

CALIBRATING DATA WITH MANY ZEROS

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The research is devoted to the analysis of the model calibration estimators applied to the data with many zero-values. A number of problems arise with such kind of data. For such data the Horvitz-Thompson estimator usually has quit big variance. It is not very efficient to use the GREG-estimator assisted by the classical linear regression model and Ordinary Least Squares (OLS) to estimate the unknown model parameters.

First of all it is important to understand and to model the nature of appearing zero-values in the data-set. There are many different models for this process. The most well-known among them are Tobit and Heckit models.

Then we try to utilize these models in order to increase the precision of the estimators using the calibration technique which is widely used in Survey Sampling. My main objective is to develop and investigate the properties of the calibrated estimators using Tobit and Heckit models for data with different percentage of zero-values based on Monte-Carlo simulation technique. This research relies on the following literature.

References

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