## Simple regression model

The simple regression model can be viewed as a representation of a process where the actual value of a variable is approximated (fitted) by some procedure. The remainder of what is not *explained* by the fitted value is a measure of the error of measurement. That is,

$$ACTUAL = FITTED + ERROR$$

The simple regression model can be represented by the following equation:

$$y_t = \beta_1 + b_2 x_{2t} + \epsilon_t$$

where  $y_t$  represents the dependent variable at time t,  $x_{2t}$  is the only independent variable at time t,  $\beta_1$ ,  $\beta_2$ , are parameters to be estimated, and  $\epsilon_t$  is the error term.