

## Editorial

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### **The ISI World Statistics Conference in Kuala Lumpur**

From 18–23 August 2019 the 61th ISI World Statistics Conference took place in Kuala Lumpur (Malaysia). It is expected that many of the very good ideas and papers that were presented in the ‘Official Statistics’ sessions, will find over the next couple of months their way into the journal. Thanks indeed to the many presenters and authors for their commitment to submit a manuscript.

The well organized conference created good occasions for networking and content-full side meetings. The recent issues and future plans for the SJAOS were presented to the side-meeting of the IAOS Executive Committee as well as to the 2019 IAOS General Assembly. Both meetings endorsed the Strategy for the journal for the years 2019–2021 (see the editorial Vol. 35, Nr. 3 (2019) for a brief summary of this Strategy). During the conference the new website of the SJAOS ([www.officialstatistics.com](http://www.officialstatistics.com)) was officially introduced as well as the on-line platform for discussion on topics of significant relevance for official statistics. The high number of visits to the website and the discussion platform during the first 100 days, is a proof for its usefulness for the exchange of information and discussion on important topics for those working or interested in official statistics. As announced, with each issue of the journal, a new discussion item will be launched via a leading article. The second discussion, launched with this issue, is introduced in the next paragraph. Furthermore, at the end of the editorial you will find more details about the website and discussion platform in general and on the first and second discussion.

### **What to find in this issue**

This very rich issue is built on four sections. The first section on “The future role of Official Statistics in the informational ecosystem” deals with the leading topic for this issue and the item for the second discus-

sion on the discussion platform. In the second section I proudly present the winning manuscripts of three of the four prize winners of the Young Statistician Prize 2019. The fourth prize winning manuscript will be - because of the good fit with the other articles - published in the next issue of the journal; the special issue on Population and Housing Censuses (Vol. 36, Nr. 1 2020)). A third section, with nine articles, deals with the very current topic of ‘Trusted Smart Statistics’. Finally the issue ends with four rather diverse articles.

*“Official statistics in the future informational ecosystem; User orientation, profound knowledge and science for a future-oriented strategy”*

The leading topic for this issue, and also the item for the second discussion on the discussion platform is on “The future role of Official Statistics in the informational ecosystem”. In this issue this discussion, oriented towards the popular formulation Data4Policy (D4P) and towards the special relation between official statistics, science and policy, will be launched with three manuscripts. In next issues of the journal the discussion on this topic will be continued based on a series of articles, selected and edited by Walter Radermacher (former Director General of Eurostat, European Union and of Destatis, Germany).

The opening article of this series by Walter Radermacher “Governing-by-the-numbers; Statistical Governance Reflections on the future of official statistics in a digital and globalized society”, describes how under the cover of Data4Policy, well-known guiding themes, such as the modernization of the public sector, or evidence-informed policy-making, are leading to new solutions with new technologies and infinitely rich data sources. Data for Policy means not just new data, techniques and methods, but is not least also a matter of securing an important function and position for official statistics. In order to justify the position of official statistics in the Policy for Data of the future. Radermacher argues in his contribution that it is necessary to have a clear understanding of the tasks of official statisticians for the functioning of (democratic) societies, with a view to how these tasks have to be rein-

terpreted under changing conditions (above all because of digitization and globalization).

The direction and tone of these series of articles is set by the following contribution to the editorial by Walter Radermacher.

“Is data the new gold? In some discussions you can’t help but get the impression that we are exploring all the technical finesses to access the valuable commodity and make our best use of it. Whatever is associated with the term ‘data’ seems to get some of the glamour out of it. Big data, machine learning, algorithms and artificial intelligence promise solutions for problems that have so far been handled without much success. Traditional methods of generating statistics by laborious, cost-intensive and time-consuming collecting of data appear outdated and superfluous in this light. The policy position of official statistics in a digitized and globalized society is fundamentally at stake. Statistical leadership is more in demand than ever now and in the near future to ensure professional independence, efficient production processes and high-quality products. To successfully address new partnerships, data, opportunities and risks, it is vital that professional statisticians and statistical leaders are aware of their strengths and weaknesses, that they know the DNA of their business and that they learn from their history.

Official statistics have shown an excellent record in the role of trustworthy authority in the intersection of three fundamental rights: privacy (the right of a person to privacy), freedom of information (the right of a person to open and transparent information) and statistics (the right of a person to live in an informed society). 200 years of experience and a good reputation are assets as important as the profession’s stock of methods, international standards and well-established routines and partnerships. It is now important to nurture, renew and increase this capital by making new partnerships with young and creative professionals from statistics, data sciences or other disciplines, opening up new data sources and providing new products and services. A reflexive form of scientization in official statistics requires considerably more than statistical methods, data sciences and information technology. Therefore, business administration and sociological knowledge should also belong to the standard building blocks of education for the professional statisticians of the future”

Two articles, by respectively Markku Lehtonen (University Pompeu Fabra, Barcelona. Ecole des Hautes Etudes en Sciences Sociales, Paris and University of Sussex, Brighton, UK) “The multiple faces of trust in statistics and composite indicators: a case for healthy mistrust” and by Eric Rancourt (Statistics Canada) “The Scientific Approach as a Transparency Enabler throughout the Data Life-Cycle”, support the opening article by Walter Radermacher.

Markku Lehtonen in his contribution “The multiple faces of trust in statistics and indicators: a case for healthy mistrust and distrust” describes how in an environment of declining public trust in official statistics and indicators to remain trusted and credible, statistical institutions must safeguard their authority as sources of independent and scientifically sound indicators, while at the same time being innovative, to ensure the relevance of the indicators. However, Lehtonen argues, that in addition to this trust-building work, embracing mistrust and distrust is essential if indicators are to be relevant and influential. The article illustrates ways in which mistrust and distrust can serve as resources rather than mere threats to the credibility and authority of official statistics. By using examples from indicator work he concludes with suggestions for ways statistical institutions can adjust their strategies so as to maintain trust via a more nuanced understanding of the multiple dimensions of trust, mistrust and distrust.

Eric Rancourt’s article “The Scientific Approach as a Transparency Enabler Throughout the Data Life-Cycle”, argues that in fine-tuning their approaches to maintain the vital trust National Statistical Offices (NSOs) need to operate successfully and constantly re-inventing themselves to remain relevant to new data needs and keep up with their high-quality standards and new sources of information. As new practices and new issues are emerging throughout the data life-cycle process, it is important that NSOs realize that transparency becomes a central issue. He shows how by using Statistics Canada’s data life-cycle management model, the scientific approach can be leveraged to make transparency more explicit both in projects and management.

### **Statement for the second discussion on the SJIAOS discussion platform**

The contribution by Walter Radermacher “Official statistics in the future informational ecosystem; User orientation, profound knowledge and science for a

future-oriented strategy”, contains relevant discussion items for the future role of official statistics. These items are the topic of the second discussion on the discussion platform ([www.officialstatistics.com](http://www.officialstatistics.com)). You are invited to react on the set of statements.

**The main statement you are invited to react on is:**  
***Data are given – Facts are produced:***

In the long run trust in official statistics can only be maintained based on a continual striving for the best quality, with leadership based on profound knowledge of the business and with customer orientation as the supreme orientation. This implies that statistical products must meet the expectations of users in their design, production and communication.

For a more detailed introduction to the discussion platform and the supporting statements that are open for discussion I invite you to the end of this editorial.

### **Prize winning articles from the Young Statisticians Prize 2019**

The December issue also brings you the manuscripts of three prize winners that took the 2019 Young Statisticians Prize (YSP2019). Vianney Costemalle (French National Institute of Statistics and Economic Studies INSEE) developed in his manuscript “Detecting geographical differencing problems in the context of spatial data dissemination” a method for dealing with geographical differencing problems by detecting individuals located in small overlapping areas and whose personal information can therefore be disclosed. The differencing technique, which consists in subtracting the value of two overlapping areas, can lead to a breach of confidentiality. Combining the data into a graph structure enables focusing on relevant geographical regions. The originality of the method resides in reducing the graph size and complexity.

In her contribution “Be a detective for a day: How to detect falsified interviews with Statistics” Marlene Weinauer (Statistics Austria), draws attention to the treatment of interview falsification, with focus on falsification by telephone (CATI) interviewers. She developed a method that provides a base for a data-driven, mostly automatic tool written in the statistical software R, to detect interviewers with irregularities in their answers or their time patterns. She shows how traditional methods, e.g. recontact or test calls, can be made much more effective with such focused samples than with random samples.

Nancy Wang (Statistics New Zealand) in her contribution “Using address histories to improve the link rates of surveys in the Stats NZ’s Integrated Data Infrastructure (IDI)”, shows us how improvements could be made to the linking methodology used to link survey data in the IDI. This linked longitudinal database combines administrative and survey data, and initially contained only a small number of administrative datasets from key government agencies, which generally contained good quality identifying information such as names and date of birth. When survey datasets were later added, the link rates achieved were lower than that of administrative datasets, due to poor quality names and the underutilization of geographic information. This paper outlines how the address history of individuals were used to increase the link rate of surveys in the IDI.

Congratulations again to the YSP2019 Prize winners. The fourth Prize winning manuscript from James Farnell and Peta Darby (Australian Bureau of Statistics) will be published in the next issue.

The Statistical Journals website ([www.officialstatistics.com](http://www.officialstatistics.com)) has interesting interviews – prepared by the interview editor Nancy Torrieri – with all the authors of the four prize winning manuscripts, discussing the article and their work and giving some background on the authors.

### **Special section on ‘Trusted Smart Statistics’**

A special section in this issue of the journal is dedicated to nine manuscripts on the very current topic of ‘Trusted Smart Statistics’. The issue of trust is already introduced in the first three articles of this issue. This section gathers extended versions of papers that were presented at the 104<sup>th</sup> DGINS conference in October 2018, held in Bucharest (Romania). The section illustrates how the European Statistical System (ESS) calls the future of official statistics and how in operational terms the concern for maintaining and improving trust is included in the production and dissemination of statistics. The section will be introduced in a guest editorial by Mariana Kotzeva, the Director General of Eurostat. For a more detailed description of the nine articles in this section I refer with pleasure to the guest editorial.

The papers provide a good insight in ‘Trusted Smart Statistics’, and with Mariana Kotzeva I am very confident that this special section will contribute to moving forward towards its implementation, moreover, I

am convinced that the approach to publish in a special section a set of strongly related manuscripts, all dealing – from different perspectives – with a current and important issue, will be an important tool for increasing the knowledge and leveraging the discussions on such a topic.

#### Four more articles

Finally the issue contains four articles covering a mixture of themes. The first article “Flow of funds analysis: A combination of Roman law, accounting and economics, and” by Kazusuke Tsujimura and Masako Tsujimura (Keio University, Tokyo, Japan) details the historical background of the ‘Flow of Funds’ Analysis tracing back to ancient Rome to clarify the interdependence between law, accounting and economics; and to revive the original idea of Mitchel and Copeland, the fathers of the Flow of Funds Analysis, to understand the interactions between the financial and non-financial economy. Funds, which is the sole currency in the pure credit economy we live in today, exist only in the bank’s balance sheets, so accounting is a necessity for the virtual currency. The assets and liabilities in the bankers’ accounts mean claims and obligations so that law is another prerequisite for the existence of funds.

Hans-Peter Hafner, Rainer Lenz and Felix Ritchie in “User-focused threat identification for anonymised microdata” describe by proposing a more ‘user-centred’ approach, an alternative to the criticized method of identifying a number of ‘risk scenarios’ of how intruders might seek to attack a confidential dataset. The user-centred approach has been successfully adopted in controlled research facilities. They show in their article how the same approach can be applied to distributed data with limited National Statistical Institutes control. In that way it is also relevant for future developments in official statistics, such as administrative data and ‘big data’. The analysis describes the creation of a scientific use file (SUF) for business microdata and demonstrates that the alternative perspective can have dramatically different outcomes as compared with established anonymization strategies.

Inna Lola (National Research University Higher School of Economics, Moscow, Russia) in her article “Proposal for measuring and analyzing the dynamics of business conditions for the development of the retail market” develops some analytical and methodological solutions to study the dynamics of retail business

development, based on the results of business tendencies surveys. She proposes and tests a Retail Market Indicator (RMI) and Retail Business Potential Indicator (RBPI); both aimed at quickly identifying current tendencies in the retail business, which, together with the quantitative parameters of the market, increase the scale of representation of the actual and expected phase of economic development of trade and the associated consumer market. The results of her study show that the proposed methodology and statistical tools can give a significant contribution to the improvement of the existing techniques on industrial processes’ monitoring.

Finally Pietro Gennari and Dorian Kalamvrezos Navarro from the Food and Agriculture Organization of the United Nations (FAO) in Rome, discuss in their article “Validation of Methods and Data for SDG Indicators” some of the main challenges in the practical implementation of the guidelines on data flows between countries and custodian agencies needed to inform the global Sustainable Development Goals (SDG) reporting process, it identifies areas in need of further guidance from the Inter Agency Expert Group on SDGs (IAEG-SDG) and provides some proposals aimed at improving this global SDG reporting process.

They argue that the validation of methods and data for SDG indicators, while apparently consisting of two completely separate matters, have been closely linked in the SDG process. When validating country data, National Statistics Offices (NSOs) are namely also effectively certifying the specific methodology used by the custodian agency for the compilation of the indicator, in particular the data source used and the adjustments made to harmonize national definitions and classifications.

I wish you pleasant readings of these interesting articles.

#### Some words about the next issues (Volume 36, Issues 1, 2 and 3)

The next three issues of the journal are already in full preparation or planned. The March 2020 issue (Vol. 36, Nr. 1) will be a special about the preparations for the Population and Housing Census round 2021. Guest Editor of this issue will be Jean-Michel Durr from the French National Statistical Institute (INSEE). The future and the challenges around Population and Housing Censuses will also be the third theme that will be launched for the discussion platform.

The June 2020 issue (Vol. 36, Nr. 2) will be the main issue for publishing manuscripts from the 2019 ISI WSC; the September 2020 issue (Vol. 36, Nr. 3) is expected to be a special about the Future of Economic statistics.

The bi-annual IAOS Conference that will be held in Zambia from 19–21 May 2020, will without doubts guarantee the presentation of another group of interesting papers. Many of them will probably find their way in the fourth issue in 2020 (Vol. 36, Nr. 4). Beyond that an extra issue of the Journal is planned on ‘Official Statistics for the African region’. I invite potential authors from the African region to contribute to this extra and very special issue of the journal.

As a final word in this editorial I would like to thank the team of emphasis editors, the large group of reviewers and the staff from IOS Press that have

been involved in the preparation and production of the four issues of this Volume of the SJIAOS. I would especially like to thank the reviewers and the editors who have spend many hours in reading the submitted manuscripts, proposing revisions, and assessing the overall quality. The journal would not exist without their commitment and precious work. Of-course a final word of thank to the around 100 authors of the circa 60 manuscripts as published in 2019 for their continued interest in drafting interesting, relevant and very valued contributions to the field of official statistics.

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