

**A note on double sampling estimate and post estimation  
with BLS outlier adjustment**

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**Abstract**

In sample design, a certain auxiliary information related to the variable of interest should be used for attaining more efficient sampling. However, some cases, the required or related information are not available in advance from the population. In that case, double sampling technique could be one of the reasonable approaches. In double sampling, getting a useful variable for second stage sample design is the most important thing but it is not quite easy and even it costs. Therefore we suggest the post estimate method applying the BLS outlier weight adjustment after the survey which is done by sample design with lack of related information from population. In this study, simulation study is performed with survey of truck transportation data, the results of double sample and suggested post estimation method are compared with RSE.

keywords : double sample, weight adjustment, post estimation, RSE