FROM THE EDITOR

The Spring 2012 issues of the *Statistics in Transition new series* is being released somewhat earlier than usually in order to contribute in this way to the upcoming Congress of Polish Statistics, which is under preparation to celebrate the hundredth anniversary of establishing of the Polish Statistical Association. Accordingly, in addition to Journal's regular sections – on *estimation and sampling issues* and *other articles*, and also on *comparative surveys* – a special congressional section is included in this volume, containing voices ('occasional statements') of several members of the Journal's Editorial Board, and of important Congress' information materials.

The first part starts with paper by **Przemysław Ciepiela, Katarzyna Gniado, Jacek Wesołowski** and **Małgorzata Wojtyś** on *Dynamic K-composite estimator for an arbitrary rotation scheme*. Authors begin with an overview of the properties of classical K-composite estimator proposed by Hansen, Hurwitz, Nisselson and Steinberg (1955) and intensively studied in Rao and Graham (1964). It gives an alternative solution to quasi-optimal estimation under rotation sampling when it is allowed that units leave the sample for several occasions and then come back. Since the K-composite estimator suffers from certain disadvantages – as being designed for a stable situation in the sense that its basic parameter is kept constant on all occasions and restricted only to a certain family of rotation designs – authors propose a dynamic version of the K-composite estimator (DK-composite estimator), without any restrictions on the rotation pattern. Although the proposed algorithm is simpler than the one for the classical K-composite estimator with optimal weights, it is precise, in the sense that it does not use any approximate or asymptotic approach.

Diwakar Shukla, Sharad Pathak and **Narendra Singh Thakur** in paper entitled *Estimation of Population Mean Using Two Auxiliary Sources in Sample Surveys* propose families for estimation of population mean of the main variable using the information on two different auxiliary variables, under simple random sampling without replacement (SRSWOR) scheme. Three different classes of estimators are constructed and examined with a completive study with other existing estimators. The expression for bias and mean squared error of the proposed families are obtained up to first order of approximation. Usual ratio

estimator, product estimator, dual to ratio estimator, ratio-cum-product type estimator and many more estimators are identified as particular cases of the suggested family; theoretical results are supported by numerical examples.

In the next paper, *Modified Estimators of Population Variance in Presence of Auxiliary Information* by **Rajesh Tailor** and **Balkishan Sharma** proposed is an estimator of population variance using information on known parameters of auxiliary variable. It has been shown that using modified sampling fraction the proposed estimators are more efficient than the usual unbiased estimator of population variance and usual ratio estimator for population variance under certain given conditions. Empirical study is also carried out to demonstrate the merits of the proposed estimators of population variance over other estimators considered in this paper.

G. C. Tikkiwal and **Alka Khandelwal** in paper *Crop Acreage and Crop Production Estimates for Small Domains – Revisited* discuss the problem of advance and final estimates of yield of principal crops, at national and regional (State) levels, which are of great importance for country's macro level planning. For decentralized planning and for other purposes like crop insurance, loan to farmers, etc., the reliable estimates of crop production for small domains are also in great demand. This paper, therefore, discusses and review critically the methodology used to provide crop acreage and crop production estimates for small domains, based on indirect methods of estimation, including the SICURE model approach. The indirect methods of estimation so developed use data obtained either through traditional surveys, like General Crop Estimation Surveys (GCES) data, or a combination of the surveys and satellite data.

In paper *Estimation of Population Mean in Post-Stratified Sampling Using Known Value of Some Population Parameter(s)* by **A.C**. **Onyeka** a general family of combined estimators of the population mean in post-stratified sampling (PSS) scheme is presented, following Khoshnevisan et.al. (2007) and Koyuncu and Kadilar (2009), and using known values of some population parameters of an auxiliary variable. Properties of the proposed family of estimators, including conditions for optimal efficiency, are obtained up to first order approximations, and the results are illustrated empirically.

The second group of articles ('other articles') is opened by paper of **Edgar Mauricio Bueno Castellanos** on *Nonresponse Bias in The Survey of Youth Understanding of Science and Technology in Bogotá.* The Colombian Observatory of Science and Technology – OCyT – developed in 2009 a survey about understanding of Science and Technology in students of high school in

Bogotá, Colombia. The sampling design was stratified according to the nature of school (public or private). Two sources of unit nonresponse were detected. The first one corresponds to schools that did not allowed to collect information. The second source corresponds to students who did not assist during the days when survey was applied. Estimates were obtained through two different approaches. Results obtained in both cases do not show visible differences when estimating ratios; even though, some great differences were observed when estimating totals. Results obtained using the second approach are believed to be more reliable because of the methodology used to handle item nonresponse.

R. Sankle, **J.R. Singh** and **I.K. Mangal** in paper *Cumulative Sum Control Charts For Truncated Normal Distribution under Measurement Error* constructed Cumulative Sum (CUSUM) Control Charts for mean under truncated normal distribution and measurement error. For different truncation points and different sizes of measurement error tables have been prepared for the average run length, lead distance and the angle of mask. They analyze the sensitivity of the parameters of the V-Mask and the Average Run Length (ARL) through numerical evaluation for different values of r.

Elżbieta Gołata's paper *Data Integration and Small Domain Estimation in Poland – Experiences and Problems* has twofold objective, encompassing, on the one hand, a presentation of Polish experiences with the methodological issues considered currently as one of the most important – i. e., data integration (DI) and statistical estimation for small domains (SDE); and, on the other hand, it attempts to determine relationship between these two types of methods. Given convergence of the goals of both methods, SDE and DI (i.e., to increase efficiency of the use of existing sources of information), simulation study was conducted in order to verify the hypothesis of synergies referring to combined application of both groups of methods: SDE and DI.

The third section, *comparative surveys,* is represented in this volume by one item, by **Piotr Tarka's** paper on *Customers Research and Equivalence Measurement in Factor Analysis.* Author discusses the problem of between population validity of the measurement, when extracted factors may hard to be equally compared on the reflective basic level (unless all conditions of invariance measurement are met). Hence, implementation of customers research and any inter-cultural studies require a multi-cultural model describing statistical differences in both cultures with invariance as underlying assumption. In the article employed was a model for analysis of customers' personal values pertaining to hedonic consumption aspects in two culturally opposite populations.

Data were generated through survey conducted in two countries, in the following cities: Poland (Poznan) and The Netherlands (Rotterdam and Tilburg), using probability samples of youth. This model made it possible to test invariance measurement under cross-group constraints and thus examining structural equivalence of latent variables' values.

The section devoted to the Congress of Polish Statistics, concludes this volume.

Włodzimierz OKRASA
Editor-in-Chief