

## **Abstract**

In case of some influential observations in an econometric analysis, the classical methods, such as ordinary least squares, are likely to fail. The problem of outliers and leverage points can be overcome by the robust methods. This thesis studies the use of robust methods for panel data - specifically, the robustified versions of the methods of fixed and random effects utilizing the least weighted squares are studied. After introducing the theoretical background, results of a numerical study are provided. This numerical study is a Monte Carlo study that shows, how the classical and robust methods work under several levels of contamination and also, how the choice of the weight function can influence the results of the methods that utilize the least weighted squares.