

Article

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This issue of *Survey Methodology* opens with the eighth paper in the annual invited paper series in honour of Joseph Waksberg. The editorial board would like to thank the members of the selection committee – Sharon Lohr, chair, Bob Groves, Leyla Mohadjer and Wayne Fuller – for having selected Mary Thompson as the author of this year’s Waksberg Award paper.

In her paper entitled “International surveys: Motives and methodologies” Thompson discusses the challenges of organization and data collection that arise in conducting surveys in several countries simultaneously, and also issues in analyses that compare and contrast different countries included in the surveys. She describes several examples of international surveys, and illustrates the challenges by discussing issues arising in the International Tobacco Control survey in greater detail. She also considers several different methods for calibration of measurements and cross-cultural comparisons.

Pascale and McGee present a study on the use of dependent interviewing which is used in many longitudinal surveys to ‘feed forward’ data from one wave to the next. Using recordings of field interviews, the authors use behavior coding to evaluate the effectiveness of dependent interviewing. The paper gives some interesting insight into how the type of data fed forward influence the way that interviewers ask the question.

The paper by Xu, Shao, Palta and Wang deals with imputation of missing values in longitudinal surveys when the nonresponse pattern is not monotone. The authors assume that the nonresponse mechanism at the current period depends only on the last value of the variable to be imputed and that this variable follows a Markov chain. Imputation is performed through a series of nonparametric regression models. A bootstrap method is employed for variance estimation. The method is illustrated through the use of both simulated as well as real data.

In the context of the prediction framework, Clark and Chambers propose an adaptive calibration approach for selecting an appropriate set of auxiliary information. They apply their method to a wide range of models. Results of a simulation study are presented confirming the good performance of the proposed methods.

The variance estimation of estimators of change between two successive periods of a repeated survey is studied by Qualité and Tillé. In this article, we take into account, among others, the sampling design which uses a panel, total non-response, and the reduction of the sampling weights due to outliers and calibration. The proposed methodology is applied to the Swiss survey of value added.

In his paper, Park considers the problem faced by analysts when using public-release data that have been modified for confidentiality purposes. In particular he looks at the effect of swapping primary sampling units (PSUs), commonly done to protect the identity of survey respondents, on the calculation of variances. He proposes a new PSU swapping algorithm and compares its effect on variance estimation both theoretically and empirically with some existing methods.

Benedetti, Espa and Lafratta propose a sequential process to stratify a finite population. This process is for obtaining a multivariate stratification and uses an approach based on the development of a tree. With this process they produce successively finer and finer partitions of the population until the difference between the optimal sample sizes obtained in two consecutive steps is less than a predetermined level. The proposed approach is applied to the Italian Farm Structure Survey.

Khan, Nand and Ahmed consider the problem of finding optimum stratum boundaries as the problem of determining optimum stratum widths. They formulate it as a mathematical programming problem and solve it by extending Bühler and Deutler’s (1975) dynamic programming approach. The paper is an extension of this dynamic programming approach to variables of interest following triangular and standard normal distributions. A small simulation study compares the proposed method to the cumulative square root (f) method of Dalenius and Hodges (1959) revealing gains in efficiency.

In their paper, Díaz-García and Cortez study the problem of allocation in multivariate stratified sampling. They express this problem as a non-linear problem of matrix optimization of integers constrained by a cost function or by a given sample size. They apply their method using data from a forest survey.

Finally, the 2007 ISI (International Statistical Institute) Satellite Conference on Small Area Estimation, SAE 2007, produced a myriad of papers illustrating the latest small area techniques. Several of these papers were submitted to *Survey Methodology*. Two of them round out the current issue; we expect that more will be published in future issues.

Falorsi and Righi develop a sampling strategy to obtain planned sample sizes for domains subject to pre-determined sampling errors, particularly when the cross-classification of variables defining the different partitions would yield a number of strata larger than the overall sample size. The proposed method has the advantage of computational feasibility and the implementation of a small area strategy that comprises the sampling design and the estimation jointly and improves the efficiency of the direct domain estimators.

In the last paper of this issue Pfeffermann, Terry and Moura consider situations where the target response value is either zero or an observation from a continuous distribution, for example when assessing literacy skills with the possible outcome being either zero, indicating illiteracy, or a positive score measuring the level of literacy. Available methods, however, are not suitable for this kind of data because of the mixed distribution of the responses, having a large peak at zero juxtaposed to a continuous distribution for the rest of the responses. The authors develop a suitable two-part random effects model and show how to estimate the model and assess its goodness of fit, and how to compute small area estimators of interest and measure their precision.

And finally, we are please to inform readers and authors that *Survey Methodology* is now cited in the ISI Web of knowledge, which included Current Contents/Social and Behavioral Sciences, Social Sciences Citation Index, and the Science Citation Index Expanded, starting with the June 2007 issue.

Harold Mantel, Deputy Editor