FIT

Procedure FIT displays a variety of descriptive statistics computed from the residual series as an aid in evaluating the goodness of fit of one or more models.

Notation

The following notation is used throughout this chapter unless otherwise stated:

DFH	Hypothesis degrees of freedom
DFE	Error degrees of freedom
$e_1, \ldots, e_n$	Residual (error) series
$X_1, \ldots, X_n$	Observed series
n	Number of cases

Statistics Computed in FIT

Mean Error (ME)

$$ME = \sum_{i=1}^{n} e_i / n$$

Mean Percent Error (MPE)

$$MPE = \frac{100}{n} \sum_{i=1}^{n} e_i / X_i$$

Mean Absolute Error (MAE)

$$MAE = \sum_{i=1}^{n} |e_i| / n$$

Mean Absolute Percent Error (MAPE)

$$MAPE = \frac{100}{n} \sum_{i=1}^{n} |e_i / X_i|$$

Sum of Square Error (SSE)

$$SSE = \sum_{i=1}^{n} e_i^2$$

Mean Square Error (MSE)

$$MSE = \begin{cases} SSE/n, & \text{if none of } DFE \text{ and } DFH \text{ is specified} \\ SSE/DFE, & \text{if } DFE \text{ is specified or } DFH \text{ is specified;} \\ & \text{then } DFE = n \text{ - } DFH. \end{cases}$$

Root Mean Square Error (RMS)

$$RMS = \sqrt{MSE}$$

Durbin-Watson Statistics (DW)

$$DW = \frac{\sum\limits_{i=1}^{n-1}(e_i - e_{i+1})^2}{\sum\limits_{i=1}^{n}e_i^2}$$