Do we need more Public Statistics?

A paper to support discussion at the NSAG roundtable on 19th July 2022

The RSS's National Statistics Advisory Group (NSAG) is promoting discussion of the concept of *public statistics*. Up to now, this been largely through meetings of RSS Sections[1], feedback from Section committees, other conversations, and desk research.

The aim of the roundtable is to test our proposal that the RSS should now more actively pursue the goal of having more public statistics in the UK.

Our working description of *public statistics* seeks to put the spotlight on data needs rather on the designation of data sources: the essence of public statistics is to help answer questions about society, the economy, and the environment by drawing on existing statistics and devising new ones.

This note summarises what we have learnt so far, with thanks to everyone who has contributed to the discussions, reported back from them, or pointed us to other relevant material.

Public statistics as our interpretation of the UN vision for official statistics

- The UN Fundamental Principles for Official Statistics [1] contain all the elements of a public statistics system as we envisage it, especially the expectation that "official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honour citizens' entitlement to public information" (Principle 1).
- Good practice is published to support this, eg "The production of official statistics is a complex chain of operations. **It starts with the investigations about information needs of various users**, their filtering and subsequent bundling in such a way that one activity of official statistics can generate results that fulfil a great number of user needs and are not targeted exclusively to one user group. This phase is normally not carried out every year in a systematic and comprehensive way, but only when a multi-year programme is set up; annual adjustments are possible, but mostly only partial" [2, para 9, our bold].
- The sources of data for official statistics are similarly recognised as wide-ranging: statistical surveys and "secondary use of administrative or similar data" [2, para 10].
- RSS interest in official statistics is long-standing: can be traced from its Charter [3] and, since 1970, in its support of users as well as producers of official statistics. The RSS believes, like many others, that official statistics provide the cornerstone of the evidence needed to generate informed debate and drive good decision making.

How far this differs, if at all, from the UKSA strategy of statistics for the public good

- The commitment that UK official statistics are for the public good is embedded in the UK Statistics Authority (UKSA)'s statutory objective of "promoting and safeguarding the production and publication of official statistics that serve the public good" [4, Section 7.1].
- It is also captured in the title of UKSA's current, 5-year strategy, launched in 2020 [5], with the promise that the public good includes informing the public about social and economic

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[1] Eg https://www.youtube.com/watch?v=_5YLcgULSy0

matters as well as assisting in the development and evaluation of public policy, and regulating quality of statistics and publicly challenging their misuse.

- Official statisticians are already importing data from other sources, under the Digital Economy Act. ONS has produced a protocol for assessing non-official sources, particularly with a view to accessing a broader range of data sources for SDGs [6].
- The Integrated Data Service [7] is designed "to be ready to answer questions we don't yet know we need to know" [8]. Meanwhile, the Secure Research Service [9] operates through secure data labs.
- There is a welcome move towards more coherent statistical analysis by ONS, not just the publication of individual sets of statistics, eg [10]. This move builds on a 2017 Office for Statistics Regulation (OSR) observation that the value of a "family" of statistics is maximised "when the statistics are brought together so that they shed light on the questions that are important to society" [11].
- OSR and UKSA Code of Practice for Statistics is sub-titled "Ensuring official statistics serve the public good" [12]. Note Section V5.3: "The suitability of existing data, including administrative, open and privately-held data should be assessed before undertaking a new data collection".
- OSR encourages providers of statistics beyond the official statistics system to take up the Code of Practice - see current list of 34 voluntary adopters [13].
- OSR started research in 2019 to develop a better understanding of how statistics can serve the public good, including a literature review of what is already known, and what is not known, about the public good of statistics [14].

However:

- Difficult to avoid the conclusion that "statistics for the public good" is largely interpreted by UKSA as that the statistics the Government Statistical Service produces should be for the public good. But this begs the question of what statistics should be produced? This is not well addressed in the UKSA strategy. Proposed improvements to wider user engagement are emerging [15] but are only slowly being implemented across the GSS.
- An innate tendency/culture for official statistics producers to prioritise government users over others. Recognise the tensions in meeting fundamental principle of equal access, for example when statistics are needed to assess the performance of government and not just to deliver government services. But why, for example, is the value proposition for the IDS that it is only for a "cross-government community of data professionals who collaborate to help solve complex policy questions" [7]? Also, some frustration among external users of official data over the time taken to secure access to undertake "secondary analysis", including when detail is withheld.
- Model still seems to be that official statistics alone have the function of statistics supporting the public good. To meet some needs, this involves importing data for processing within ONS into statistics which it then publishes. Is this as far as it goes, to update the *Social Trends* approach of including statistics from non-official sources to broaden the coverage of ONS's annual 'survey' of life in Britain?
- Although the Covid-19 pandemic took us into extra-ordinary times, it nevertheless illustrated that there is a large volume of statistics that are relevant to the public good but are not official statistics.

- The concept of public statistics is partly driven by the increasingly complex data eco-system that could be an opportunity for more timely, relevant and, above all, useful statistics, as in [16], [17], [18].
- Allin and Hand called in *Significance* for official statistics to embrace public statistics by taking centre stage, perhaps importing more data from other sources, but also providing leadership, and curating and quality-assuring sets of statistics drawn from official and other organisations [19].
- One backdrop to public statistics is the emergence of interest in citizen data and the development of a National Data Strategy [20]. However, while citizen data refers to "any data that could originate from or relate to any individuals or groups of people", the use of such data appears to be primarily economic and scientific, rather than to directly inform citizens themselves – apart from through a plethora of dashboards.

Necessary components to deliver public statistics

If public statistics are to live up to what we envisage, then they will need to be underpinned by, among other things:

- Regular assessment of unmet needs for public statistics (remembering Deming's injunction to measure what is important) with assessment of why these are unmet (not measured, frequency, geography, population sub-groups, etc). May need to hone skills in user engagement, especially to look through the use lens not the producer lens.
- Identifying appropriate sources (and not assuming that anything measured is appropriate).
- Negotiating and maintaining supply of data.
- Data ethics and governance, including "gateway questions on ethics and privacy, transparency and accountability" when investigating potential sources. Should also learn from ADR UK's current, UK-wide public dialogue on public perceptions of 'public good' use of data and statistics, in conjunction with OSR [14].
- Analysis drawing on all relevant sources: data, statistics, and statistical analysis all part of public statistics.
- Effective dissemination, with honest and clear presentations that are understandable by the audience: trustworthy outputs that are trusted.
- Quality assurance throughout, especially against the Code of Practice. This may need more debate on balancing quality and value, including on whether or not there is a need to sustain the delivery of specific public statistics over the longer term. Benefits but also risks eg quality and reputational damage if wrongly endorsed.
- Annual and multi-year business plans for ONS/GSS/public statistics. The UN handbook on national statistical systems notes that, in many countries, the statistical law stipulates that a high-level advisory body assists by discussing and expressing views on "strategic priorities and the relevance of statistical activities in terms of user needs" [21, Section 4.5.1]. The ideal for public statistics would be where government users are in the minority on this advisory body.
- How to manage expectations eg which questions to address and for how long? Who will moderate demand?

Is this something to pursue (if so, how?) or not?

- There is much to recognise in how the UK official statistics system is working to provide statistics for the public good.
- There is also more that the system could do to meet more fully the concept of public statistics.
- Evolution not re-building or re-branding? Can we help the official statistics system to become the heart of public statistics, to enable statistics of appropriate quality to be harvested from a range of official and non-official sources, all to meet identified public needs? Or would re-branding help remove some mis-trust?
- Many detailed issues to resolve and, perhaps, more coherent definitions.
- Resources, is this about doing the best to meet prioritised requirements with the resources available? Does a case need to be made to obtain more resources where needed to launch and to meet the on-going objectives of a system of public statistics? Is it a given that public statistics need to be publicly funded to ensure independence?
- How to involve users in the development and delivery of public statistics? Co-creation sounds appealing, but taking the concept forward will need a lot of work, so people will need to see the value of participating.
- Also should be addressing the 'demand side' for public statistics, improving statistical literacy, the art of reading statistics, and statistics as part of active citizenship. Part of wider agenda on communicating with citizens on scientific evidence and findings, eg [22].
- Where are the gaps and unmet needs? How to collect/audit these? Potential areas (identified by the Statistics User Forum) include:

Childcare	*Gig economy*	*Green energy*	*Homelessness*
	Levelling up (beyond the Government's agenda)		
Local and neighbourhood statistics		*No overall statistical picture of education*	
	Poverty and impact of cost-of-living		*UK-wide statistics*

- It does seem relevant and timely to be having this discussion. How can we best connect with, contribute to, and learn from similar developments in other countries and in international arenas? Eg WHO, ISI/IAOS, and [23] – [27].
- There are even bigger ideas around. As Walter Radermacher noted (see footnote 1), statistics have traditionally been married to the nation-state, but relationships are changing. What are the implications for official/public statistics? Similarly, the work of the International Science Council on science as a global public good [27].

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References

[1] UN Fundamental Principles of Official Statistics	https://unece.org/statistics/FPOS
[2] How Should a Modern National System of Official Statistics Look?	https://unece.org/DAM/stats/documents/applyprinciples.e.pdf
[3] The RSS's 1887 charter states our charitable object as being:	https://rss.org.uk/RSS/media/File-library/About/rss-1887-charter.pdf "To collect, arrange, digest and publish facts illustrating the condition and prospects of society in its material, social and moral relations; these facts being for the most part arranged in tabular forms and in accordance with the principles of the numerical method".
[4] Statistics and Registration Service Act 2007	https://www.legislation.gov.uk/ukpga/2007/18/section/7
[5] UKSA Strategy 2020-2025	https://uksa.statisticsauthority.gov.uk/statistics-for-the-public-good/
[6] UK Sustainable Development Goals: use of non-official sources	here
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[8] An interview with Alison Pritchard	Significance, April 2022, pp 42-44 https://rss.onlinelibrary.wiley.com/doi/epdf/10.1111/1740-9713.01636
[9] SRS	here
[10] ONS Centre for Inequalities and Inclusion	https://content.govdelivery.com/accounts/UKONS/bulletins/31e5b43 newsletter
[11] Richard Laux blog	https://osr.statisticsauthority.gov.uk/happy-families/
[12] OSR and UKSA Code of Practice for Statistics	Edition 2.0 (February 2018) available, with supporting material, at https://code.statisticsauthority.gov.uk/
[13] Voluntary adopters of Code	https://code.statisticsauthority.gov.uk/list-of-voluntary-adopters/
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[15] User engagement strategy for statistics, Feb 2021	https://gss.civilservice.gov.uk/policy-store/user-engagement-strategy-for-statistics-ensuring-official-statistics-meet-societys-need/
[16] Centre for Public Data	https://www.centreforpublicdata.org/ = a new, non-partisan organisation with a practical mission to help the UK's public data work better for everyone
[17] Better Statistics CIC	https://www.betterstats.net/ = a social enterprise campaigning for more reliable statistics, whether produced by private companies or by public bodies.
[18] Tom King's blog	https://publicstatistic.wordpress.com/

	= features articles and critiques about the understanding and utility of statistics of, and for, the public. Tom is on Twitter @acertaintom
[19] Allin P. and Hand D.J. (2021)	Building back better needs better use of statistics, Significance, Vol 18(2), pp 44-45 https://rss.onlinelibrary.wiley.com/doi/10.1111/1740-9713.01514
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[22] Science as an open enterprise, Royal Society	https://royalsociety.org/-/media/policy/projects/sape/2012-06-20-saoe.pdf
[23] The Irish CSO Frontier Series	https://www.cso.ie/en/methods/ourpublishingformats/ for publications based on methods and sources under development.
[24] Alain Desrosières refers to public statistics in his history of statistical reasoning.	Alain Desrosières (translated by Camille Naish), 1998, *The Politics of Large Numbers*, Harvard University Press He appears to be referring to official statistics (from national statistical offices and similar official bodies) but is keen to stress "not only the conditions in which public statistics forged its legitimacy but also the public contexts of debate within which statistics found a place" (p148).
[25] Julia Lane called in *Significance* for "a new, more democratic, public data infrastructure" in the US.	Lane, J. (2020) After Covid-19, the US statistical system needs to change, Significance, Vol 17(4), pp42-43 https://rss.onlinelibrary.wiley.com/doi/10.1111/1740-9713.01428
[26] The UN PET Lab is running a pilot program with several NSOs.	Launched Feb 2022: https://unstats.un.org/bigdata/events/2022/unsc-un-pet-lab/index.cshtml The lab will demonstrate that PETs (Privacy Enhancing Technologies) can make fully compliant data sharing between organisations possible.
[27] MacFeely and Nastava are concerned by the huge challenges faced in many countries in compiling indicators to assess progress towards the UN's sustainable development goals.	MacFeely, S and Nastava, B. (2019) "You Say You Want a [Data] Revolution": A Proposal to Use Unofficial Statistics for the SDG Global Indicator Framework, Statistical Journal of the IAOS, 35, 309–327 See also their UNESC paper of the same material available here Official statistics should switch to "a mixed business model: one combining the manufacture of official statistics with the franchising of production under license", accreditation based on the fundamental principles for official statistics.
[28] ISC 2021 position paper	https://council.science/wp-content/uploads/2020/06/ScienceAsAPublicGood-FINAL.pdf