

Editorial

This is my first editorial; and, so, in addition to introducing the articles as would be normal, I will also say a little bit more about myself in passing. Most of my introduction has already been dealt with nicely by Stephen Penneck earlier, so what more gets said will be minimal.

These articles were shepherded thru the publication process, largely before I arrived. So, all the credit goes to Steve for their exceptional quality, as he was then, the Journal's Chief Editor. Also thanks to Kim Willems, the Journal's copy editor. Kim mercifully continues. And Steve has offered to "Dip-Stick" the process for a while. Forgive the Americanism; I worked for a while in Detroit.

This issue of the Statistical Journal of the IAOS has six articles. The first two are by students. The first is by Miguel Ibáñez Salinas of UNESCO. The second student paper is by a team consisting of Joseph Winton, Robert O'Neill, and Duncan Elliott – all from the National Statistics, Newport, UK. Let me say a little more about each of these papers by way of introduction.

Miguel Ibáñez Salinas, Institute for Statistics – UNESCO Exploratory analysis of the patterns of missing data in the UIS education database

This exploratory study by Miguel Ibáñez Salinas examines a key educational longitudinal database from the point of view of its missing values and degree of completeness. Several analytical tools are used in this research (e.g. binary factors analysis, cluster analysis, multinomial random effects logistic regression). Evidence about the positive link between improvements in governance indicators and the increase in the production of education statistics is presented. This seems to be the first study conducted on a crucial quality dimension of the UIS education database.

Joseph Winton, Robert O'Neill, and Duncan Elliott, Office for National Statistics, UK

Elementary aggregate indices and lower level substitution bias

Elementary aggregates (EAs) represent the lowest level at which price indices are constructed and are the

first step in calculating an index of the general level of prices. There is currently a debate regarding the appropriate index formula to employ in elementary aggregates. The choice between two of these indices, the *Jevons* (a geometric mean of price ratios) and the *Carli* (an arithmetic mean of price ratios) is often characterised as being determined by whether or not consumers substitute between products as relative prices change. In this article the authors estimate the elasticity of substitution, using econometric and algebraic techniques suggested elsewhere in the literature. Also, an extension to the algebraic technique is proposed and sub-sampling techniques are used to overcome obstacles faced when applying these methods to panel data on alcohol consumption. For this application substitution behaviour was deemed insufficient for informing the choice index formula at the EA level.

The remaining four articles are mainly by seasoned experts and cover policy topics, coordination issues and triple system estimates. We take each paper up in turn, in the order of their appearance in this issue of the Journal.

The first has three authors – all from Statistics Netherlands: Menno Cuppen, Paul Van der Laan, and Wim Van Nunspeet. Their paper is entitled *Re-engineering Dutch social surveys: From single-purpose surveys to an integrated design*. The context of their problem is provided below:

Netherlands and its Division of Socio-economic and Spatial Statistics are facing increasing quality demands by customers and stakeholders. Information is needed at more detailed levels and more and more crossings need to be made among different variables of interest. Also, timeliness and coherence of statistics are important issues. Next to these demands there is a strong incentive to collect data more efficiently and to reduce the costs of data collection.

Anyway, in 2010 as part of a large scale re-engineering programme of Dutch household surveys, an integrated design of household surveys, combined with optimal use of administrative data and mixed mode data collection, was introduced. This integrated design consists of a core questionnaire and specific topic

modules. It is anticipated that the approach will make Dutch social statistics richer, more cost-effective and more useful as a tool to address policy needs.

The next paper is from New Zealand. It has two authors: J.A. Harraway and S.D. Forbes. Like the first nonstudent paper the theme here is, again, how National Statistical offices are responding organizationally to change. The title of the paper is *Partnership between national statistics offices and the academics to increase official statistical literacy*

Statistics New Zealand is actively involved in raising the statistical capability of key groups of users. Current priority groups are government, the media and the Maori (indigenous New Zealanders) and, in the recent past, schools and small businesses.

Initiatives designed to support statistical literacy development include synthetic unit record files (SURFs), “confidentialized” unit record files (CURFs), postgraduate student work placements, funding for the CensusAtSchool project, a National Certificate of Official Statistics for public sector staff, and an honours/masters paper in official statistics.

Almost all the educational initiatives implemented so far have been developed collaboratively with educational institutions through a network of academics imbedded in official statistics (NAOS) established in 2006. A particular focus of this paper is the postgraduate course in Official Statistics introduced in 2011. This course used advanced video-conferencing with teaching staffs and students from five New Zealand universities.

The third nonstudent paper, by Mark M. Courtney, focuses on *Consumer price indices and the identification problem*

This paper is concerned with the choices of methods for first-stage aggregation in the construction of consumer price indices – the stage at which a number of price quotes for each item in the index are combined to get a price index for that item. Choices here are more difficult and more controversial than for an upper-level aggregation, where the elementary aggregates are combined to get an overall consumer price index.

The final nonstudent paper, *An investigation of triple system estimators in censuses*, was written by an in-

ternationally mixed authorship-Bernard Baffour from Australia, with James J. Brown and Peter W.F. Smith from the UK

In most quarters, despite their high costs, the value of a census cannot be overstated. But are they still affordable? Countries are, thus, seeking more cost-effective alternatives. This paper details some exploratory research into one such alternative, based on capture-recapture methods. Capture recapture methods have been used for population estimation for decades, but the focus has been on dual system estimation. Dual system measurement of the population has been rightly criticized for its reliance on the independence assumption between the two systems. This assumption is untestable, and its failure introduces bias into the estimates of the population.

The most logical improvement of dual system estimation is triple system estimation. In this paper, a simulation study is carried out to compare the performance of different dual and triple system estimators of the population size under various dependency scenarios. Performance is explored through both the bias and variability of the results. The study shows that the dual system estimator copes well with dependence, provided the coverage of both lists is reasonably high. In addition, although the triple system estimators yield less biased estimates of the population, the dual system estimator can have smaller variances and is shown to be robust enough to cope with low levels of dependence.

A “Newbie” Comment

It is hard to come along right after the editorships of Frank Nolan and Stephen Penneck. So wish me well; I will need your forbearance. Hope to see you all in Hong Kong?

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