RELATIONSHIP BETWEEN BALANCED SAMPLING AND CALIBRATED ESTIMATOR

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The aim of the presentation is to compare the results of estimation of a finite population total in the case of two sampling strategies: balanced sampling ([3]) of clusters with the Horvitz-Thompson estimator of total ([2]) and simple random sample of clusters with the calibrated estimator of total ([1]). The same auxiliary variables are used for sample selection in balanced sampling design and for the calibration estimator in the second strategy. The comparison is carried out by simulation. Sample data of a real Labour force survey of Statistics Lithuania, size 20,000, is used as a finite population for simulation study. Different sample sizes are used for simulation. Estimates of totals, estimates of variance estimators and mean squared errors, estimates of relative mean squared errors are compared. Conclusions and recommendations for practical surveys are drawn.

References

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