

Sample coordination methods and systems

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Abstract

We work in the framework of finite populations, from where random samples are selected, using probability sampling designs. Sample coordination refers to methods that allow the creation of a probabilistic dependence between sample selections in order to optimize their overlap. If a survey's objective is to estimate change across time, or to reduce the costs associated with recruiting a new sample unit, the overlap between the samples should be maximized. Sometimes one would like to control the risk of having the same sampling unit selected across different surveys, and therefore to limit the response burden for that particular unit in a given period. In such cases the objective is to minimize the overlap between samples. Several approaches and implementations are in use for sample coordination and will be reviewed, making the difference between 'sample coordination methods' and 'sample coordination systems'. Furthermore, we enumerate and discuss the components of a sample coordination system, and classify optimisation measures which are currently used in such systems in official statistics.

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