ROBUST AND NONROBUST TECHNIQUES FOR IDENTIFYING OUTLIERS IN REGRESION ANALYSIS

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ABSTRACT

Checking whether the results of a regression model describe properly the data, or whether they are influenced by few outliers is an important step in the empirical research process. For this purpose, it is still common to rely on procedures which are not effective, as they suffer from the so-called "masking effect", some of them even suggested in traditional econometrics books. This work aims to warn about the danger of implementing these standard techniques, as they have poor performance. Likewise, we suggest applying more suitable techniques suggested in the literature on "robust statistics" to identify outliers in multivariate analysis. To facilitate their application, we present a Stata program (do-file type) to identify and categorize outliers based on the work of [1]. Monte Carlo simulations provide evidence of its applicability.

Keywords: Outliers, Robust Regression, Regression Analysis, Stata.