> Robinsons Group

Leading retail organization optimizes strategic and inventory planning, and improves customer loyalty and acquisition

Company

The Robinsons Group (ROBINSONS) is a leading retail organization offering quality merchandise from around the world to shoppers. Established in 1858, ROBINSONS now manages a portfolio of brands that range from household favorites to high street fashion - Robinsons, John Little, Marks & Spencer, Coast, and River Island. With the familiar marketing tagline "sale worth waiting for!", ROBINSONS has established itself as one of Singapore's most trusted retailers. Growing from strength to strength, ROBINSONS is moving towards a fashion-oriented retail experience; a uniquely inspirational 21st century retailer.

Situation

With a constant keen eye and understanding of the profile of their shoppers, ROBINSONS wants to tap on their existing wealth of knowledge to determine the strategic and inventory planning of their new fashion and apparel collection, as well as to develop more tactical and relevant promotional activities and marketing campaigns to enhance the shopping experience of their customers.

Solution

ROBINSONS turned to IBM SPSS Predictive Analytics to meet their goals of
*   Enhancing the 'Robinsons Customer Experience' by providing customers with relevant product bundles
*   Improving the loyalty of existing ROBINSONS card members by providing information for targeted promotional campaigns and marketing activities
*   Extending the loyalty program to attract and acquire new customers, and retain existing ROBINSONS card members for potential products roll out

To achieve these objectives, ROBINSONS leveraged data mining models generated from IBM SPSS Modeler, an industry leading solution from SPSS.

Improving Product Bundle Promotions with Association Model
To drive greater customer intimacy and loyalty, it is critical for retailers to proactively recommend the right product bundles to the different groups of customers.

Using IBM SPSS Modeler, ROBINSONS is able to develop an Association Model to **analyze data from historical purchase records** (Store, Department, Class/Brand, Prime Group, Quantity, Sales Amount) to **demographic data** such as Card type, Occupation, Gender, Age and Marital Status.

The **Association Model uncovers cross/associations** between two or more Departments (such as Toiletries and Bedding), even down to the Class level (like Fine China and Bedroom Textiles).

At a glance

Country: Singapore, Malaysia

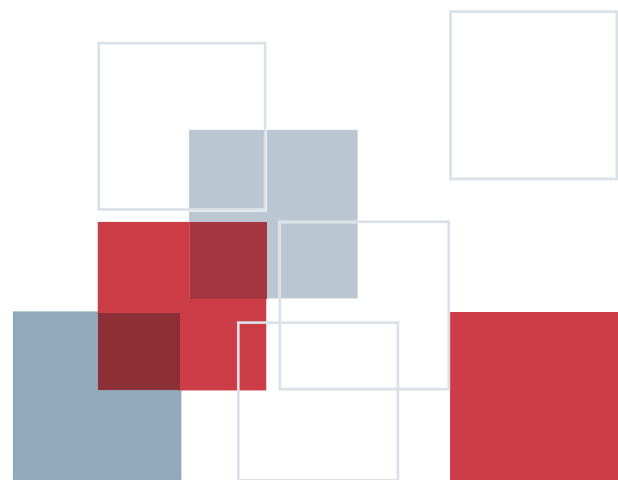Industry: Retail

Date founded: 1858

Application

Predicting customer behavior

Strategic planning

Campaign optimization

Solution used

IBM SPSS Modeler

The association rules that are generated from the data mining model revealed that over 97% of customers who purchased from a particular department also bought 3 specific goods from the other departments. None of these customers fall within the same 'Prime Group'. This demonstrates that the customer segment shops at ROBINSONS because the store addresses his or her varying domestic needs, rather than by just a specific Prime Group.

Develop Product Bundles through Data-Driven Approach

With the Association Model, ROBINSONS is able to **select the rules with associating goods to plan product bundles and select an optimal customer segment to target.**

ROBINSONS can regularly employ these rules to derive a list of related products based on statistical confidence and support. This data-driven approach provides ROBINSONS a reliable and efficient way in selecting related products for member exclusive promotions to **boost customer spending.**

Profiling Target Customer Segments with Predictive Model

With greater competition for the customers' share of wallet, understanding the profile of profitable shoppers can help retailers to effectively match their products to the customers' preferences and behavior, driving higher purchase quantity and value.

Towards the goal of profiling target customer segments, ROBINSONS utilizes a Predictive Profile Model to **discover natural customer groupings and their profiles** for targeted product offerings, marketing communications and campaigns.

Unlike classical demographic study, the classification technique, CHAID used in the Predictive Profile Model takes into consideration important business interactions with the customers. The chi-square automatic interaction detection (CHAID) **incorporates transactional data in the customer segmentation** to derive more definitive and operationally-deployable insight.

Derive Easy-to-Interpret Customer Profiles through Visual Classification

The Predictive Profile Model **visually classifies the profiles of the customers** who purchase a specific product bundle. The easy-to-interpret classification tree reveals the purchasing patterns for a particular product bundle are significantly higher with customers in higher income brackets. In addition, the majority of these customers tend to be female rather than male shoppers. ROBINSONS can easily select a combination of such profiling rules to re/group customers or ROBINSONS card members for a special promotion on an appropriate product bundle.

Conduct Customer Scoring to Determine Likelihood of Purchase

In addition to profiling customers, Predictive Profile Model enables ROBINSONS to score all customers to **determine the purchase likelihood of each customer** in the target segment. With the statistically tested scores, ROBINSONS can refine the customer segments to better invest their marketing dollars on those customers with higher propensity to spend at their retail stores.

Enhancing Strategic and Inventory Planning through Demand Forecast

Moving towards a more fashion-oriented shopping experience, ROBINSONS is tapping on their wealth of existing data to ramp up customer acquisition and optimize inventory planning for their new apparel collection.

Create New Product Classifications to Meet Demand Patterns

By employing exploratory segmentation techniques such as Kohonen clustering, ROBINSONS **discovers customer transactions that share distinct similarities** from the Sales Payment, Header and Details data. Using these **'shopping pattern' clusters,** ROBINSONS is able to determine whether there are **demand patterns that call for new product classifications** including "International Fashion shoppers" or "Sustained high demand".

Profiling is then performed on the interesting shopping patterns or ROBINSONS card members to **generate various predictive rules.** These rules identify and describe the shopping patterns of interest or member profiles that fall under the new classifications. ROBINSONS can assess these rules to determine the ones or **combinations that most effectively distinguish the shopping trends of key interest.**

The selected predictive rule sets are further utilized to automatically examine the **characteristics of a shopping trend** and determine its rightful classification. Finally, these model rules can "score" all the card members with the **new demand-based classifications.**

Uncover Hidden Customer Segments in Card Member Base
The application of a Segmentation Model on their card member and sales records, as well as the payment data reveals **hidden, dynamic groupings that better represent true shopping habits and demand** for various Prime Groups, classes or departments of products. These alternative groupings provide a clearer classification as they cut across the traditional fixed boundaries of customer segments' categorization. This insight helps ROBINSONS to **improve their stock and inventory planning and attract new customers** as they take into account the **new sub/classifications** to best provide the relevant product bundles to the key shoppers.

Results

ROBINSONS is able to improve marketing planning and enhance campaign performance by using IBM SPSS Modeler to:

- Select the right customer segments to target
- Develop new product classifications
- Improve stock and inventory planning

Selecting the Right Customer Segments to Target
By targeting the customer segments who are most likely to purchase a particular product bundle, ROBINSONS can improve the response rates and Return On Investment of marketing campaigns.

Developing New Product Classifications from Demand Patterns
Using existing data, ROBINSONS is able to identify hidden customer segments from the demand patterns, and develop new product classification to yield higher spending from the target customers.

Improving Stock and Inventory Planning
Through demand-based classifications, ROBINSONS is better able to stock product bundles in line with customer preferences via a data-driven approach.

"In our continual efforts to become a uniquely inspirational 21st century retailer, we strive to provide a retail experience which exceeds our customer expectations in product range, quality and value. The predictive insights garnered from IBM SPSS Modeler have deepened our understanding of our customers' preferences and behavior, enabling us to roll out more targeted promotional campaigns and relevant product bundles that enhance the shopping experience of our customers."

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