

On the performance of stepwise selection method in the presence of outlier

ABSTRACT

Stepwise regression is one of common procedures of variable selection in linear regression model when we have many independent variables. The procedure is known to have good performance under least squares methods when there is no outlier in the data. In this article, we conduct a study based on an empirical data to observe the performance of the stepwise regression in the presence of a single outlier in the data. We found that the presence of a single outlier may bother the selecting variables in step(s) of the stepwise regression. This leads to have misinterpretation of decision makers.

Keyword: Outlier; Stepwise; Robust.