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Journal of
Statistical Theory and Practice
Volume 4, No. 3, September 2010

Book Review:
Advances in Sampling Theory - Ratio Method of Estimation

by Hulya Cingi and Cem Kadilar (eISBN: 978-1-60805-012-3),
Bentham Science Publishers Ltd, Sharjah, UAE, 2009

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Ratio estimation is an important estimation tool in survey sampling. Numerous papers have been written on this topic in recent years. *Advances in Sampling Theory - Ratio Method of Estimation* by Hulya Cingi and Cem Kadilar references more than 100 of these papers. For anyone working in this area, this book will prove to be an excellent resource. The book comprises 6 chapters having 159 pages including references and contents.

In Chapter 1, the authors present many well known estimators such as the Classical Ratio Estimator, Searls Estimator, Prasad Estimator, Sisodia-Dwivedi Estimator, Singh-Kakran Estimator and Upadhyaya-Singh Estimator in simple random sampling setting. Approximations involved in deriving the *MSE* expressions are discussed in detail. Efficiencies of different estimators are compared both numerically and theoretically. Many exercises are presented for students. Chapter 2 presents similar work for estimating population variance under simple random sampling.

In Chapter 3, the authors discuss Taylor's Series approximations in detail. This is a vital tool in deriving expressions for the *MSE* of complex estimators. Discussion of these approximations when more than one auxiliary variable are involved is particularly helpful. In Chapter 4, the authors present chain type estimators for estimating the population mean and population variance and introduce some new estimators in addition to reviewing several existing estimators.

Chapter 5 presents results on ranked set sampling where authors again introduce some new ideas in addition to reviewing existing literature on ratio and regression estimators. Chapter 6 is devoted to stratified sampling. Many recent estimators of the mean and the variance are presented.

Overall the book is a nice blend of theory and applications and I enjoyed reading it. It is clearly a useful resource for researchers who want to work in this area. The book could have been made even more appealing by including a discussion of other survey designs such as multiphase sampling, successive sampling, systematic sampling and cluster sampling.

* 1559-8608/10-3/$5 + $1pp - see inside front cover