

Statistics Commission



Report No. 34
Data on Demand –
Access to Official Statistics

June 2007

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Official Statistics

Report by the Statistics Commission

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Foreword

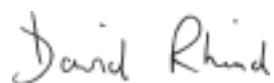
By the Chairman of the Statistics Commission

In our preceding 33 reports we have repeatedly made the point that good quality and trusted official statistics underpin the activities of the state and the effective functioning of democracy. Yet there is little point in having such statistics if they are hard to find. The revolution in access to information wrought since 1991 by the invention of the World Wide Web built upon the Internet has transformed the way in which hundreds of millions of individuals, families, organisations and governments across the world now function – the first port of call for information is to search the Web.

This development – the so-called ‘democratisation of knowledge’ – presents both great opportunities and challenges. In principle, anyone can find almost anything and act upon it. On the other hand, some information and some information sources are much more reliable than others. But all of this is secondary if access to the information is constrained by poor policies on the part of the information providers, poor structuring or inadequate descriptions of the information, ineffective search and assessment tools or poor presentation on the Web.

In this report we consider the improvement of access to official statistics in the UK. We conclude that there is still much improvement to be made and make recommendations in the form of principles which we urge the future Statistics Board to adopt. Behind it all however is a vision of government statisticians acting not only as experts in the collection and guardianship of statistical data but also as promoters of the use of these statistics to a wide community, not just central government (important as that sector is). To achieve this vision and maximise the public benefit from the costly investment in information, while continuing to keep statistics free of charge, will require some changes in attitudes and behaviour and possibly some reallocation of resources.

I would like to thank all those who contributed to this report, particularly Commission member Ian Beesley who chaired the project board, Richard Cracknell from the House of Commons Library, and Kevin McHale from the Office for National Statistics (project board external members), Abigail Armstrong and Allen Ritchie from the Statistics Commission Secretariat who managed the project, and the Ipsos MORI team who undertook much of the research.



Chairman, Statistics Commission
June 2007

Introduction and summary

1. In this report we look at the ease with which both experienced researchers and novices can find and use UK official statistics through the Web. User expectations are changing as the Internet develops and as citizens become more adept at using the vast range of information it offers. Search engines are enabling more people to have more access to more data more often and more efficiently.
2. The report presents the results from two research projects that we commissioned – “mystery shopper” research into finding statistics on topical issues and a survey of the policies of government departments for publishing of statistics on the Web. The full research report is attached at Annex 2.
3. Our recommendations are designed to help meet rising user expectations and to keep UK official statistics in the vanguard of public use of high quality statistics. They are addressed to the new Statistics Board that will be established by the Statistics and Registration Service Bill currently going through Parliament. They are in the form of a set of principles, which we believe should determine dissemination of statistics on the Internet.
4. To provide further context and detail about accessibility, relevant extracts from the existing National Statistics Code of Practice and a review of the literature on accessibility are attached as Annexes 1 and 3.

SECTION 1: RECOMMENDATIONS

5. We propose the following eight principles of statistical dissemination, to be followed by all producers of official statistics:

Principle 1: **Statistics are collected to be used and as wide a use of them as is possible should be encouraged**, including the re-use of raw data for research outside government.

Principle 2: Since the most satisfactory forms of data provision are still evolving, **UK government statisticians should adopt an exploratory and experimental approach to dissemination and access to statistical data through the Internet.**

Principle 3: **Government departments that publish official statistics should seek the full involvement of other web professionals in the presentation of statistical data on their websites.**

Principle 4: **Government departments that publish official statistics should recognise that web design and web culture are still developing and should set up an appropriate mechanism to keep accessibility issues under review.** This might take the form of a technical advisory panel, with membership drawn from external user expertise such as resides in user-centred website design, communications experts, the Statistics User Forum (SUF) and the House of Commons Library.

Principle 5: **User needs, interests and capabilities should determine the design and operation of statistical dissemination over the Internet.** This necessitates interactive engagement with users and active pursuit of feedback plus better search engines (possibly in co-operation with commercial operators). Users of government statistical websites should not be expected to have a working knowledge of government departments or of 'who produces what'.

Principle 6: **Statistical products should be specifically designed for the Web.** The Internet brings a new dimension to the relationship between producers and users of statistics. It has transformed the way that people look for information and want to access information.

Principle 7: **Data should be presented in a layered or hierarchical way to allow users to drill down to the level of detail they desire.** Tables, charts, maps and online statistical programs for manipulating data should be increasingly the norm. Guidance on definitions, sources and methods, data quality and interpretation should be an integral part of dissemination (possibly in the form of Frequently Asked Questions).

Principle 8: **There should be one point of entry – a government statistics portal – giving access to official statistics across the UK government and those of the devolved authorities.** This portal would link to all government statistics sites, and include a search engine which operates seamlessly over all those sites.

SECTION 2: BACKGROUND TO THE REPORT

The UK has long had a healthy appetite for statistics

6. The UK appetite for statistical information is large. Many news stories are built around official statistics; examples from the headlines of the past few months include the numbers of immigrants, the inflation rate and the extent of obesity in the country. The Government's emphasis on evidence-based policy and performance targets increases both its own demand for statistical information and at the same that of the media and general public as they seek to use official data to assess government effectiveness and performance.

7. Historically there have been many examples of statistical evidence radically changing the way things are done. For example, Florence Nightingale's application of disease statistics to reduce mortality in those wounded during the Crimean war or Sir Richard Doll's research in the 1950's that made the link between smoking and lung cancer. Keynesian demand management of the economy would not have been possible without the development of National Accounts statistics. More recently the *Stern Review on the Economics of Climate Change* drew on statistical evidence.
8. Parliament and democratic accountability rely on good statistics. Many Members of Parliament have a keen appetite for statistics. Many of the Parliamentary Questions they put to ministers ask for statistical information; the House of Commons Library receives an average of 3,000 substantive statistical enquiries from MPs every year.
9. Official statistics are produced by central government departments, devolved administrations, local authorities, agencies or other organisations in the public sector. Most economic and many social statistics, including statistics on population, are produced by the Office for National Statistics (ONS). But statistics in other important areas are often produced by the government department responsible for policy in that area, eg most health statistics relating to England are produced by the Department of Health and education statistics for England by the Department for Education and Skills. Many statistics relating to Scotland, Wales and Northern Ireland are produced by the devolved administrations.
10. The UK has a tradition of good quality official statistics. A recent Statistics Commission¹ report concluded that, on the basis of research into public perception of statistics, "on the whole, opinion leaders believe that the quality of official statistics in the UK is up with the best in the world."

¹ *Official Statistics: Perceptions and Trust*, Report No 24, Statistics Commission (2005)

11. There is also a long-standing tradition of official statistics publications. The first Population Census was conducted in 1801. Labour market statistics have been published in the *Labour Department Gazette* and successor publications since 1893, the National Accounts *Blue Book* first appeared in 1948, *Economic Trends* in 1953 and *Social Trends* in 1970. This long tradition of publication was reinforced by the National Statistics Code of Practice,² introduced in 2002, which included a commitment to free access to all official statistics through the Internet.
12. Nevertheless publication is not in itself enough – statistical information needs to be published in a way that makes it readily accessible and understandable to those who want to use it or who could use it if barriers to its use were removed. The accessibility of official statistics is a key issue for many actual and potential users outside government – the general public, the media, business and academics. This is recognised in the National Statistics Code of Practice, which requires that “...data will be presented to a standard that clearly and accurately expresses the contents to the widest possible audience, with choice and flexibility in the format where possible...”. The Protocol on Data Presentation, Dissemination and Pricing states that “the Web will be the primary means of providing general access”. We interpret the current Code of Practice and Protocols as requiring producers to make official statistics available free of charge on the Internet to the extent that it is practicable to do so.
13. However the Internet is a rather different medium for the dissemination of statistics from the traditional paper publication. The issues around accessibility of statistics through the Internet are also different. It is to this that we now turn.

The Internet changes everything

14. Computing power, enhanced storage and telecommunications have transformed statistical processing and computation, making it possible for a laptop to carry out computations that in the past would have required a roomful of machinery. Computing power per unit cost increased by a factor of 10,000 between 1975 and 1995³ and the growth continues. Simulation and other data exploration tools are now readily available to the domestic laptop owner.

² ‘National Statistics’ is a quality marker applied to certain of the United Kingdom’s official statistics. The National Statistics Code of Practice sets out the key principles and standards which official statisticians are expected to follow and uphold. It is supported by twelve Protocols. See Annex 1 to this report for relevant extracts.

³ Bond, J. *The Drivers of the Information Revolution – Cost, Computing Power and Convergence*, Note No. 118 *Public Policy for the Private Sector*, The World Bank Group. July 1997.

15. The development of the Internet has brought changes in the way that people access and use information – not the least being an increasing familiarity with searching methods. The rate of households acquiring Internet access has been rapid – in 2006, 57 per cent had an Internet connection, up from 36 per cent in 2001.⁴ Currently four out of five Internet connections are via broadband.⁵ The Web is now the first port of call for information in many homes, businesses, schools, universities and government departments.
16. There has been an increase in information sharing websites. The Cabinet Office recently hailed this development as “democratising information and driving citizens’ appetite for sharing advice and opinions in new ways”⁶ and it is looking into how best to use them to improve information from government.⁷
17. Web users have the opportunity to select Internet content for their own needs, tailoring the format and content or sharing information with others about individual websites through the use of social bookmarking websites (ie sites that enable users to share online their favourite sites and to develop virtual information networks). Some website owners, such as newspapers, offer readers the opportunity to propose the page they are reading for inclusion in a hosted social bookmarking site, thus increasing readership of that newspaper’s site. News feeds can be selected by topic so that the user in effect gets his or her own newspaper built only of matters of interest to them. All of this has raised expectations about the ability of websites to make content relevant to individual users and so facilitate finding information.
18. Rosling⁸ has exploited technological developments to present information and enable new comparisons of statistics. He has argued for using technology more efficiently to enable users to access data, for example by adding a ‘data’ option to a search engine toolbar; Google has now bought his project.⁹

⁴ The 2001 percentage of households with Internet connection covers the period Jan-March 2001 – source: *Historical Internet Access – Data (pre-April 2003)*, ONS, (accessed April 2007); the 2006 figure covers to Jan-April 2006 – source: *Internet access – households and individuals*, Statistical First Release, ONS, (August 2006).

⁵ The rate of broadband connections relates to March 2007 and is taken from *Internet connectivity March 2007*, Statistical First Release, ONS, (May 2007).

⁶ *Power to the people – Information sharing hailed as a new force for social progress by Government*, Press release 8 February 2007, Cabinet Office.

⁷ *The Power of Information Review: online advice sites could improve citizen empowerment*, Press release 5 April 2007, Cabinet Office.

⁸ *Debunking third-world myths with the best stats you’ve ever seen*, Rosling H, conference presentation to Technology, Entertainment, Design (TED), (2006).

⁹ *Business comment: Statistics website will bring openness, in all probability*, Conway E, The Telegraph, 6 April 2007.

19. The Internet also opens up many possibilities for interaction between the consumer and the provider. This has been highlighted by the Varney report on the opportunities for transforming the delivery of public services. It noted that “today’s consumer is no longer the passive recipient of government services” and that technological changes “create an increasing expectation that access to services on the Web will be comprehensive, joined-up and capable of delivering a service almost instantly”.¹⁰
20. In line with these trends, the Government recently announced its intention to make all online government services accessible via a central hub, such as DirectGov or Business Links¹¹. Another recent proposal has been the development of a single statistical publication hub that would separate the release of statistics from political comment on the data.¹²
21. The Freedom of Information Act (2000) is also helping to generate a culture of making government information publicly available, and is raising expectations about the type of information that should be made available.
22. At the same time, the Internet raises difficulties about the authority of information. These are less acute when the information is from a trusted source but much more serious when it is produced by individuals or (sometimes) by a group of volunteers. Whilst blogs (web logs) encourage access to a wider source of ideas and comment, they also increase the risks of misinformation. Blogs are used both by the authoritative (for example, the ONS blog as part of its consultation on geographies¹³) and the merely opinionated. The online self-managing encyclopaedia Wikipedia is now much bigger than, for example, Encyclopaedia Britannica, although the quality of Wikipedia has been questioned. The Internet offers unlimited access to information posted on it – much of it accurate, some of it dishonest, much misleading. Hence the need for trusted sources, tools for ‘triangulation’ of information to check accuracy, good codes of practice for information suppliers and explicit descriptions of information quality have seldom, if ever, been stronger.

How we search for and scan information

23. The Internet has also transformed how we search for information; Google and the other leading search engines have democratised access to data and set a high standard for search software. Although users do not necessarily understand how the search engines work, they expect to find what they are

¹⁰ *Service Transformation*, Sir David Varney, HM Treasury, Dec 2006.

¹¹ *Transformational Government Annual Report 2006*, Chief Information Officer Council, January 2007,

¹² The publication hub was announced during the second reading debate of the Statistics and Registration Service Bill in the House of Commons.

¹³ The blog for ONS’ small area geography consultation (now closed) can be found at: <http://www.onsgeography.net/>

looking for on the first page of search results. If their first attempt is unsuccessful, they typically refine the search terms in an iterative process rather than switching to another search engine¹⁴ or using advanced search tools.¹⁵

24. The wide availability of information on the Web and the ease of accessing it via search engines have led to what has been called “information snacking”.¹⁶ This refers to the short time that people are prepared to spend scanning a website or web page. It is increasingly rare for people to scan an entire document other than by using search facilities. The recommended solution is to provide information in easy to read, bite-sized chunks, with the facility to drill down for more detail or explanation as appropriate.
25. Arguably, sophisticated search engines have made finding information seem almost too easy. Getting hold of statistical data is not the same thing as understanding what they mean. There is an “entry fee” to pay to understand and interpret what the data represent and to avoid being inadvertently misled by headings or complex descriptions. Historically, subject matter experts have often invested considerable time in understanding data – but it is unrealistic to expect most Internet users to do so. Other means of guidance must be used about definitions, sources and methods, the meaning of the figures and their limitations.
26. A 2005 study of the US Government website FedStats¹⁷ (the American portal for official statistics) argued in support of the provision of information about statistics and a statistical commentary. Its authors argued that there should be “no naked data” – the story behind the numbers is always needed. They also recommended presenting such information in small amounts – with “just-in-time, just-enough” help that is presented when needed. They suggested this might be provided by an interactive statistical glossary with context-specific explanation.

What constitutes good ‘data accessibility’? The importance of website design

27. The same study of the FedStats site identified website design as a possible barrier to accessibility and recommended that website designers aim to “minimize scrolling and clicking, provide alternative ways to slice and dice datasets, [and] closely couple search, browse, and examine functions...”.

¹⁴ *Search Engine User Behaviour Study*, iProspect and Jupiter Research, iProspect, (2006).

¹⁵ McGovern, G in *The search lurch*, Buchholz GA, (2005), Prentice Hall PTR

¹⁶ Nielsen, J in *The search lurch*, Buchholz GA, (2005), Prentice Hall PTR

¹⁷ *Finding and understanding government statistical information*, Marchionini G, Haas SW, Zhang J & Elsas J (2005). *Computer*, 38(12) p52-61, Dec 2005.

As other research¹⁸ has established, behaviour in looking for statistics is no different than when searching for other information – so the problems that emerge, such as with word matching or with documents in portable document format (pdf), are generally similar.

28. An earlier study¹⁹ of website accessibility, also based on FedStats, had recommended designing a statistical website for novice users. Statistics producers and website managers should not assume that all users regularly accessed the site and, as a consequence, had learned how to use it. Use of “scientific” words in presentation of data was best avoided; easy navigation of the site should be provided; users should not be presumed to know the structure of organisations or agencies; there should be a facility for users to perform a ‘comparative search’, enabling, for example, comparison of statistics for two cities; advanced search facilities should be available; tools for analysing the data online should be provided; and users should have the option to choose the granularity of geography and time series.
29. All the studies so far mentioned have had a US focus. A rather different perspective is provided by ‘Surfing with Ed’,²⁰ a monthly series of reviews by a UK official statistician that has looked at a different country’s statistical website each month for a number of years. Websites that have been reported as standing out include Iceland and Australia for their good navigation; Japan and Norway for their user orientation; Italy and Australia for their features; and Holland for its good practice in displaying metadata (data about data).

How are the providers of UK official statistics responding?

30. The combination of vastly increased data availability, easier to use technology, rising education and ability to use statistical information plus reducing deference to authority throws down a gauntlet to producers of official statistics. The official response of those responsible for UK government statistics to the advent of the Internet has been the current policy of making the Web the focus of dissemination of official statistics, with all statistics available freely online. Thus in theory it should be much easier than before for the general public and the non-expert user to access statistical information. There is no longer a need to go to a library to consult a paper publication (or to purchase one), or to subscribe to (paper) press releases.

¹⁸ *What is the future of statistical compendia in the 21st century?* Zawitz MW, Statistical Journal of the UN Economic Commission for Europe; 2005, Vol. 22 Issue 2, p163-171.

¹⁹ *Finding Governmental Statistical Data On The Web: A Case Study Of FedStats*, Ceaparu I, IT&Society, Volume 1, Issue 3, Winter 2003, Pp. 1-17.

²⁰ *Surfing with Ed on the Internet*, Swires-Hennessy E, monthly articles 1998-2006 and Edition 100, December 2006.

31. This is an important step. But to maximise the public benefits from the changes brought about by the Internet it is necessary to go further. In some cases, producers of official statistics have done so, and provided users with the opportunity to tailor official statistics or to produce customised tables online (for example, with benefits data on the Department for Work and Pensions website or the personalised mapping tools on the Environment Agency website²¹).
32. A slightly different example is provided by the recent introduction by ONS of a personal inflation calculator²² that enables users to enter their own expenditure to calculate their own inflation rate, based on movements of the retail prices of their personal ‘basket’ of goods and services. By so doing, ONS will help users better understand how the retail price index is compiled and how inflation rates can differ from person to person.
33. Meeting the needs of the Internet user is not just a case of putting the information onto a website as facsimiles of paper pages: this common practice often results in users having to type the numbers again into software for analysing the data. Information suppliers also need to think about the structure, and number, of websites, and about issues of website design. While not aimed specifically at statistical websites, the Transformational Government Strategy²³ takes a customer-centred approach to government websites and plans to rationalise their number, migrating content into DirectGov and Business Link websites. Research into DirectGov found that a substantial proportion of respondents (83 per cent) thought it a “good place to start” and felt it to be “trustworthy”.²⁴
34. ONS is undertaking its own usability research,²⁵ developing user *personas* in order to ensure that key needs are met. The research findings will inform the ONS website redesign due to be launched in stages beginning in 2008.

²¹ *DWP Tabulation Tool*, Department for Work and Pensions, <http://www.dwp.gov.uk/asd/tabtool.asp> and *What’s in Your Backyard?*, Environment Agency http://www.environment-agency.gov.uk/maps/?lang=_e

²² *Personal inflation calculator*, ONS, January 2007 <http://www.statistics.gov.uk/pic/>

²³ *Transformational Government Strategy*, Cabinet Office, 2005.

²⁴ Research showed 83 per cent thought DirectGov a “good place to start”; 79 per cent feel it is trustworthy. *Transformational Government Annual Report 2006*, Chief Information Officer Council, January 2007.

²⁵ *Office for National Statistics i-cessmination project*, Simonon S, presentation at Statistics User Forum meeting “*Improving Access to Government Data*” (18 January 2007).

SECTION 3: THE ACCESSIBILITY OF UK OFFICIAL STATISTICS

35. Working with Ipsos MORI, the Statistics Commission has tested the ease of accessing and using statistics from official websites. Improvements in the accessibility and ease of use of official statistics are a clear priority for the user community, some of whom have been in formal correspondence with the Statistics Commission regarding accessibility issues – for example, around the Expenditure and Food Survey, or as manifested by the priorities for the Statistics User Forum. In a consultation organised by the Commission in 2004,²⁶ Statistics User Groups listed issues around accessibility amongst their top priorities. A particular concern has been the need for the less experienced user to have easy access to information about what is available.
36. Accessibility of statistical data has been a recurrent theme in Statistics Commission reports. The Commission's 'user perspectives' reviews of health²⁷ and schools education statistics²⁸ indicated that accessibility of data was an important issue for users of the information. As long ago as 2002, the Commission carried out a specific review of the accessibility of transport statistics,²⁹ which raised a number of similar issues. In a more recent (2005) report,³⁰ the Commission expressed concerns about whether official statistics were keeping up with the changing needs of users from different sectors, about the frankness and fullness of the commentary that accompanies the figures, and about communication with users of statistics and the public.
37. This report focuses on issues around data accessibility – how easy it is to find relevant and reliable statistical information. It also encompasses issues around the provision of adequate metadata and presentation format. In so doing, we draw a distinction between 'data accessibility' and 'Web accessibility', the latter refers to the usability of websites – whether they are easy to navigate, or whether they have been appropriately adapted for disabled users, etc. Web accessibility is not the focus of this report.

²⁶ *Initial Analysis of User Group Priorities*, Statistics Commission Meeting 8 July 2004.

²⁷ *Enhancing the Value of Health Statistics: User Perspectives*, Report No 21, Statistics Commission (2004)

²⁸ *Schools Education Statistics: Users Perspectives*, Report No 26, Statistics Commission (2005)

²⁹ *Access to National Statistics on Transport via the Web*, Report No 6, Statistics Commission (2002)

³⁰ *Official Statistics: Perceptions and Trust*, Report No 24, Statistics Commission (2005)

Research we commissioned

38. We wanted to find out how easy it was for non-subject experts to find specific statistical information on the Web, and to review how well the producers of official statistics are responding to the opportunities of the web format. Following an internal pilot study to test the feasibility and usefulness of the approach, we commissioned mystery shopping research to simulate the experience of people ranging from novices to experienced researchers looking for statistics about topical issues.
39. The topical issues were based on anonymised questions asked of statistical researchers in the House of Commons Library over the three months or so preceding September 2006.³¹ A number of the questions asked for statistics for England, Wales, Scotland and Northern Ireland which entailed looking at the multiple websites of devolved administrations.
40. The mystery shopping research was conducted by Ipsos MORI across the UK in October-November 2006. Research was web-based, using a tracker program to capture the facts about the searches and focus groups to explore the experience.
41. In tandem with the mystery shopping, we commissioned (also from Ipsos MORI) a review of departmental policies in respect of the dissemination of statistics via the Web. This review looked at the procedures for data dissemination in the main government departments (defined in terms of numbers of statistics published) as well as the policies underpinning these procedures; departmental perceptions as to who their key users are; and the extent to which user feedback is sought and used.

Research findings

42. Ipsos MORI's report, attached at Annex 2, covers both the mystery shopper exercise and the review of departmental dissemination policies. In the following section, we highlight some of Ipsos MORI's key findings and draw some conclusions, taking account both of Ipsos MORI's key findings and of the contextual information and issues raised earlier in this report.

³¹ See Annex 2, page 71 for the questions researched in the mystery shopper exercise

User experience

43. The mystery shopper exercise highlighted the difficulties of searching for statistical information through Government websites. Participants found Google much the easiest route to information, whether or not they were experienced researchers. Overall, fewer than half the researchers judged information to be fairly easy to find and amongst novices this fell to one third.³² This was partly a problem of not knowing where, among government websites, to start searching for the statistics requested. (DirectGov – the government’s preferred site for access to government services and information – does not itself offer statistics and is not specifically designed to link to statistical information. The National Statistics site only covers the 200-odd statistical series produced by ONS,³³ although there are some links to statistical information on other government departmental sites.) Part of the difficulty was also due to the limitations of the search engines on government websites.³⁴ The ease and speed of finding the data varied according to topic.³⁵ Web design showed little consistency and better site map or directions would have helped.³⁶
44. Whilst the average time taken to find the target information was consistent between the groups at around 15 minutes, the range varied from 8 to 26 minutes. Research initiated from Google took, on average, 33 page views compared to 39 for research that started from the DirectGov site; the qualitative assessment of participants was that Google was more intuitive and easier to use.³⁷ However, Ipsos MORI also reported that researchers were more focused on finding information from reputable sources while novices trusted a wider range of sources.³⁸ Ipsos MORI noted that the overwhelming majority of mystery shoppers did not appear to learn search strategies during the course of the exercise. One participant commented, however, that when she began to think like a producer of statistics rather than as a user it was easier to find data.³⁹

³² Annex 2 – Ipsos MORI report, pages 46-47.

³³ Of some 1,000 UK statistical series designated as National Statistics (ie those which must adhere to the National Statistics Code of Practice), 240 are produced by the Office for National Statistics (ONS), headed by the National Statistician. Some 360 series are produced by other central government departments and agencies and nearly 400 by the devolved administrations.

³⁴ Annex 2 – Ipsos MORI report, page 47.

³⁵ Annex 2 – Ipsos MORI report, pages 48 and 53.

³⁶ Annex 2 – Ipsos MORI report, page 47.

³⁷ Annex 2 – Ipsos MORI report, page 53.

³⁸ Annex 2 – Ipsos MORI report, pages 59-60.

³⁹ Annex 2 – Ipsos MORI report, page 54.

45. One explanation for the consistency in time taken by novices and experienced researchers may be that the latter tended to check data against other information on a site and to look more closely at definitional and source explanations. As a result, 54 per cent of experienced researchers were confident in the data compared to 31 per cent of novice users.⁴⁰
46. One website which attracted praise was that of the Scottish Executive.⁴¹ But, in general, there was widespread dissatisfaction with aspects of the presentation of statistics on Government websites (including ONS). In particular the ‘shoppers’ did not like data to be embedded in large text files such as pdfs. They wanted ‘easy to read’ charts, bullet points summarising the key trends, graphics and small tables with headline figures. In other words, they wanted products tailored for use on screen with a facility for data manipulation, and not digitalised reproductions of paper documents.⁴²
47. Statistics were not always calculated in the way that might be expected and the reasons for them being presented in a certain way were not always apparent – even to those who read the technical notes. Often, important definitions and qualifications were to be found buried in the pdfs of paper publications placed on websites.⁴³ This suggests that departments need to do more in the way of exploiting web technology to find ways of attaching key interpretative information to the actual statistics.
48. Novice users in particular would have preferred a hierarchical presentation of data that allowed users to “drill down” from headline figures and commentary. Unexplained scientific terms, or statistical or government jargon, often got in the way of comprehension.⁴⁴

Departmental variations in policy and practice

49. The interviews by Ipsos MORI revealed that all eight departments producing the bulk of statistics aimed to meet the standards for availability of statistical data set out in the relevant protocols of the Code of Practice for National Statistics (attached as Annex 1). But that appeared to be the start and end of it – no department had a separate and distinct policy on statistical dissemination.⁴⁵ Yet, although departments all follow the same formal policies, there is in practice a good deal of variation in departments’ approaches to the

⁴⁰ Annex 2 – Ipsos MORI report, page 60.

⁴¹ Annex 2 – Ipsos MORI report, page 44.

⁴² Annex 2 – Ipsos MORI report, pages 52 and 60.

⁴³ Annex 2 – Ipsos MORI report, pages 46, 63 and 64.

⁴⁴ Annex 2 – Ipsos MORI report, page 59.

⁴⁵ Annex 2 – Ipsos MORI report, page 41.

dissemination of statistics on the Web. This in part reflects different degrees of involvement of other experts (Web, communications, etc) and different perceptions about the “ownership” of official statistics.⁴⁶

50. Hence, the protocols have to be regarded as setting some minimum standards for the publication and presentation of statistics in general – but no more. The specific opportunities and challenges of the Internet are not covered by the Code of Practice. By and large, departments appear to have shown limited ambition in responding to the medium.⁴⁷ As Ipsos MORI observe, “the people who control that [statistical] data are still applying a paper-based vision to the Internet”.⁴⁸
51. Government made a bold start in 2002 when it announced that the principal vehicle for releasing statistics would be the Internet, and that they would be free of charge. This contrasts with the situation where a number of government departments and agencies operating as Trading Funds charge for their services. Perhaps, however, and perversely, the very existence of the Code of Practice may have hampered further developments in adapting presentation to the new publication medium, as responsibility for the design and practices of Internet statistical release remained with statisticians whose priorities were often internal. The message is clear: to maximise the public use of and benefit from the investment in official statistics, government statisticians need to do better in presenting data, making them easier to find and use, and employing new ways to make official statistics accessible to the expert and non-expert user alike.

Becoming more alert to external users

52. The Chair of the government’s Advisory Panel on Public Sector Information (Professor Richard Susskind) has commented in relation to the Transformation Government programme that “...many, but not all, knowledge management initiatives within the public sector are almost exclusively inward-facing, that is, devoted to improved performance and efficiency internally”.⁴⁹ Government statisticians are perhaps more outward-looking than some other parts of government – but they still tend to see the key users of their statistics as those specialists and experts, more often than not elsewhere in government, with whom they have regular contact.

⁴⁶ Annex 2 – Ipsos MORI report, page 43-44.

⁴⁷ Annex 2 – Ipsos MORI report, page 45.

⁴⁸ Annex 2 – Ipsos MORI report, page 64.

⁴⁹ *APPSI Response to Transformational Government*, letter from R Susskind, 1 February 2007.

53. This is borne out by the Ipsos MORI discussions with departments which indicated that key users were usually seen as internal to government or drawn from bodies that had frequent interaction with the department concerned such as local government, academia and large businesses. Moreover, information providers often seemed to expect those using the data to be specialist analysts rather than those without technical training. Some interviewees expressed a keen interest in serving the needs of business and of the media acting as an intermediary and disseminator of official statistics. However, budgetary constraints, organisational pressures and a lack of political sponsorship for statistical initiatives towards these groups were often cited as barriers to progress.⁵⁰
54. Looking at the international picture, our impression is that countries are increasingly accepting the responsibility to make statistics publicly available free of charge. But there is often an implicit assumption that the public is being given access to the information which is needed by central government, rather than access to a statistical service designed to meet a wider set of needs in the public interest. In this respect, the clause in the Statistics and Registration Service Bill which emphasises the importance of public good is much to be welcomed.
55. In contrast to this inward-focused approach, a recent Statistics Commission report on the uses made of official statistics⁵¹ describes the wide range of uses of the statistics made by businesses and organisations beyond government and concludes that (despite the problems of access identified above), “the range of statistics on which decision-makers rely is as wide among users outside government as it is among those inside”.
56. Ipsos MORI commented that, whilst specialist user feedback is in some cases assessed and actioned in detail by departments, the handling of more general feedback seems to be patchy and concentrated on the impact of new or *ad hoc* data releases.⁵²
57. Not only has the Internet widened the range of users of statistics, it also has the potential to change the nature of the transaction between user and provider in a fundamental way. For example, the growing expectation of Internet users that they can interact with authority in real time – witness the recent development of television viewer participation through comment and photographs of news events or the volume of petitions on the No. 10 website. The scope for statisticians to interact with users of their data and to facilitate the extended use of their data sets has greatly expanded, as have user expectations.

⁵⁰ Annex 2 – Ipsos MORI report, page 40.

⁵¹ *Use Made of Official Statistics*, Report No 33, Statistics Commission (2007)

⁵² Annex 2 – Ipsos MORI report, page 43.

Website design

58. Departments differed in their approaches to web publication of statistics. Ipsos MORI found that accessibility of statistics was improved where communications staff were involved in the dissemination of data, or where outsourced web publishers were used. However, they reported a sense that statisticians were reluctant to involve others in the process of web publication of statistics.⁵³
59. This desire to remain totally in control of data and their interpretation illustrates a dilemma for professional statisticians. On the one hand they want their data to be used – unused data are worse than yesterday’s news. On the other hand they are only too aware of the qualifications and caveats that attach to what are usually estimates of a largely uncertain quantity. Wrongly interpreted data could have serious consequences. Ipsos MORI investigated the scope for a ‘one-stop shop’ for statistics but found that statisticians were not generally in favour of the idea.⁵⁴
60. The Commission believes this desire to prevent misuse should not justify a monopoly on interpretation of data, still less on involvement with the design of how data are disseminated. There would appear to be substantial potential gain from a more open collaboration between statisticians and those with other skills such as marketing, communications and web design. The work of Surowiecki⁵⁵ and the worldwide success of Wikipedia may portend a change towards wider democratic participation in the interpretation and influencing of statistical priorities.

Section 4: Conclusions and recommendations

61. The governance of UK official statistics is presently in flux. We look forward to a new Statistics Board, reporting to Parliament, as proposed in the Statistics and Registration Service Bill currently going through Parliament, and accordingly, we address these recommendations to the new Board. In so doing, we recognise that the Board will decide for itself how it will operate and that, as we finalise this report, Parliament has not decided how the Board will be held accountable.

⁵³ Annex 2 – Ipsos MORI report, pages 43-44.

⁵⁴ Annex 2 – Ipsos MORI report, page 44.

⁵⁵ *The Wisdom of Crowds*, Surowiecki J, Little Brown, 2004.

62. We therefore present our recommendations in the form of eight principles, which we believe should determine future Internet dissemination policy for UK official statistics.
63. Statistics are collected, compiled and published in order that people may use them. We believe that the publishers of official statistics should be doing whatever they can to encourage their use. So our first principle of statistical dissemination is:
- Principle 1: **Statistics are collected to be used and as wide a use of them as is possible should be encouraged**, including the re-use of raw data for research outside government.
64. This report has described the major changes brought about by the Internet. UK government statisticians have readily embraced the Internet as a vehicle for publication of statistics, but have been slower to adapt their presentation and publication policies to the new medium. We believe that they need to be more ambitious. Our second principle is:
- Principle 2: Since the most satisfactory forms of data provision are still evolving, **UK government statisticians should adopt an exploratory and experimental approach to dissemination and access to statistical data through the Internet.**
65. A key finding of Ipsos MORI's review of departmental dissemination policies was that, where departmental statisticians had involved web professionals in the design and presentation of their statistical websites, those sites were noticeably more user-friendly. Our third principle recognises this:
- Principle 3: **Government departments that publish official statistics should seek the full involvement of other web professionals in the presentation of statistical data on their websites.**
66. Our fourth principle looks forward to the future. The Internet has transformed the ways in which information, including statistical information, is disseminated and accessed – but that transformation may be as yet far from complete. The publishers of statistics need to keep accessibility issues under continual review:
- Principle 4: **Government departments that publish official statistics should recognise that web design and web culture are still developing and should set up an appropriate mechanism to keep accessibility issues under review.** This might take the form of a technical advisory panel, with membership drawn from external user expertise such as resides in user-centred website design, communications experts, the Statistics User Forum (SUF) and the House of Commons Library.

67. As our first principle emphasises, statistics are for their users. In designing a statistical website, the first concern should be meeting the needs of users and potential users. This is our fifth principle:

- Principle 5: **User needs, interests and capabilities should determine the design and operation of statistical dissemination over the Internet.** This necessitates interactive engagement with users and active pursuit of feedback plus better search engines (possibly in co-operation with commercial operators). Users of government statistical websites should not be expected to have a working knowledge of government departments or of ‘who produces what’.

68. Website design is important. It is not sufficient to simply download a set of statistical publications and releases designed to be read as ‘paper’ products onto the department’s website. Statistical dissemination through the Web should be specifically designed for the Web – this is the message of our sixth principle:

- Principle 6: **Statistical products should be specifically designed for the Web.** The Internet brings a new dimension to the relationship between producers and users of statistics. It has transformed the way that people look for information and want to access information.

69. Our seventh principle builds upon the fifth (‘design for users’) and the sixth (‘design for the Web’). It would require the publishers of official statistics to design their web-based products with the aim of making them accessible to all users:

- Principle 7: **Data should be presented in a layered or hierarchical way to allow users to drill down to the level of detail they desire.** Tables, charts, maps and online statistical programs for manipulating data should be increasingly the norm. Guidance on definitions, sources and methods, data quality and interpretation should be an integral part of dissemination (possibly in the form of Frequently Asked Questions).

70. The mystery shopper research suggests that official statistics are not that easy to find. One reason is that people do not know where to start looking – the National Statistics site may be the place to go for ONS statistics, but only around 20 per cent of official statistics are produced by ONS. Our final principle looks to correct this:

- Principle 8: **There should be one point of entry – a government statistics portal – giving access to official statistics across the UK government and those of the devolved authorities.** This portal would link to all government statistics sites, and include a search engine which operates seamlessly over all those sites.