

The UK statistical service in 20 years' time
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Richard Laux and Richard Alldritt, UK Statistics Authority

Abstract

This paper identifies some of the long-term pressures and drivers affecting official statistics, and the statisticians who produce them, in the UK. We consider:

- technological developments;
- the growing demand for official statistics and statistical information;
- declining numbers of senior statisticians;
- political misuse of official statistics;
- competition from (external) producers of statistics;
- changing economic and business realities;
- changing social structures and values;
- changes in political philosophy, institutions and structures;
- the growing number of producers of official statistics; and,
- resources for the production of official statistics.

The paper considers the implications of these aspects of the "changing environment" for the statistical service as a whole, and for individual statisticians, and identifies some changes that may be required to ensure that national systems of official statistics, in the UK and other countries, are able to maintain and enhance their vital role in informing public debate and decision-making.

Introduction

Twenty years ago, Tim Berners-Lee published a proposal for a "WorldWideWeb". The UK's Prime Minister, David Cameron MP, was just out of university. Nelson Mandela was in prison on Robben Island. It would have been a brave person who predicted their successes.

Statisticians tend to be cautious, thoughtful people, professionally rooted in gathering and managing data about the (recent) past, and preferring to leave predictions to others. But an appreciation of historical patterns and developments in society and technology can help identify those trends (in a non-statistical sense) that may adversely affect, or allow us to enhance, the official statistics system in the future. This paper is intended to help identify ways in which the statistical service, and individual statisticians, might need to work differently in the future, if official statistics are to meet the needs of decision makers and to be trusted more generally.

Context

Before considering the changing environment it is important to be clear about where we currently are. In the UK we have (relatively) new statistical legislation, and a statutory UK Statistics Authority responsible for monitoring the production and publication of official statistics. We have low levels of public trust in statistics, and although this is related to low levels of trust in government and 'officialdom', it is still very real. And yet we have a statistical service that seems to be regarded, by informed commentators, as being amongst the best in the world.

The history of the UK statistical service, and the ongoing legacy of that history, is important too. Every national statistical system will have its own such legacy; in the UK some aspects include:

(a) the now discredited but still detectable doctrine¹ that “information should ...be collected...primarily because government needs it for its own business” – which had the effect in the 1980s, and to a lesser extent ever since, of skewing the activities of official statisticians away from a balanced response to the statistical needs of society – a statistical survey was recently abolished for which there appears to have been no use other than measuring progress towards a government target that no longer exists².

(b) the effects of a widespread practice in recent years of providing minimal statistical commentary (explanation and advice about the meaning of the statistics). This approach was adopted partly to emphasise that statisticians are objective and non-partisan. However, it may also have had the effect of diminishing the value and authority of the statistical product;

(c) a vocal, informed user community, often expert in handling large survey datasets, with increasing expectations in terms of: access to more detailed (disaggregated, especially to smaller geographies) statistics and (more) microdata; and the quality of official statistics.

(d) the growth in international influences on UK official statistics, evidenced by international legislation, standards, classifications and definitions, and an increasing focus on international best practice. This has of course affected the statistical services of many other countries too.

The changing environment

A number of factors are increasingly affecting official statistics, and are likely to continue to have an effect in the years ahead. These are relevant in the UK, but probably apply more generally.

1. Technological developments. The growth of the internet, especially more recent web 2.0 initiatives³ (‘social networking’); new, customised apps that can be written and shared by huge numbers of people; the development of computing power that enables large datasets to be matched and joined; and of software and applications that allow data to be mashed⁴ and statistical results to be visualised in order to identify previously unrecognised patterns.
2. The growing demand for statistics, and statistical information. Whilst some people regard ‘evidence-based policy making’ as little more than a slogan, it does seem that government is taking an increasingly scientific approach to policy making. In recent years the UK government has commissioned substantial statistical work on the measurement of government activity, and of social well-being, for example. These examples illustrate a further point: that public policy making is addressing more complicated issues than in the past, further example being ‘sustainability’ and social exclusion (which has stimulated an increasing interest in statistical information for small areas). Similar issues can be identified at the European level.

¹ Great Britain, Privy Council Office (1981) Government Statistical Services, *Report of the Rayner Review*, London: HMSO.

² <http://www.statisticsauthority.gov.uk/reports---correspondence/correspondence/cancellation-of-the-place-survey.pdf>

³ Web 2.0 sites allow users to interact and collaborate with each other in a dialogue as consumers of user-generated content in a virtual community, in contrast to websites where users are limited to the active viewing of content that they created and controlled

⁴ Data mashing refers to the use and combination of data from two or more sources to produce enriched results.

'Statistical literacy' is related to this issue of growing demand: the more capable that decision makers – including the public – are of understanding official statistics, the better informed their decisions will be. In the UK, the Royal Statistical Society has recently launched a campaign – *getStats*⁵ – aiming to “give everyone the skills and confidence to use numbers well”. This may impact upon the future demand for official statistics, and the way that they are presented.

3. Declining numbers of senior statisticians. In UK government departments statisticians increasingly work in multi-disciplinary 'analytical' groups, typically headed by a senior economist. Whilst this exposure to other analysts' thinking will tend to have broadened statisticians' perspectives, and conversely is likely to stimulate some aspects of statistical thinking amongst other analysts, concerns have been raised that the declining number of senior statisticians has diluted statistical standards and reduced the capacity of statisticians to achieve very senior positions. This may simply be a question of morale, but anecdotally at least we understand that decisions about statistics are made without the input from senior statisticians that would have been the norm at one stage.
4. Political misuse of statistics. Whilst this is by no means only a British phenomenon, it is accepted that some aspects of politicians' involvement in statistics has led to a decline in public trust, fuelled by media scepticism about politicians (and official statistics). Indeed, this was the catalyst for the establishment of the statutory independent oversight of official statistics by the UK Statistics Authority. Whilst the Authority has tackled effectively a number of instances of the public misuse of official statistics by politicians, the problem remains.
5. Competition from (external) producers of statistics. The increasing availability of statistical data from both official and other sources (such as Google prices, and business 'intentions' or 'confidence' surveys) is breaking down the monopoly once held by official statisticians. For example, information about house prices in the UK is published by government, but also by several other organisations; it is unlikely that the public will regard the official series as inherently superior, and likely that the public will be confused by the constant drip-feed of statistics which appear to measure the same thing. And private sector companies are beginning to provide value added analysis of, for example, economic statistics that are likely to be less inhibited and more insightful than that offered by the official producers. At the same time, there has been a huge rise in the capacity of retailers, and utility companies to analyse their own market information, though official statisticians' access to this information remains very limited.
6. Changing economic and business realities. The processes referred to as 'globalisation', characterised by international flows of people (migration) and goods and services (trade) have made the measurement of many phenomena more difficult than before the current period of globalisation. At the same time, business structures are continuing to change, making business surveys harder to conduct and the results harder to interpret.

⁵ <http://www.rss.org.uk/site/cms/contentChapterView.asp?chapter=25>

7. Changing social structures and values
Traditional social structures, typified by the nuclear family, have been changing for many years and seem set to continue to do so. So-called 'gated communities' are emerging. Public scepticism of government and growing concern about privacy all compound the difficulties in undertaking traditional surveys and Censuses.
8. Changes in political philosophy, institutions and structures
In the UK, the increasing devolution of responsibility from the 'national' government to Scotland, Wales and Northern Ireland, has led to different policies and administrative processes across the UK, compounding the difficulty in producing UK-coherent statistics on many topics such as education and health. Recent (related) policy initiatives of the UK government include the "transparency agenda" – making public data publicly available, partly to increase accountability and partly to enable third parties to analyse the data in new ways – and "localism": an emphasis on allowing local communities (rather than national government) greater say in decision making that affects them.
9. The growing number of producers of official statistics. Twenty years ago, the overwhelming majority of UK official statistics were produced by statisticians working in about thirty government departments. Changes in the structure of government, particularly the institutional separation of policy making from service delivery, means that there are now over 200 producers of official statistics. Whilst the standards set out in the Code of Practice for Official Statistics apply to all these bodies, the active management of such a disparate statistical system presents a challenge to the leaders of the Government Statistical Service in the absence of statutory authority.
10. Resources. Despite the increasing demand for statistical information, resources are being cut as part of the general reduction in the size of the public sector. As an example, the Office for National Statistics' budget for 2011-12 has been reduced by X% from that for 2010-11: and this is on top of the savings that had to be made in recent years.

Implications of this changing environment

This section is concerned with analysing the issues identified above in the round, from the perspectives of the statistical service, and statisticians.

Worst-case scenario

The way in which each of the ten factors identified above affect the statistical system in the years ahead is unknowable; still less the effect of the interactions between the factors. The natural resilience of civil service institutions might prove equal to the challenges facing the statistical service, by evolution. Undoubtedly the statistical service *will* evolve. The question is whether that evolution will lead to a service that is as good as it might be: in 20 years time will the service be efficient and effective; will it be fit-for-purpose; will it meet the public good? Or, will it look increasingly outdated, partial, and sub-optimal?

This is the worst-case scenario: an under-resourced statistical system ... unable to provide a service that meets rapidly emerging demands for increasingly complicated statistical information ... in an environment that is less respectful of the provision of data for 'government' to produce statistics about it, and more sceptical about the government's use of statistics and its ability to keep their data private ... publishing tables of numbers but not describing what they mean ... focused on the immediate

needs of Ministers to the exclusion of other parts of society ... fractious about the way that resources are allocated to statistics according to Departmental boundaries ... without a strong voice in Government let alone a public identity.

The implications for the statistical service

1. **A different business model.** We need a different concept of the service, based on the provision of a genuine service to all users, with all that 'service provision' entails. This is not straightforward: official statistics is a monopoly endeavour, with a legacy of use primarily by government, yet we think that it needs mechanisms to gather feedback (and well-understood ways of prioritising users' needs), to prioritise investment decisions, to communicate with different stakeholders, and to co-ordinate technical development on behalf of 'the public good'. And it needs political support to enable it to do all of this, effectively. We think that this business model could be based on maximising the value of the statistical service, especially around data, analysis, commentary, and ongoing user-support.
2. **A more 'business-like' statistical service.** Within the context of adding value, we see the need for a continuing focus on efficiency and effectiveness, characterised by well-understood prioritisation and planning procedures, a greater capacity for innovation (processes, and technological exploitation), partnerships (with other analysts in government, and academia/private sector/international experts), and more active identification and promotion of good practice (including that identified internationally).
3. **Closer working with partners in the European Statistical System (ESS).** The ESS's recently published statistical strategy sets out a 10 year vision for European Statistics – for the system as a whole and therefore relevant at the national level. Many elements of this strategy relate to the 'business-like' point above, including: working in partnership, and the integration and standardisation of production systems, IT, quality and methodology, and common tools. The UK statistical system should seek to exploit synergies and take every benefit from its involvement with the ESS.
4. **Stronger governance, co-ordination and central management.** We believe that there is a need for the governance of the decentralised UK statistical system to be further strengthened, not least to be able to demonstrate the independence of statisticians from inappropriate political influence. Stronger co-ordination and management could provide greater flexibility, for example to address statistical challenges that cut across organisational boundaries, and could help ensure that statisticians have suitable skill sets (which might involve greater specialisation for some), and are able to work effectively with other analysts and experts (inside and outside government).
5. **A higher profile.** We think that there should be a more recognisable and positive identity and reputation for official statistics, based upon a public face for statistics, better communication of statistical messages, and a strategic approach to relationships with opinion formers outside government, and high-level decision makers within.

The implications for official statisticians

1. **More 'soft' skills.** Official statisticians typically have strong technical (analytical) skills, and the need for these is likely to remain – indeed, statisticians will need to understand new techniques and the potential of new technologies. But they will also need to improve their communication skills, to be able to publish confident, helpful commentaries about the main messages contained in sets of statistics, and the coherence with other related statistics. They will need to improve their ability to influence, to develop and maintain

relationships, and to engage with a variety of delivery partners, users, and other stakeholders.

2. *Complementary knowledge and skills.* Recognising that the environment in which statisticians operate is changing, the acquisition of other skills (eg legal, procurement, contract management) will become more important.

Conclusion

A statistical service that meets the public good in the medium term will need to be organised, managed and governed so that it provides a clearly-articulated, coherent and well-understood service to all parts of society, including organisations that it might today regard as competitors.

The statistical service in 20 years time will need to look quite different to that we see today. It will need to be:

- More service-oriented, focused on end-value and better able to demonstrate that it offers value for money;
- Better at planning and prioritisation;
- More effective at working in partnerships;
- More adept at responding to technical change, and better organised to respond to new, and cross-cutting challenges;
- More innovative;
- More rigorously attuned to 'best practice';
- Better able to demonstrate its independence from inappropriate political influence;
- More responsive to external challenge;
- Better managed to ensure that skills are kept up-to-date and relevant; and,
- More respected.

And official statisticians will need to be able:

- to communicate the messages in the statistics they work on more effectively;
- to develop effective relationships with an ever-increasing and diverse range of stakeholders; and,
- to develop a range of skills, and acquire knowledge, in other areas of public administration.

If the statistical service and professional statisticians can respond to the sorts of challenges that can already be identified, we think that official statisticians around the world will be able to maintain and further develop their vital role of informing public debate and decision-making.