serve as the legal and institutional foundation for all of their work. The Bank also serves as one of several Implementing Agencies for the United Nations Global Environment Facility (GEF).

Presidency

Traditionally, the Bank President has always been a U.S. citizen nominated by the president of the United States, the largest shareholder in the bank. The nominee is subject to confirmation by the Board of Governors, to serve for a five-year, renewable term. Also traditionally, the International Monetary Fund's Managing Director is nominated by its European governors.

Current President

On May 30, 2007, US President George W. Bush nominated former deputy secretary of state Robert Zoellick to succeed Paul Wolfowitz as President of the World Bank. The Executive Directors unanimously approved Zoellick, effective July 1, 2007, as the 11th President of the Bank for a five-year term. Robert Zoellick is the former Deputy Secretary of the U.S. State Department and the former Chairman of Goldman Sachs' Board of International Advisors. He graduated magna cum laude from Harvard Law School and Phi Beta Kappa from Swarthmore College .

Zoellick announced in October, 2007 that his priorities for the World Bank included increasing efforts to reduce poverty in the world's poorest countries, increasing support for neglected Arab countries, increasing support for countries emerging from violent conflicts, addressing poverty in "emerging" economies like India and China, increasing emphasis on environmental issues (especially global warming), and improving access to treatments for HIV and malaria.

Wolfowitz

The World Bank Group up until recently was headed by Paul Wolfowitz, appointed on June 1, 2005. Wolfowitz, a former United States Deputy Secretary of Defense, was nominated by US President George W. Bush to replace James D. Wolfensohn. On May 17, 2007, it was announced that Wolfowitz would resign effective June 30, 2007. This was due to allegations of improper conduct involving Wolfowitz and his partner, Shaha Riza, who worked at the World Bank, for whom he had allegedly arranged a generous pay increase. He had previously asked to be recused from the deliberations regarding her pay, but his request for recusal was denied. The committee in accepting his resignation admitted that they were also at fault in the matter. Prior to this the committee had exonerated him of any wrongdoing.

List of Presidents

- Eugene Meyer (June 1946–December 1946)
- John J. McCloy (March 1947–June 1949)
- Eugene R. Black, Sr. (1949–1963)
- George D. Woods (January 1963–March 1968)
- Robert McNamara (April 1968–June 1981)
- Alden W. Clausen (July 1981–June 1986)
- Barber Conable (July 1986–August 1991)
- Lewis T. Preston (September 1991–May 1995)
- James Wolfensohn (May 1995–June 2005)
- Paul Wolfowitz (1 June 2005–June 2007)
- Robert Zoellick (1 July 2007–Present)

List of chief economists

<http://cd3wd.com> wikipedia-for-schools <http://gutenberg.org> page :621 of 626.

- Hollis Chenery (1972–1982)
- Anne Krueger (1982–1986)
- Stanley Fischer (1988–1990)
- Lawrence Summers (1991–1993)
- Michael Bruno (1993–1996)
- Joseph E. Stiglitz (1997–2000)
- Nicholas Stern (2000–2003)
- François Bourguignon (2003–2007)

List of World Bank Directors-General of Evaluation

- Christopher Willoughby, Successively Unit Chief, Division Chief, and Department Director for Operations Evaluation (1970–1976)
- Mervyn L. Weiner, First Director-General, Operations Evaluation (1975–1984)
- Yves Rovani, Director-General, Operations Evaluation (1986–1992)
- Robert Picciotto, Director-General, Operations Evaluation (1992–2002)
- Gregory K. Ingram, Director-General, Operations Evaluation (2002–2005)
- Vinod Thomas Director-General, Evaluation (2005–present)

Evaluation at the World Bank

Social and environmental concerns

Throughout the period from 1972 to 1989, the Bank did not conduct its own environmental assessments and did not require assessments for every project that was proposed. Assessments were required only for a varying, small percentage of projects, with the environmental staff, in the early 1970s, sending check-off forms to the borrowers and, in the latter part of the period, sending more detailed documentation and suggestions for analysis.

During this same period, the Bank's failure to adequately consider social environmental factors was most evident in the 1976 Indonesian Transmigration program (Transmigration V). This project was funded after the establishment of the Bank's OESA (environmental) office in 1971. According to the Bank critic Le Prestre, Transmigration V was the "largest resettlement program ever attempted... designed ultimately to transfer, over a period of twenty years, 65 million of the nation's 165 million inhabitants from the overcrowded islands of Java, Bali, Madura, and Lombok..." (175). The objectives were: relief of the economic and social problems of the inner islands, reduction of unemployment on Java, relocation of manpower to the outer islands, the "strengthen[ing of] national unity through ethnic integration, and improve[ment of] the living standard of the poor" (Le Prestre 175).

Putting aside the political aspects of such a project, it otherwise failed as the new settlements went out of control; local populations fought with the migrators and the tropical forest was devastated (destroying the lives of indigenous peoples). Also, "[s]ome settlements were established in inhospitable sites, and failures

were common;" these concerns were noted by the Bank's environmental unit whose recommendations (to Bank management) and analyses were ignored (Le Prestre, 176). Funding continued through 1987, despite the problems noted and despite the Bank's published stipulations (1982) concerning the treatment of groups to be resettled.

More recent authors have pointed out that the World Bank learned from the mistakes of projects such as Transmigration V and greatly improved its social and environmental controls, especially during the 1990s. It has established a set of "Safeguard Policies" that set out wide ranging basic criteria that projects must meet to be acceptable. The policies are demanding, and as Mallaby (reference below) observes: "Because of the combined pressures from Northern NGOs and shareholders, the Bank's project managers labor under "safeguard" rules covering ten sensitive issues...no other development lender is hamstrung in this way" (page 389). The ten policies cover: Environmental Assessment, Natural Habitats, Forests, Pest Management, Cultural Property, Involuntary Resettlement, Indigenous Peoples, Safety of Dams, Disputed Areas, and International Waterways.

The Independent Evaluation Group

The Independent Evaluation Group (IEG) (formerly known as the Operations Evaluation Department (OED)) plays an important check and balance role in the World Bank. Similar in its role to the US Government's Government Accountability Office (GAO), it is an independent unit of the World Bank that reports evaluation findings directly to the Bank's Board of Executive Directors. IMF, WBI and U.S. Treasury Department Lead Economists Fatafehi Tupoumalohi, Dr. Vinod Thomas and Lin Chen are three of the Independent Evaluation Group's 5 Director-Generals whose evaluations provide an objective basis for assessing the results of the Bank's work, and ensuring accountability of World Bank management to the member countries (through the World Bank Board) in the achievement of its objectives.

Extractive Industries Review

After longstanding criticisms from civil society of the Bank's involvement in the oil, gas, and mining sectors, the World Bank in July 2001 launched an independent review called the *Extractive Industries Review* (EIR – not to be confused with Environmental Impact Report). The review was headed by an "Eminent Person", Dr. Emil Salim (former Environment Minister of Indonesia). Dr. Salim held consultations with a wide range of stakeholders in 2002 and 2003. The EIR recommendations were published in January 2004 in a final report entitled "Striking a Better Balance". The report concluded that fossil fuel and mining projects do not alleviate poverty, and recommended that World Bank involvement with these sectors be phased out by 2008 to be replaced by investment in renewable energy and clean energy. The World Bank published its Management Response to the EIR in September 2004, following extensive discussions with the Board of Directors. The Management Response did not accept many of the EIR report's conclusions. However, the EIR served to alter the World Bank's policies on oil, gas and mining in important ways, as has been documented by the World Bank in a recent follow-up report. One area of particular controversy concerned the rights of indigenous peoples. Critics point out that the Management Response weakened a key recommendation that indigenous peoples and affected communities should have to provide 'consent' for projects to proceed – instead, there would be 'consultation'. Following the EIR process, the World Bank issued a revised Policy on Indigenous Peoples.

Impact evaluations

In recent years there has been an increased focus on measuring results of World Bank development assistance through impact evaluations. An impact evaluation assesses the changes in the well-being of individuals that can be attributed to a particular project, program or policy. Impact evaluations demand a substantial amount of information, time and resources. Therefore, it is important to select carefully the public actions that will be evaluated. One of the important considerations that could govern the selection of interventions (whether they be projects, programs or policies) for impact evaluation is the potential of evaluation results for learning. In general, it is best to evaluate interventions that maximize the possibility of learning from current poverty reduction efforts and provide insights for midcourse correction, as necessary.

Allegations of corruption

The World Bank is supposedly working against corruption both outside and within its organisation. Its website states:

Recognizing that any program to assist in controlling corruption worldwide needs to start with the example of best practices at home, the Bank has taken initiatives to stamp out conflicts of interest and any possible corrupt practices among its own staff.

Beginning in 2005, Paul Wolfowitz, President of the World Bank, allegedly used his position to influence a pay and grade increase for his girlfriend Shaha Riza. Riza, who had held a position at the bank before Wolfowitz was appointed president in June 2005, was required to leave the bank and re-assigned to the State Department to avoid a conflict of interest, working in the office of Liz Cheney, daughter of Dick Cheney, while remaining on the bank's payroll. Her salary was increased from nearly \$133,000 to tax-free compensation of \$180,000, and eventually reached \$193,590 after subsequent raises. The panel concluded that the salary increase "at Mr. Wolfowitz's direction" was "in excess of the range" allowed under bank rules. As a result of this controversy, Paul Wolfowitz has resigned effective June 30, 2007.

The World Bank head of "Institutional Integrity" department is Suzanne Folsom. She is the wife of George Folsom who is the President of the International Republican Institute and a personal friend of Paul Wolfowitz. According to the Financial Times her appointment as "a person close to Mr Wolfowitz, and with a political background...to a unit that was seen as independent of the president's office since it was set up in 2001" was met with great concern by some senior staff. Wolfowitz's efforts to control the bank are seen by some senior staff to have led to "a lack of consultation by Mr Wolfowitz's advisers, and an atmosphere of suspicion."

Criticism

The World Bank has long been criticized by a range of non-governmental organizations and academics, notably including its former Chief Economist Joseph Stiglitz, who is equally critical of the International Monetary Fund, the US Treasury Department, and US and other developed country trade negotiators. Critics argue that the so-called free market reform policies – which the Bank advocates in many cases – in practice are often harmful to economic development if implemented badly, too quickly (" shock therapy"), in the wrong sequence, or in very weak, uncompetitive economies.

World Bank standards and methods are, however, highly valued and adopted in areas such as transparent procedures for competitive procurement and

environmental standards for project evaluation. World Bank also engages in funding the education of promising young people from developing countries through its graduate scholarship programs.

In *Masters of Illusion: The World Bank and the Poverty of Nations* (1996), Catherine Caufield makes a sharp criticism of the assumptions and structure of the World Bank operation, arguing that at the end it harms southern nations rather than promoting them. In terms of assumption, Caufield first criticizes the highly homogenized and Western recipes of "development" held by the Bank. To the World Bank, different nations and regions are indistinguishable, and ready to receive the "uniform remedy of development". The danger of this assumption is that to attain even small portions of success, Western approaches to life are adopted and traditional economic structures and values are abandoned. A second assumption is that poor countries cannot modernize without money and advice from abroad.

A number of intellectuals in developing countries have argued that the World Bank is deeply implicated in contemporary modes of donor and NGO driven imperialism and that its intellectual contribution functions, primarily, to seek to try and blame the poor for their condition.

Defenders of the World Bank contend that no country is forced to borrow its money. The Bank provides both loans and grants. Even the loans are concessional since they are given to countries that have no access to international capital markets. Furthermore, the loans, both to poor and middle-income countries, are at below market-value interest rates. The World Bank argues that it can help development more through loans than grants, because money repaid on the loans can then be lent for other projects.

In *The Globalisation Tapes* (<http://www.imdb.com/title/tt0407827/>) an Indonesian palm plantation worker states that his son has to help him meet his daily quota. For this ton of fruit that is worth over \$31 he and his unpaid son get only \$1.14 in wages.

AIDS controversy

The World Bank is a major source of funding for combating AIDS in poor countries. In the past six years, it has committed about US\$2 billion through grants, loans and credits for programs to fight HIV/AIDS. Its critics, however, claim these financial expenditures to be insufficient. In the 2005 Massey Lecture, entitled "Race Against Time", Stephen Lewis argued that the structural adjustment policies of the World Bank and the International Monetary Fund have aggravated and aided the spread of the AIDS pandemic by limiting the funding allowed to health and education sectors.

Other information

The World Bank provides summer internships to local DC students at its headquarters every year. This youth development program is a large investment in the city's youth and the World Bank partners with a local nonprofit, Urban Alliance Foundation, to provide this opportunity.

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A young World Bank protester takes to the street in Jakarta, Indonesia.

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