

## Guest Editorial

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# Governing by the numbers

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A series of manuscripts in the Journal on the ‘*The future role of Official Statistics in the informational ecosystem*’ was introduced in the December 2019 issue (Vol 35/4) with the opening article ‘*Governing-by-the-numbers/Statistical governance*’ (Radermacher, Vol 35/4, pp. 519–538). This opening article was accompanied by two articles and followed by five articles in the June 2020 issue (Vol 36/2), two articles in the December 2020 issue (Vol 36/4) as well as a number of comments on the corresponding discussion platform. In this issue (Vol 37/1) the threat of publications on ‘Data4Policy’ will be continued with five more articles.

### **Pandemic and more crises: official statistics in a globalised information society**

In the current pandemic, there is a strong inclination to focus on solving the most pressing problems in the short term. In this crisis mode, following an operational approach, the framework conditions for official statistics necessarily remain static: the statistical programme, task distributions and responsibilities, the business model, the enterprise architecture, etc. Assuming that the pandemic could pass us by without leaving any traces or scars and that we could subsequently return to the pre-crisis ‘normal’, this would be a satisfactory course of action. Such a scenario, however, does not seem very realistic. On the contrary, it is to be expected that in the coming years we will have to struggle with the serious health, social and economic consequences that this crisis will leave as its traces. Worse still, the other crises we know about, but which are currently pushed into the media background, such as climate and biodiversity, will still be waiting for our responses and activities. And as if that were not enough,

digitisation and globalisation are changing other strategically important parameters that characterise the informational ecosystem in which official statistics operate.

For all these reasons, it is now urgent to pursue a longer-term perspective of action, in which the framework conditions are no longer necessarily assumed to be static and unchangeable, but in which the statistical programme with its products is rethought, in which new services are added to statistical production, new partnerships and role distributions are explored, and in which processes are adapted to the new circumstances [1].

Changing the course of official statistics costs time, a lot of time. In order to be able to offer relevant statistics at the right moment, one has to start with their preparation early, even very early. This means that, under certain conditions, new products outside the traditional work programmes in the field of economy and social affairs have to be considered and their possible production has to be built up with new partners and services. A striking example of this (besides COVID) is biodiversity. From the point of view of official statistics, it is probably easy to question the responsibility for this area; after all, there is a lack of practically everything necessary for this, i.e. mandate, personnel, budget, expertise, etc. In addition, the possibility of fulfilling the quality standards applied in the current domains of statistics that have been developed over the years and decades can be discussed. So why embark on such an experiment and enter such limited explored statistical terrain? The answer to all these questions becomes clear in looking into the alternatives: In cases where official statistics is not the coordinator of official information and the central institution and authority in the statistical system of a country (or of an international organisation), parallel statistical worlds will emerge with different processes, quality standards, forms of communica-

tion, etc., an unnecessary variation, which is inefficient, ineffective and contributes to the feeling of confusion of citizens.

The articles in this volume examine such strategically important questions for the future of official statistics from very different angles. This includes the relationship between statistics and science on the one hand and civil society on the other. What are the theoretical and practical prerequisites (and hurdles) for successful cooperation in the sense of citizen science? How are these new trends to be fitted into new data worlds and data sources? Indicators as special purpose vehicles within the statistical output portfolio play a major role here as a relay and communicative bridge between producers and users of information. The implementation of such new impulses and strategic directions undoubtedly means an enormous challenge for official statistics in the form of adaptation and redesign of production processes that require innovations in data and methods, building of adequate personnel capacities, new skills and, last but not least, revisions of the governance.

In this issue five articles are devoted to these topics

Karl Pickar, Ariane König, Jacek Stankiewicz “*Can citizen science complement official data sources that serve as evidence-base for policies and practice to improve water quality?*” Addressing environmental issues in policy making requires recognising these issues as part of a complex socio-ecological system. The evidence base for such policies and associated monitoring and implementation measures, as well as related official indicators, statistics and environmental accounts are increasingly receiving attention. This paper explores the potential of citizen science as a non-traditional source of data to complement the current data production process for evidence-based policy-making, using pollution of surface waters and its effect on associated ecosystems as an example. The paper develops a framework that helps to explore the official data production process in relation to different purposes of environmental policies. This highlights different challenges that the current official data production process sees itself confronted with in relation to the different purposes of the policies and associated monitoring regimes. These questions are explored with reference to the case of evidence-based policy making on water quality of surface freshwater in the EU, with a focus on Luxembourg. The paper argues that citizen science has the clear potential to meaningfully contribute both to the evidence base for policy and practice, as well as to an improved governance process.

Walter J. Radermacher “*Guidelines on indicator methodology – a mission impossible?*” Indicators are

part of daily life, modern politics and public debate in times of crises and their solutions. The question arises to what extent indicators embody a special form of statistical information, whether a separate indicator-chapter in statistical methodology is needed and what the content of this chapter should be. This paper considers different perspectives of indicators produced by official statistics agencies. Starting from the definition of indicators, it then discusses statistical quality, impact and interaction between producers and users of indicators. To introduce and illustrate the points made in the paper a choice of cases is used in order to derive the essential elements of a methodological framing. The overall objective is to enhance the added value of official statistics indicators as they are communicated and expected to lead to trustworthy evidence for policy making.

Rainer Diaz-Bone, Kenneth Horvath “*Official statistics, big data and civil society. Introducing the approach of “economics of convention” for understanding the rise of new data worlds and their implications*” The rise of big data and ongoing political and social transformations confront official statistics with important questions regarding its self-understanding and its role in public debates. These questions imply serious tensions that will very likely increase in the foreseeable future. This article introduces a specific sociological perspective for thinking and talking about these developments. Building on the “economics of convention”, this perspective questions dominant state-centred conceptions of official statistics which do not adequately mirror the plurality of possible representations of the social world and the variety of assessing the quality of these representations. As a consequence, official statistics are ill-prepared to deal with the variety of critical interventions and challenges it faces. The notion of “data worlds” is presented as a means to tackle this problem of plurality. On this conceptual basis, it becomes possible to link methodological questions with analyses of how statistical data and knowledge production is embedded in political, economic, and social formations and situations. Reflections on the quality of official statistics and its capacities cannot be based on its institutional independence and on scientific standards alone. Instead, it has to be based on a theoretical approach that offers blueprints for linking the production of “facts” by official statistics to conceptions of the common good, allowing the development of new forms of public participation and democratic control of processes of quantification, measurement, and datafication.

Javier A. Carranza Torres “*New data, new methods and data partnerships for a real data revolution*”

The main purpose of the paper is to describe in detail a statistical co-production project, striving to empower and professionalize a selected group of young entrepreneurs, by capacity building to complement the production of statistics for development and also involving civil society members at national statistical offices. Milestones of the proposal are highlighted and expected positive impacts are explained. This description includes the theoretical assessment of initiatives of co-production and co-creation that takes place in the scheme, also explaining the role of different actors within the involved processes and the results they are supposed to produce.

Giorgio Alleva, Emanuele Baldacci, Pietro Demetrio Falorsi “*Methodological, technological and design challenges in the new multisource statistics ecosystem*” In this article, future challenges and developments of

official statistics and statistical science are presented along four main axes: data, capabilities to manage data, methods, and data governance. Nobody can address alone the new challenges of the information society. Partnerships among official statistics, academia, public and private researchers, and users, are fundamental. It is necessary to adopt a strategy and a coherent plan of action at the global level to support the modernization of statistics to answer societal challenges.

## Reference

- [1] Radermacher WJ. How Statistics Can Help – Going Beyond COVID-19. Data & Policy [Internet]: Medium. 2020. Available from: <https://medium.com/data-policy/how-statistics-can-help-going-beyond-covid-19-22bb2ce92440>.