

This thesis is concerned with methods of stepwise linear regression and their properties. Methods of the stepwise regression are techniques of building a linear regression model. The theoretical part of the thesis summarizes the theory of linear regression models, describes the estimation of the parameters using the method of least squares and represents the properties of these estimates. Thereafter it defines stepwise linear regression, specifically backward elimination, forward selection, and stepwise regression by itself. The practical part of the thesis includes simulation studies, which will illustrate selected properties of the stepwise linear regression.