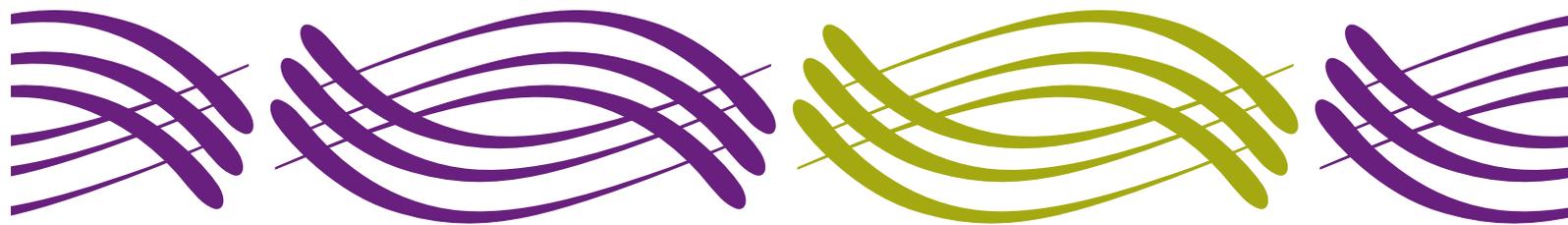


Statistics Commission



Report No. 33

The Use Made of Official Statistics

March 2007

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Report by the Statistics Commission

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# Foreword

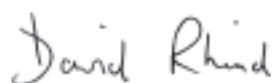
Official statistics are not just a record of our economy and society. They are a tool used in decision-making inside and outside government. For that tool to be effective it must be designed to meet the needs of users. If a charity uses official figures about local areas to target its resources, it is doing more than managing its own business. It is contributing to the well-being of society and creating what we call in this report 'public value'. The cost to the public purse of collecting statistics is well understood in government. The broader value of the product is not.

If the statistical product is unsuited to the needs of a user, to the charity in the example, that bit of the public value will be lost and we will all be the poorer. Users of statistics inside government have direct access to the statistical producers and can make their needs known. Those outside government do not find this so easy.

The Statistics Commission has a particular role to help ensure that the needs of non-government users of statistics are recognised and taken into account. This research sets out to discover how and why users outside government use official statistics. It also points to the nature of the public value associated with that use of the figures.

What emerges from this study is that a remarkable range of use is already made of official data in decision-making but that there is scope to do more to meet users' specific needs and so unlock the value of the information already available. Our conclusions are based in large part on research carried out on our behalf by Ipsos MORI. However we have placed our own emphasis on specific points, taking account of the Commission's other research, and the potential contribution of the new Statistics Board that will be set up once the Statistics and Registration Service Bill has completed its passage through Parliament.

I would like to thank all those who contributed to this report, especially Commission member Colette Bowe, who chaired the project board, and Suzanne Hall and Andrew Johnson from Ipsos MORI. We are immensely grateful to all the interviewees who gave their time so willingly.



Chairman, Statistics Commission  
March 2007



# **PART 1**

## **The Use of Official Statistics in Decision-Making**

**Report by the Statistics Commission**



## Introduction

1. This report looks at the use made of official statistics by public and private sector organisations. It considers the extent to which those statistics influence decision-making and provides examples of specific uses. It also looks at the public value derived from these uses, and the implications for statistical planning and governance.
2. We recognise of course that individual people, as opposed to organisations, also make use of information derived from official statistics; not least when they decide how to vote in elections and otherwise contribute to the democratic process. Whilst that use is of undoubted importance it is not within the scope of the current review.
3. Part 1 is the Commission's own report. It builds on work carried out by the Commission secretariat and draws on a report, *The Use Made of Official Statistics*, prepared for the Commission by Ipsos MORI. That report forms Part 2 and is based on interviews with a selected sample of public (non-central government) and private sector organisations. Ipsos MORI also conducted a literature review (Part 3). The Commission's earlier research study forms Part 4.
4. Finding out more about the use of official statistics outside government has been a long-standing goal of the Commission. Prior to embarking on the research reported here, we had some knowledge derived from previous work, from our contact with users, and from our day-to-day business. So we were expecting to find a diversity of users, and uses, of statistics from fields such as education, health and crime. But, as far as we were able to establish, few specific examples were readily available from government departments.

## Conclusions

5. The research by the Commission and Ipsos MORI found extensive use of official statistics in decision-making in public, voluntary and private sector organisations in the UK. The nature of the statistical influence on decision-making varies, from sketching in a social and economic backdrop against which investment decisions might be made to being an integral and essential element of the decision process – for example, in formula-driven allocation of funding to services where a change in the relevant statistics can lead directly to a change in financial allocation.
6. Statistics are used in marketing, resource allocation, monitoring, policy development, benchmarking, targeting, lobbying, bidding, planning services and for internal research purposes. Such use in turn influences a multitude of less obvious decisions about matters as diverse as stock for supermarkets,

location of cash machines, fashion trends, where to situate services – for example the location of the Connexions Service (see Part 4).

7. Although some sources of statistics such as the Population Census are particularly widely used, our impression is that the range of statistics on which decision-makers rely is as wide among users outside government as it is among those inside.
8. Not surprisingly in view of the points above, official statistics are highly valued by decision-makers. The research suggests that they generally perceive them to be credible and rarely carry out independent checks on accuracy prior to use (Part 2, section 6). Statistics produced by the Office for National Statistics (ONS), and other major departments are often considered to reflect ‘quality and rigour’ (Part 2, section 1.3) and the ONS name is considered to carry with it assurances of reliability and credibility (Part 2, section 2.1).
9. Nevertheless there are aspects of official statistics that are identified as deserving attention. Some specific conclusions from the research are:
  - There is a need for government, including the devolved administrations and the future Statistics Board<sup>1</sup>, to **improve the accessibility** of existing official data to meet a wider range of user needs and encourage future use. Ways to do this suggested in the research included simplifying the data structure, reducing the volume of data provided within datasets, and improving online access, especially the search facility on websites. **Improving the timeliness** of some data provision would also help many users. There is a strong perception amongst decision-makers outside government of slow dissemination of official statistics by departments (Part 2, section 2.2).
  - **More effective engagement of users** by government departments in consultation exercises and **improved communication** between producers and users would enhance mutual understanding of the pressures and constraints faced by each group (Part 2, section 5.4). The challenge for producers of statistics is to ensure that an understanding of the needs of all users, not just government departments, is able to influence future development of statistical services.
  - **Good statistical planning arrangements** which identify and take due account of all users’ needs would help to maximise the public value of official statistics (Part 2, section 5). This research indicates that the value of statistics – that is their value in informing and influencing decisions which in turn benefit society – could be enhanced through more systematic planning. In the UK, unlike in a number of countries where

<sup>1</sup> A Statistics Board will be established under the provision of the Statistics and Registration Service Bill

statistics are managed by a central authority, statistical planning is dispersed across many departments and all four UK administrations, with relatively little systematic engagement with non-government users – and little direct account taken of their needs.

- Better planning might also benefit users inside government, for example by helping to avoid the hazards of setting targets for services without having the statistical information required to monitor or deliver the target (see Part 4). In this research, some respondents felt that when targets were set, for example to increase participation in sport, little planning had gone in to how to measure or collect the data. Energy retailers were expected to contribute towards meeting the government target to reduce fuel poverty through investment in energy efficiency measures that they are obliged to undertake under the terms of their supply licence – but did not have the data (eg on the location of ‘fuel poor’ households) that would enable them to do so effectively.

## Public value

10. Decision-makers interviewed for this research were already convinced about the public value of official statistics in a general sense; they were equally clear that the quality of the services their organisations provide would suffer if their decisions were not informed by statistics (Part 2, section 3.1). But it is important here to be clear about what the Statistics Commission means by ‘public value’. The concept has been the subject of academic work in a number of fields. Within government, the most widely used definition originated from a 2002 discussion document produced by the Cabinet Office. It regards public value as “the value created by government through services, laws, regulation and other actions”<sup>2</sup>. In our own use of the term we are stressing the value to society of the decisions that are, or might in future be, informed by official statistics. This is consistent with the Cabinet Office definition. The service in question is the provision, mostly free of charge, of official statistics to people who can make use of them.
11. We also need to be aware of the *potential* public value of official statistics, that is their potential to provide a good basis for effective decision-making by organisations or individuals, regardless of whether they are currently being used effectively at present. The sorts of decisions in question might range from allocating resources within a local authority, changing bank interest rates, deciding on the location of a supermarket, setting premiums in the insurance industry or choosing a school for a child (see Part 4). Such decisions affect us all and it is therefore in the interests of society as a whole that they be informed by the best information available.

<sup>2</sup> Kelly G, Mulgan G, Muers S (2002). *Creating Public Value. An analytical framework for public service reform*. Strategy Unit. Cabinet Office.

12. Were a balance sheet for official statistics to be prepared, the costs would be clear enough. The benefit, or value, would however be found to be much more diffuse and harder to treat in traditional accounting terms. Given this, it is possible that the vital asset that official statistics represent is undervalued in public sector planning processes. And we observe that little systematic consideration is given to how the public value could be maximised<sup>3</sup>.
13. The concept of public value has gained currency in recent years with papers on its application in the arts<sup>4</sup>, sciences<sup>5</sup> and education fields<sup>6</sup>. Recently the BBC introduced a Public Value Test as a key component of a new system of governance which took effect in January 2007. This measures the public value which would be created by a service, and comprises five elements<sup>7</sup>. However there has been little published material about the application of public value (in a non-monetary sense) in the context of official statistics.
14. Accounting (albeit informally) for public value potentially offers a new approach to determining priorities for official statistics – introducing a framework for measurement which has user requirements at the centre. We would like to see progress towards a statistical planning system which builds on this conceptual framework. This means planning would involve genuine engagement with many users, taking account of their needs and reflecting them, as much as possible, in service delivery.
15. We believe it is important to move away from a culture which seems, almost instinctively, to prioritise the use of statistics by central government, important as that clearly is, above the use by large numbers of local, voluntary and private sector bodies. Of course, these two constituencies often require the same information but there can be some significant differences of emphasis. For example, the local user may care more about having local information and less about completeness or consistency of national coverage.

<sup>3</sup> We are aware of the scope for different approaches in this area. For example, the Bank of England uses a formal cost-benefit framework to assess additions to its regular data collection. However, the benefits described in the framework, namely policy use, policy relevance, value added, quality, meeting international standards, are not as broad as our use of the term 'public value' in relation to official statistics. We consider this to be the value to society as a whole of the decisions that are, or might be in the future, informed by official statistics.

<sup>4</sup> Oakley K, Naylor R, Lee D (2006). *Giving them what they want: the construction of the public in public value*. Burns Owen Partnership Ltd.

<sup>5</sup> Wilsdon J, Wynne B, Stilgoe J (2005). *We need to infuse the culture and practice of science with a new set of social possibility. The Public Value of Science or How to ensure that science really matters*. Demos.

<sup>6</sup> Grigg P, Mager C (2005). *Public value and learning and skill. A stimulus paper*. Learning and Skills Development Agency.

<sup>7</sup> These are: fit with purposes, quality, impact, reach and cost, and value for money.

## Supporting the new Statistics Board

16. The Statistics and Registration Service Bill, which is expected to pass into law in 2007, will create a new Statistics Board responsible for official statistics. The Statistics Commission believes that this offers a real opportunity to develop further the ways in which user needs are identified and incorporated in government-wide planning of statistical services.
17. Some issues which we propose for consideration by the Board are:
  - How best to **improve statistical planning across government departments** in order to maximise the public value of official statistics. Current perceptions amongst decision-makers are that planning is *ad-hoc* and contained within departments rather than being the glue that holds the wider statistical system together. The way forward here lies in the development of a practical application of the concept of public value to statistical planning. This could provide a means of including in the planning the more intangible aspects of value that do not fit neatly into a cost-benefit analysis.
  - How to **improve consultation with users** in order to help identify uses, and potential uses, that offer enhanced value. It will be important to engage in different types of consultation to seek out occasional users, and establish new networks rather than engaging in 'more of the same' consultation with existing well-known users.
  - How to **improve communication with users** in a way that recognises that not everyone speaks the statistical language fluently and that there is diversity among users in terms of skills and confidence in using statistics. The utility, and value, of official statistics would undoubtedly increase if users had a greater understanding of the data through better explanation of the main messages.
  - How best to **enhance the accessibility of data** by improving statistics web sites and the structure of the data on those web sites. We will comment further on this in a forthcoming Statistics Commission report on the *Accessibility of Official Statistics*, to be published in spring 2007.
18. The Commission intends to return to all these issues in its report *Official Statistics: Public Value and Public Trust*, scheduled for publication later in 2007.

## Some examples

19. The following five case studies illustrate how official statistics are used and for what purpose. They demonstrate the essential and extensive role official statistics play in decision-making in the organisations in our research. Further case studies are found in Part 4.

### Powergen

- Powergen is part of E.ON – a large power and gas company based in Germany. It is one of the UK's largest energy suppliers, the second largest electricity generator and owns the second largest distribution network. It is governed by a board of directors.
- The Customer Insight Team uses many official statistics (eg Census data, Expenditure and Food Survey data, DWP benefit claimant information, Index of Multiple Deprivation) along with commercial and internal data sources.
- The data are used to monitor customer profitability and to model customer credit risk to the company. Census data on unemployment and morbidity are combined with internal data on energy consumption to indicate areas where people are at home because of unemployment (temporary state) and areas where people are at home because of long term limiting illness (more permanent state). The latter constitute more of a credit risk as ability to pay might be more limited. Such information is used to monitor trends to inform business decisions.
- Another example is the internal research carried out to try to target the 'fuel poor' to encourage their take up of energy efficiency measures (eg loft insulation). The research combined internal data (eg number of customers, individual energy consumption, comparative neighbourhood consumption data and past energy efficiency take up) with commercial and official sources (eg Census for information on central heating (amongst others), Index of Multiple Deprivation, benefits claimants and income estimate data). This found that take-up of promotional energy efficiency measures was weighted towards rural and/or more prosperous areas. The research provides a basis for trying to identify disadvantaged households where take up is low but need might be high.

## Cambridgeshire County Council

- Cambridgeshire County Council serves a population of 570,200. It has responsibility for providing a range of services to local people including education, library and heritage, social care, roads and traffic management, strategic planning, trading standards and waste disposal. It is governed by a cabinet – which is the main decision-making body.
- Official statistics used include a wide range of economic statistics (Annual Business Inquiry (ABI), Annual Survey of Hours and Earnings, Gross Value Added figures) and socio-economic statistics (Labour Force Survey, Index of Multiple Deprivation 2004). Administrative data are also used in the form of benefit data from DWP. Census and Neighbourhood Statistics data are also widely used.
- The data are used to develop policy, develop strategy and monitor performance. ABI is used for planning land use and monitoring economic strategies. Education, benefits and labour market data are used to profile areas, allocate resources and provide services eg location of a Connexions Service.

## Tesco

- Tesco is the largest supermarket in the UK measured by reported turnover. It employs over 260,000 staff and has over 1,800 stores. It has a board of directors for decision-making.
- The type of data used includes Census data for demographic information and the Expenditure and Food Survey (EFS) data for expenditure information and travel survey data for information on drive times. Extensive use is made of internal data eg club card information to complement the official sources.
- Examples of the use made of data include decisions over store location (the potential of new out of town stores are analysed by examining populations within 15 or 20 minutes drive away), store content (Census data on ethnicity and EFS data on expenditure, along with club card information, are used to stock shelves) and targeting members of the public ('Buy One Get One Free' flashes are used on leaflets in less affluent rather than more affluent areas).

## Visit Wales

- Visit Wales is the Welsh Assembly Government's tourism team, within the Department of Enterprise Innovation and Networks. Its role is to deliver Assembly strategy in respect of tourism, support the tourism industry and to provide the appropriate strategic framework within which private enterprise can achieve sustainable growth and success. It is quite a small organisation.
- The official statistics used include Census data and the International Passenger Survey (IPS). The UK Tourism Survey data is also used but these are not official statistics.
- The IPS is used to monitor volume and value of international tourism. It gives a profile of the average traveller to Wales which is then used in marketing campaigns abroad to disseminate different messages for different populations. For example the Australian market is indicated to be young and active and so in promotional leaflets Visit Wales highlight the outdoor sports and back-packing opportunities in the country.

## Competition Commission

- The Competition Commission is an independent public body established by the Competition Act 1998. It conducts in-depth inquiries into mergers, markets and the regulation of the major regulated industries. The Commission consists of about fifty members who are supported by staff.
- Official statistics are often used in the internal research into markets and to inform decisions on whether mergers should go ahead. These included Census, International Passenger Survey, Family Resources Survey and Annual Business Inquiry data, among others.
- An example of how the data are used as background information is on the acquisition by Morrison of Safeway supermarkets. Census data, population density and travel time isochrones were used to determine whether any particular group of people would be disadvantaged as a result of the acquisition. This knowledge, along with many other data sources, contributes to decision-making on whether mergers and acquisitions should proceed or not, and on whether markets are working for customers.

## **PART 2**

### **The Use Made of Official Statistics**

**Report to the Statistics  
Commission by Ipsos MORI**



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## Publication of data

As the Statistics Commission has engaged Ipsos MORI to undertake an objective programme of research, it is important to protect everyone's interests by ensuring that the research findings are accurately reflected in any press release or publication. As part of our standard terms and conditions, the publication of the findings of this report is therefore subject to the advance approval of Ipsos MORI. Such approval will only be refused on the grounds of inaccuracy or misrepresentation.

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## Background and objectives

One of the key aims of the Statistics Commission is to ensure that official statistics are responsive to user needs. However, there is a paucity of data available regarding how official statistics are used by organisations – particularly outside of government – and the public value derived from them.

As such, the main purpose of this study is to fill these gaps and **determine how official statistics are used in the decision-making process and the value of them in this**. In order to be able to answer this satisfactorily though, it was important to explore other, related, issues including:

- The processes used within each organisation for decision-making;
- How official statistics are used by organisations; for example, what kind of decisions official statistics are seen to be able to help with;
- The extent to which official statistics are accessible to organisations – both in terms of how easy are they to locate, generally, and then understand and interpret;
- The information sources used (including data other than official statistics), how reliable these are perceived to be and the reasons driving this;
- The confidence with which organisations use official statistics; does data alone make for good decision-making or do organisations feel the need to complement these with other evidence and, if so, what form this takes;
- The needs of users of data and an examination of the extent to which the current arrangements meet these;
- The impact of devolution on the quality of decision-making, for example, does an organisation with UK-wide remit find it harder to use statistics that are gathered from all the devolved nations than an organisation that relies on England-specific data alone;
- The value of official statistics both in terms of the decision-making process generally, and furthermore, the quality of the actual decisions made; and,
- What measures need to be put into place – with particular reference to the proposed legislative arrangements – to improve the quality of decision-making in the future and the public value gained.

## Methodology

To enable us to meet the objectives set, we undertook a comprehensive programme of qualitative research. Qualitative research is an interactive process; it seeks not only to highlight what participants think but, furthermore, their reasons for this.

However, there are some qualifications that should be made about the capabilities of this methodology. Qualitative research is intended to be illustrative; it cannot be used to generate statistics and nor can it be said to be representative of the views of any given population – instead it can be said to be reflective. It also deals in perceptions rather than facts (although it should be remembered that perceptions are facts to those that hold them).

In total we conducted 52 in-depth interviews with key decision-makers from the public, private, and voluntary sector (for full details, please see the acknowledgements section).

All in-depth interviews were conducted face-to-face and lasted up to an hour. The interviews were structured by a discussion guide to ensure commonality between them; this can be found in Appendix A2.

## Executive summary

- All decision-makers cite the importance of working from a robust and reliable evidence base. Furthermore, the need for this is perceived to have increased in recent years; high profile scandals have placed pressure on private sector companies to prove their accountability while in the public sector it is imperative to demonstrate that public money is being put to good use.
- The most frequently referenced provider of information is the ONS. This is, in part, due to the high awareness of this organisation; all data users recognise the ONS as a key producer and it often is their first – or indeed only – port of call for information on any given matter.
- Individual government departments are also recognised as key producers of data. Away from the public sector though, research agencies and private companies such as Reuters and Bloomberg are frequently cited as sources of information and are praised for the timeliness of the data they produce. Data intermediaries are also used – especially by those within the health sector.

- Given the importance of official statistics in the decision-making process, those using the information have a number of needs. Firstly they mention the need for accurate and credible data. ONS is praised here; the organisation is seen as a byword for integrity. It is seen to have enough distance from government so as to ensure that the data it produces are free from political interference. There is more scepticism regarding data produced by government departments as these are seen to be used to support particular policies and, thus, the door is perceived to be open to manipulation in their interpretation.
- Having access to data that are timely is also key. There is a strong sense that data produced by both the ONS and government departments are not released quickly enough to meet the needs of decision-makers – the Census is highlighted as a case in point. In many cases this frustration is borne out of the fact that decision-makers do not always need precision – they simply need an indication as to how things are changing. However, those working with long term trends, for example, in the health sector, are of the opinion that official statistics are timely enough for their needs.
- The ability to easily access data is also important, with many using the Internet as their main channel. However, the ONS website, in particular, is the subject of much criticism. It is perceived to be difficult to navigate (due, in part, to the amount of information stored on it) and, linked to this, the search function is not seen to be user-friendly. To mitigate this, many decision-makers simply revert to using alternative search engines, such as Google, to find information. Much of this criticism is borne out of the high expectations that users have of the ONS. Given its reputation for rigour, and the professional standards it sets, users expect this to be portrayed in every contact they have with it.
- Using data that are relevant to the issue in hand is also crucial to decision-makers. On the whole, they state that there is a wide range of issues covered and that, usually, the data already in existence are sufficient to meet their needs. However, a number of perceived gaps are highlighted. These include a lack of data regarding migration, a better understanding of the housing market and figures regarding the level of bankruptcy in the UK.
- There is some concern among decision-makers regarding the geographical scope of the data used with the feeling that *National Statistics* often refer to England alone. This is seen to have been a particular issue since devolution with each of the devolved administrations collecting their own data. What this means for the decision-maker is that they have to collate each dataset, amalgamate it and draw inferences from this which takes a great deal of time and effort. Positively though, a few are of the opinion that the quality of data produced by the Scottish Executive are higher than average and, as such, this might drive up the quality of data production more generally.
- Those working in organisations with a geographically focussed remit, for

example, local authorities and Regional Development Agencies, state that official statistics – while useful in that they provide a national picture – do not enable them to understand what is going on at a local level in the detail that they need. As such, many resort to commissioning their own research to understand this.

- These issues aside though, decision-makers do believe that there is real public value derived from the use of official statistics. In short, data helps decision-makers to understand the world around them which, in turn, enables them to deliver products and services which benefit the general public.
- However, it is thought that the public value of official statistics could be further enhanced so as to deliver maximum benefit to the population. To facilitate this, many call for improved consultation between the producers and users of official statistics. It is thought that by reinforcing a two way dialogue here, the producers will have a better understanding of the needs of users (in terms of what data they want and how quickly they need it) and, vice versa, the users of data will have a greater sense of the constraints and pressures faced by those collating and analysing such information.
- Related to this, it is thought that, looking forward; more attention needs to be paid to statistical planning. Decision-makers are of the opinion that this only happens in an *ad-hoc* fashion at present and that, too often, targets are set before due consideration has been given to how the data to measure them will be collected and analysed. To rectify this, decision-makers would welcome their involvement in the planning process.
- Decision-makers also perceive that it is the right time for changes of this nature to be made. They state that with the moves to make the ONS independent, the chance to influence statistical production in the UK has never been greater. While they recognise that there is much to be pleased with in terms of what data are produced and the quality of them, there is still scope for improvements and decision-makers are keen that their calls for change are acknowledged to ensure maximum value for the public.

# 1 Decision-making in practice

Before exploring how decision-makers use data in their work, it is important to understand something of the decision-makers themselves. Their mindset, experience and background all feed in to how they use data and their perceptions of it. This can be seen as the context that frames the whole research study.

Beyond this though, it is also important to understand where data fit in the decision-making process and the importance attached to them. For many, statistics are seen as key here and, without them, their ability to make sound judgement calls on particular issues would be severely hampered.

## 1.1 The decision-makers

Framing their attitudes to data and how they use it is the background of those responsible for making decisions on behalf of their organisation and, thus, it is important that this is briefly explored before moving on to the main body of the findings.

In the main, the decision-makers we engaged with are not trained statisticians (although a few are) but experts within their chosen sector. They have progressed to such positions of responsibility because of this specialist knowledge about the field in which they work.

However, with increased responsibility comes new challenges; namely making decisions which affect the future direction of their organisations. While many have a strong sense of what they believe to be right in these instances – an intuition based on experience – they understand and agree with the fact that gut instinct alone is not enough by way of justification and that statistics provide the essential backing they need to push decisions forward.

Given though that these people are often not trained statisticians this can impact on how they search for, refer to, and use the data they need. In the first instance, this is discussed at more length in part three of this section. Suffice to say, government (and by association, the ONS) is the most well known producer of information and, as such, this is the first (and sometimes only) port of call for many.

Furthermore, due to their lack of understanding of the statistical system within the UK, there is much confusion about what data are produced by ONS and what are not. Decision-makers' default assumption is that data originate from ONS – regardless of whether they are branded with departmental insignia. In part this is due to the high profile of the ONS. It is well recognised as being a data producer and thus, it is often assumed that it has responsibility for key datasets regardless of whether this is the case or not.

Others, particularly those with more technical know-how, believe the distinction between departmental and ONS statistics is a false boundary and that, actually, it does not matter where the data come from – the interest lies in how they are used. They are of the opinion that drawing this line between the two sources of data can cause problems as both are subject to different quality procedures.

As will become apparent through this report, understanding the decision-makers themselves is crucial in order to gain a rounded sense of how they view and use official statistics.

## 1.2 The importance of an evidence base

All decision-makers are strongly convinced that access to robust and reliable data underpins good decision-making. They state that without knowing the full details of the context in which they are operating their ability to highlight a clear, and appropriate, way forward is hampered.

*“...You need evidence – you need to know what’s going on and you need to be able to see whether or not you’re going to be able to measure whether you’ve made a difference...”*

Furthermore, the need for a strong evidence base appears to have increased in significance over recent years. Partly, this is due to the ease with which they can access data; decision-makers state that technological developments, for example, improved access to the Internet, have enabled them to uncover information relevant to their work with a speed that was previously impossible.

However, there is a strong sense that the prevailing climate in both the public sector and the business world has changed extensively over the past decade. Regarding the former, decision-makers state that the Labour government has placed a great emphasis on the importance of ‘evidence-based’ policies and this attitude has permeated thinking right across the sector. Plus, they make the point that their work involves the investment of public money and, given this, they need to justify what they are doing.

*“...Government statistics make the message much more powerful...they give us credibility as an organisation, to show this is an objective piece of work as opposed to something that we’re making up. If we quote a government department then suddenly that argument has much more weight and it becomes much more credible...”*

With the private sector, decision-makers speak of the influence of the high profile collapse of companies such as Enron in 2001. They state that the fall-out from the subsequent trial has sharpened the focus on the behaviour of companies and thus there is a real need to demonstrate that they are acting entirely properly. They also state how they are accountable to their shareholders and, therefore, in the same vein as those in the public sector feel a real need to be able to justify their course of action.

*"...Post-Enron, companies are far more concerned about accountability and governance so all decisions have to be based on data..."*

However, information alone does not make for good decisions. Beyond this, decision-makers state the importance of having a clear strategy and vision to work towards; without knowing what 'success' should look like, they claim it becomes impossible to make decisions designed to lead to this point. Given this, having a set of clearly defined objectives is critical.

*"...Good decision-making starts with a hatch of objectives..."*

*"...What makes for good decision-making is clarity of the objective of the exercise..."*

Furthermore, decision-makers are quick to point out the merits of working with a skilled and professional team of colleagues. This is particularly true for those in the most senior positions within their organisations, for example, the Chief Executive or Managing Director. They state that they simply do not have the time to be able to involve themselves fully in all decisions that have to be made and, thus, rely on the expertise of others within their team to do this for them.

*"...You need a good working culture of those who are making the decisions..."*

To help facilitate this, there are very clear decision-making structures within each of the organisations we engaged with. All the decision-makers are responsible for referring their most important recommendations on to a higher board for approval. Where applicable, decisions are also communicated to wider groups of stakeholders so as to gauge their reactions before any steps are taken.

*"...At the highest levels, we have a board that will approve decisions...we would go to the board with a series of papers which would gauge their opinions and reactions. And equally, we would do the same with other stakeholders, so by the time you go to the board you're pretty sure that, actually, at the end it's going to get you to the decision you recommend because you've done all the work prior to that..."*

This helps ensure that the decision-making process is both transparent and stands up to public scrutiny. Beyond this though, the referral of such decisions allows for an appropriate system of checks and balances to be put in place.

## 1.3 Sources of data

Obviously, the precise data sources used depend very much on the nature and subject of the issue in question. However, generally speaking, decision-makers turn to a wide range of sources, most prominent of which are that which they class as 'official' statistics i.e. those produced by either ONS or individual government departments.

There are many reasons for this. First and foremost is that this branding is perceived to stand as a byword for quality and rigour. The majority of decision-makers assume that if datasets have been produced by government departments or the ONS then there is no need for them to check them for reliability.

This is particularly true for data produced by ONS as the organisation is perceived to have the distance necessary from government to ensure that its figures are produced without political interference. Furthermore, it is not seen to produce statistics that support a particular argument or policy – it simply collects the data that are of national importance. As a result of this, the majority of decision-makers see no need to question its outputs for integrity.

*"...It's official, so that status is really important to us. The integrity of it is very important..."*

While, as mentioned above, the precise data set used by decision-makers does depend very much on the question in need of addressing, there are certain surveys that are used more commonly than others.

Chiefly, the Census is perceived to have a wide range of applications and is used by the majority of those that participated in this research. It is seen to be the definitive source of information on the population of the United Kingdom and, more importantly, how it is changing. For those in the public sector, information contained in the Census helps them to understand issues around resource allocation and what future priorities should be while for those in the private sector it serves to indicate how the market is developing. Other frequently sources of information include the Labour Force Survey, inflation figures and the Retail Price Index.

Looking more widely across the public sector, individual government departments are also seen to produce a number of useful data series for decision-makers. The Department for Work and Pensions' information on employment figures is cited often, as is its data on the proportion of the population that has a disability. The Department for Transport, the Department for Trade and Industry and HM Treasury are also seen to be key producers of information.

Departmental administrative data are also mentioned. While many decision-makers do use these, it tends to be for more internal purposes, for example, for judging salary reviews, performance bonuses and so on.

*“...The administrative data we use, we use as internal data for auditing of equal pay. That’s the extent to which we use it...”*

As an aside, many are of the opinion that they could do more to utilise the information made available via administrative data. Partly the reason why this is not the case currently, and this is discussed in more detail later on in this report, is that there simply is seen to be too much of it in existence which makes it difficult for decision-makers to get a handle on what is most relevant to them.

*“...It’s potentially a hugely powerful data set that we can do so much with...but in the meantime it is being completely underused...”*

Beyond this though, decision-makers also turn to the private sector to help them in their quest for relevant information. Research agencies such as YouGov, BMRB and Ipsos MORI are mentioned as key sources of data. The virtue of these organisations is that they are perceived to be entirely impartial; to remain in business they need to ensure their data are not only reliable but also independent so as to appear credible and these features are appreciated by those seeking to make decisions.

*“...These companies are above suspicion in a political sense and in other ways. Because, as a commercial imperative, the last thing you would want anyone to say about your research is that it was in anyway skewed or politically tilted...”*

Furthermore, as much of the data produced by these companies is made public, they can provide useful contextual information at no extra cost.

Decision-makers also utilise the services of commercial data providers such as Experian and CACI. While using data sourced from these companies obviously comes at a price, decision-makers do praise it for the fact that it is timely, easy to access and also fills many of the gaps left by official statistics in that, for example, it often details consumer habits and behaviours.

Furthermore, many of those with whom we spoke also mentioned how they have access to their own research departments. They state that they are often required to make decisions over an issue on which there is no currently available data and, thus, they have to bridge this gap themselves. This is particularly true of those organisations whose remit is over a small geographically defined area, for example, local authorities. They state that while surveys indicating what is happening nationally are useful, for contextual purposes, these data do not drill down to the local level that they need in order to make sound policy decisions. As a result, their own research teams work to fill this vacuum.

Much use is also made of data intermediaries. As outlined earlier, many of the decision-makers are not trained statisticians and thus some can find interpreting the data and pulling the key messages from it challenging. Thus, the services of data intermediaries are really seen to add value and to save the decision-makers time in working on this themselves.

Obviously the extent to which data intermediaries are used depends very much on the sector they work in and whether such services are available in this field. One example of good practice here is from the health sector in which many decision-makers state that they turn to the *Compendium of Clinical and Health Data*. This draws together much of the information historically produced by the Department of Health and is seen by decision-makers to be extremely useful. Not only are all the data they need in one place but the added interpretation and commentary adds insight and aids their understanding of the issues in question.

That said though, there are those that prefer to use the data in their raw form. This practice tends to be limited to those who are confident in using and analysing statistics. The reason why they prefer this method of working is that, while they trust the data, they do not necessarily trust the interpretation behind it. Furthermore, sometimes the data are not analysed in a way that is salient to the issue they are exploring. Given this, they prefer to have the ability to conduct the analysis themselves so as to ensure it helps them answer the questions they need it to.

*"...Whatever data, we always go to the source. Always. Because a bitter lesson is that you cannot necessarily rely on a non researcher to be able to make an assessment of whether those statistics were robust enough..."*

## 1.4 An over reliance on statistics?

While all decision-makers are convinced that statistical information is a key component in any evidence base and that having this evidence base is increasingly important in today's socio-economic climate, a few do wonder whether there is an over reliance on statistical data at the expense of other information.

In short, the real value of data is that they can track performance and serve to indicate to decision-makers whether they have met their specified targets or not. While this is, of course, vital, they do not help decision-makers understand what they need to do in order to improve their performance going forward.

As a result, decision-makers state it is important not to lose sight of the power of the spoken word in the form of oral evidence from stakeholders and other interested parties. They recognise that qualitative insight, on first glance, does not seem as powerful or weighty as statistics due, in part, to the smaller base sizes involved.

However, without it, it is impossible to understand why people feel the way they do about a certain issue. Also, in areas where there are no data, anecdotal evidence is the only means by which decision-makers can seek to understand a certain situation without relying entirely on their own gut instinct. Finally, consulting with interested parties helps to generate buy-in; people feel as though their views are being taken on board which can help decision-makers garner good will for the future.

In light of this, decision-makers are keen to ensure that data are not seen to be the only evidence on which they are able to make a decision and, more often than not, try and combine both statistics and anecdote as a means of moving forward.

## 2 User needs

Given the importance of data in the decision-making process, those using them have a number of requirements that they expect from any sources they refer to. Chief among these is that the data are accurate. Other factors of critical importance include timeliness, relevance and geographical scope. These are all discussed in greater detail throughout the remainder of this section.

### 2.1 The reliability and credibility of data

Decision-makers state that it is critical that the data they use are reliable. Given that this information underpins their decision-making, without access to accurate statistics this process is impeded. A few point out that if data are inaccurate they not only run the risk of making an ill-advised decision but, also, jeopardise their corporate reputation – both internally and externally.

To illustrate, decision-makers state how they themselves act as data intermediaries; in order to justify the particular standpoint they have assumed they need to disseminate information to any relevant stakeholders. However, if it later transpires that the data used for this purpose were inaccurate, then their own credibility is called into doubt.

*“...We convey information out to our end users, and if there are some inaccuracies that we have to retract it doesn't look tremendously good on our team. And in some instances that may not be our fault, and don't shoot the messenger so to speak, but we still have a responsibility to make sure that our sources have good integrity, and that are going to be sending things out that we don't have to pull back from...”*

Positively, many decision-makers are of the opinion that ONS data are reliable. It is perceived to be a credible organisation and with enough distance from government to ensure that its figures are produced without political interference. Those with more technical knowledge state that its sample sizes and methodological approach guarantee robust findings.

*“...I've got no evidence, no reason to think that it isn't reliable...”*

Evidence of this is given by the fact that decision-makers rarely 'sense check' ONS data – they just assume it will be fit for purpose. Now for some, this is partly a by-product of the fact that they neither have the time nor the expertise to do this. However, for many, the ONS name carries with it assurances of reliability and credibility and decision-makers see no reason to doubt this.

There is some cause for concern, however. A few decision-makers state that on instances when data are subsequently revised by ONS, this is not made clear enough to users for them to take the appropriate steps in amending their thought processes around a particular issue. Instances of this include changes to the inflation figures, the RPI and, most notably, the 2001 Census.

Linked to issues of reliability are those of credibility. A few decision-makers are less than convinced that the ONS, with its current set up, has the autonomy it needs from government to be able to produce truly impartial data. While there is little suggestion that Ministers directly put pressure on ONS to alter the figures, there is a strong sense among this group that the uses the data are put to (such as performance indicators) twist what they are intended to do. While this group believes that the proposed legislative changes<sup>1</sup> are a step in the right direction towards rectifying this, they are in no way seen to tackle all the factors that impinge on the credibility of ONS's outputs.

The main element they perceive is missing from the proposed legislation is any clause relating to prior ministerial access. A few decision-makers are of the perception that Ministers, in some instances (such as where the data might prove to be inflammatory or contentious), are allowed sight of the data up to ten days prior to its release, and do not understand why this is the case – particularly when set against examples given of other European nations where the maximum time they have to examine data is 48 hours and is often perceived to be no time at all.

These decision-makers are of the opinion that failing to address this issue really will negatively impact on the extent to which they find official statistics to be credible and, furthermore, will negatively impact on the quality of public debate if the Government continues to know the details before the Opposition.

*“...There is this notion that Ministers have got an overriding right to defend...and that just simply makes the process uneven and asymmetrical...”*

Moving away from ONS's outputs towards those produced by government departments, these figures are also deemed to be generally reliable and fit for purpose. Among those with more technical knowledge, especially those in academia and the media, there is some concern that departmental data are not subject to the same rigorous quality checks as National Statistics.

Furthermore, the fact that they are often used to defend policy decisions by government also calls into question the extent to which they are manipulated to suit the argument of the day. These two factors do impinge on their credibility for this audience and thus, they tend to be more circumspect when using data of this nature.

*“...There is an element of managing government statistics to ensure least political embarrassment...”*

<sup>1</sup> Please note that at the time of the research, HM Treasury had not yet announced its response to the consultation period on the proposed legislation for the independence of ONS.

However, on the whole, decision-makers do look on departmental data as a useful and valid source of information to help them in their work.

Perhaps a point worth noting is that while accuracy is, of course, important to decision-makers, many do not see the need for data to be perfect – regardless of source. On the whole, they are interested in indicators and general trends and, for this; they do not need precise figures. As long as they have a sense of how the situation is changing and the general direction in which the issue is moving then, for most, this is enough.

*“...I certainly take the information at face value...in any case; I do believe that you do not have to go down to the very last decimal point. We’re much more interested in general trends – is it going up, is it going down, what is the general magnitude of the figures that you’re talking about...”*

## 2.2 The timeliness of data

Across the board, there is a strong sense that data – particularly those produced by the ONS and government departments – are not timely enough to meet the needs of decision-makers.

The Census is highlighted here as a case in point. While decision-makers recognise that the collation and analysis of these data is a huge undertaking, they feel there is too long a lag before the dissemination of results. The upshot of this is that decision-makers are forced into the position of having to take action when they know they are using data which do not necessarily reflect the world we are living in.

This has a real impact for some organisations, particularly local authorities, whose financial settlement is partly based on Census figures for their locality. They state that while the data are relatively recent, they can be confident that the funds they receive reflect the population they cater for. However, as time passes they are less convinced of this and thus are more likely to doubt the settlement they are awarded. The use of mid-year estimates was not mentioned in this regard.

*“...A lot of decisions are made on the basis of information that comes out of the Census – including our financial allocations. And we all know that because it’s a ten year snap shot that things change in the interim period. So the quicker you get the information out and base a decision on that information while it’s current the better. Decisions that are made on the basis of a Census carried out five years ago frankly become tenuous in places...”*

The Census was not singled out for criticism alone, however. The London Area Transport Survey, which is run decennially by the Strategic Rail Authority, was also mentioned. Decision-makers state that the last wave conducted was in 2001 and, therefore, by the time the next wave is conducted in 2011 the transport system in London will have experienced significant changes such as the introduction of Oyster Cards, the Channel Tunnel Rail Link opening and extensions to the Docklands Light Railway. Therefore, the data being used are not reflective of the situation.

*"...We had the last one in 2001 and the next one won't be until 2011. Already since 2001 we've had a huge amount of growth around Docklands, DLR extensions, significant changes on the Jubilee Line extensions. By 2011 we will have the Channel Tunnel Rail Link opening, East London Line extensions built and running....ten years just feels too long to be honest..."*

Also impacting on timeliness is that a few decision-makers are of the perception that some departmental data are held back for political purposes in that releasing them would damage a Minister's, or even a whole department's, reputation. As such, it is believed that in such instances, departments wait until there are other noteworthy events for the media to comment on and then attempt to release the data unnoticed.

Of course, this issue around timeliness is not seen to apply to all datasets. In contrast, the Retail Prices Index is perceived, by the majority of those that use it, to be relatively timely. In addition, data from commercial research agencies are also praised for the quick turnaround time (though some do recognise that this is a result of smaller sample sizes).

Furthermore, a few decision-makers state that they have no problem working with data that are perceived by some to be out of date. This is particularly true of those working in healthcare. They state that major changes to data series such as mortality rates (and the reasons behind these) occur over such a long period of time that it makes little difference to them if the data are a few years old.

*"...The Census information we use is really for long term policy work, so the fact that it's a year out of date – or even nine years out of date – isn't key for us because the variables that we can give out don't change that quickly..."*

The timeliness of data is a particular issue for those working in the private sector. This is partly due to the fact that they perceive that they can access data from commercial sources much faster and, thus, they do not see why government and the ONS cannot learn from this.

Linked to this, there is a perception among some that the ONS and government departments do not realise the negative impact that a time delay can cause. This is partly thought to be due to the fact that both ONS and government do not always have a clear understanding of who their key constituencies are and what they use the data for; while they, of course, produce data to be used by the public sector there is a sense that they do not comprehend the extent to which those in the private sector rely on their outputs as well.

*“...ONS’s data don’t give any impression of urgency and that wouldn’t matter but for the fact that for a great deal of British public administration, urgency is an essential part of the way these services operate...”*

This issue is also a question of needs. Many of those working in the private sector state that they are less concerned with precision and instead just need an indication as to what is happening regarding key trends. Many would be willing to sacrifice an element of reliability for quicker access to the statistics as long as the data were clearly labelled as being provisional.

*“...My impression has always been that the ONS is slow and ponderous. They have to wait until every single detail has been signed off...I think some of these details are not always appreciated...”*

It should be noted that this quotation refers to ONS’s outputs generally, rather than any particular dataset.

In contrast, data accessed from the private sector are considered to be timely. Decision-makers recognise that this is often due to the fact that sample sizes are not as large in these instances and, furthermore, that the data are not subject to as many rigid quality checks. However, given that, for some, this is not of critical importance anyway – in that what they want is an indication of what is happening rather than the precise details – this is considered to be more than adequate for their needs.

## 2.3 The accessibility of data

As mentioned earlier in this report, many of the decision-makers we engaged with are not statisticians and thus are not particularly confident in accessing and understanding data. Thus, they state that it is particularly important for them to have sight of data that are clear, well labelled and easy to use.

The majority of decision-makers use the internet to access data; they find this the most convenient channel as they can do this as and when they need to. However, the ONS website, in particular, comes in for much criticism by decision-makers.

While many appreciate that both the design and content of this website have to strike the right balance between catering for specialist academics (who therefore need precise technical details) and those with a more causal interest, most are of the opinion that, in its current format, it is doing neither particularly effectively.

*"...The ONS website has to tread a fine line. It has to be an interface for professional statisticians and economists and, at the same time, a newspaper reading member of the public has to be able to log on and conduct their own research..."*

The main criticism levelled against the ONS's website regards its search function. Decision-makers are of the opinion that unless the precise wording of the data series is typed in to ONS's search engine, they are simply unable to locate what it is that they need. As a result, many use other search engines such as Google to find what they need.

*"...Their search will virtually find nothing apart from a precise word that happens to appear in a title..."*

Navigation around the site is also thought to be in need of improvement. Many state that there is simply too much data stored on the ONS's web pages to make it easy for them to spot what is relevant for their work. This links in with requests for clearer signposting.

*"...There's just so much that, to an extent, you have to go and ferret around to try and find things..."*

The issue for many decision-makers appears to be that they simply do not know what information ONS stores. As such, they would like to see more indicators on the home page – especially regarding what is new and interesting.

*"...It's actually finding my way to the data and even knowing that it is there. I work closely with the ONS yet I would still say that I am probably under-utilising the information that's available..."*

Those with more technical knowledge state that they would like to be able to manipulate the data on the website, for example, to analyse it by different variables so they are able to uncover the precise information that they need. While these participants are aware that ONS employees will undertake this willingly on request, they would like the technology to be made available so as to enable them to do it themselves.

This is due to the fact that they are confident in handling statistics and understand what is and is not possible to do with them and, thus, see no reason why they should have to ask others to do this for them. The North East Regional Information Partnership's website is held up as an example of good practice here.<sup>2</sup>

In part, these criticisms are the result of high expectations of the ONS. A few state that the ONS has a strong brand image; through the work it does it conveys the message that it is a professional, technologically adept and rigorous organisation. While this positive, it does mean that those who are engaged with the organisation expect it to live up to these values through all possible points of contact. Given this, the fact that there are areas for improvement on the website – one of the prime touch points for any organisation – comes as something of a surprise.

*"...These problems are not unique to them to be fair, but given that they set such huge stall by professional standards it's particularly unforgivable that their website is so ghastly..."*

Of course, this negativity is by no means the view of all decision-makers. A few recognise that, as mentioned earlier, the ONS's website has to meet the needs of such a wide range of users that it would be impossible to do this completely successfully in every instance and, given these constraints, it operates as effectively as it can.

Others believe that the ONS adopts a holistic approach when it comes to the design and content of its website and this is appreciated greatly. They state that the ONS proactively informs them of when it is due to change the appearance and layout of the website and, furthermore, consults them beforehand on this to determine whether these changes will meet their needs.

*"...ONS do warn you when their website changes. They even ask your opinion and do it generally in an ordered and evolutionary way..."*

It should be noted as well that this criticism is not limited to ONS alone and also extends to other government departments' websites – although, interestingly, not to the same extent. HM Treasury's website is, along with the ONS, perceived to be fairly impenetrable by those that access it.

*"...Treasury data are still difficult to get...you can go onto the Treasury website and it's pretty clunky really. You get these PDFs that you download and it's all pretty clumsy and you think, good grief, it's 2006, surely there ought to be a better way of presenting critically important government data..."*

<sup>2</sup> See [www.nerip.com](http://www.nerip.com) for more details on this.

In contrast, other sources of data that are praised for their accessibility include the financial series stored on the Bank of England's website. This is seen to be particularly easy to navigate and the search engine returns all relevant data without needing to type in the exact phrasing of the data series.

*"...The Bank of England's website is pretty good in terms of the data series they have on there – it is very easy to find the data you want but, at the same time, it presupposes the level of knowledge that you can go after the data that you're looking for..."*

Private data companies, such as Reuters, are also well regarded. This is due to the speed with which they disseminate information and the fact that they personalise it. For example, on a paid subscription, users can signify which data they are particularly interested in and when information on this subject is made available, an email alert is sent out highlighting this.

*"...Reuters and Bloomberg are the kings of keeping people informed so I would hold them up as models of best practice..."*

A few are aware that companies of this nature are often acting as data intermediaries and are merely repackaging government and ONS statistics for their own purposes. However, the real benefit of this is that decision-makers do not need to be proactive and, instead, the data are sent to them as and when they are released.

*"...There are loads of updates from people like Reuters and Bloomberg who can send you any data that you sign up for. They cover nearly everything, but they source it all from providers of official statistics. They're just better at letting you know when it comes out..."*

Regarding accessibility, there are also issues around the transparency of data. This is of particular concern for those trying to access data concerning the private sector. Now, of course, decision-makers understand that for reasons of commercial confidentiality, companies will want to try and hold back some of the information they gather. However, where this really becomes a serious issue is in the health sector.

Decision-makers state that while they are able to uncover a huge amount of information relating to performance in the public sector, they have very little idea of what is occurring in the private sector. While this not only has implications for performance tracking and quality assurance, looking forward, if the NHS continues to work increasingly closely with the private sector then the need for this kind of information will become paramount.

*“...One of the challenges is the NHS versus the independent sector. We’ve got lots of information about the NHS and we’ve got very little information about the independent sector and future policy direction is a blurring between the two so that represents huge information challenges...”*

As a result of this, many of the decision-makers call for greater transparency from organisations in what they collect and how they disseminate this.

## 2.4 The relevance of the data

For the most part, decision-makers state that there is a wide enough range of data collected to meet their needs. However, the socio-economic climate is perceived to be changing rapidly and decision-makers state that data producers must work to ensure that what they collect is relevant and reflective of the world in which they operate.

In light of this, decision-makers are able to highlight a number of gaps that they believe are in need of filling. They are quick to point out that these vacuums of information do not prevent them from making the decisions that they need to in order to do their work. However, it does force them into the position where they rely more heavily on anecdotal information which is not only perceived to be less robust but carries less weight with those agreeing the decision.

The loudest calls come for realistic and robust data on immigration. It is partially seen to be ONS’s responsibility to do this since the Home Office made its announcement that it has little idea of what is happening; ONS is seen as having the technical expertise and infrastructure in place. For example, many believe that this is information that could be collected via the Census.

*“...The biggest one is immigration statistics. The fact that the government doesn’t know is politically dynamite and administratively unforgivable...”*

Decision-makers state that knowing the extent of immigration, plus an indication of where these people are coming from, is absolutely business critical. Without this information, there are serious ramifications for resource allocation – particularly in the public sector. Take, for example, local authorities. They state that without a clear idea of the changes with regard to the ethnic make-up of their area, they are unable to effectively plan what services are needed.

Likewise in the health sector, given that certain BME groups are more susceptible to certain diseases (for example, the Black Afro-Caribbean population to sickle-cell anaemia) decision-makers state that they are unable to target preventative initiatives without understanding where these populations live and, more crucially, are increasing.

Thinking more broadly than this, this absence of information is also seen as a barrier to fostering cohesive communities. Decision-makers state that they need to know where there is a risk of discrimination and, thus, this information is crucial.

*“...If we are concerned with community cohesion, and if we are concerned with a growing Muslim population and the radicalisation of that population or the fact it’s been discriminated against, then often these are the sorts of communities where it’s very difficult to get data...”*

Linked to this, a few decision-makers state that without understanding the extent of immigration properly the misinformation will prevail which, in turn, will feed hostility and suspicion of newly arrived communities.

*“...It leads to huge exaggeration of the numbers...and you now get the Daily Mail estimates which actually seem to prevail...and the government hasn’t actually been able to knock them on the head. These sort of things are so bad for race relations because it somehow seems as if chaos is reigning...”*

Aside from the issue of immigration data, a few make the point that a surfeit of agricultural data is collected at the expense of other series that may be more relevant to the world we live in today and that, perhaps, other types of information might prove to be more useful. Of course, among those working in sectors relating to the land, these data were of paramount importance. However, there was a sense among a few that this may not be as relevant as it once was perhaps.

Furthermore, while they understand that, often, the real value of data comes when they are presented in a time series and, thus, it is hard to stop collecting data that have been gathered for years previously, it is thought that it is time that a systematic review of what surveys are still useful and what are not is undertaken.

*“...It’s slightly as if the ONS is a nice, decent library that’s always collected certain things and feels as though it can’t stop collecting them...”*

Thinking about government departments individually, there are also seen to be some very obvious gaps which decision-makers perceive need filling with up-to-date information.

Taking the Department for Communities and Local Government in the first instance, it is believed that it needs to develop a sound and robust methodology for tracking house prices. Understanding this information is key to many decision-makers including those in banking (who can develop new mortgage agreements off the back of this information), insurance (who can set rates accordingly) and local authorities (who can determine the need for social housing if prices are too high for the socio-economic make-up of the borough).

While decision-makers are aware that there are currently three surveys that measure house prices – the DCLG, the Halifax and Nationwide – all are seen to have their own failings. The result of this is that decision-makers have to collate the data from all three and recalculate it accordingly so that it meets their needs.

*“...A massive area that is missing is a high quality, consistent government outlook on house prices indices because the DCLG one suffers from the same vagaries as the Halifax one and the Nationwide one and you have to look at all three and calculate them on different bases...”*

A number of decision-makers commented on the need for more and better data from the Department of Trade and Industry on debt and bankruptcy. This is seen to be of particular importance given the rising levels of debt in the country and, in turn, the impact this has on people’s ability to enter into the housing market and so on. Plus, for those working in the banking sector, they state that without a proper understanding of this area it is difficult to assess issues of credit risk.<sup>3</sup>

*“...There is a woeful amount of information on Individual Voluntary Arrangements (IVAs) and bankruptcies and people with credit problems, and it is very difficult to figure out who these people are, why they are having IVAs, why people are being made bankrupt because it’s the DTI that releases those statistics and they’re pretty impenetrable...”*

More generally, there appears to be an absence of data regarding the voluntary sector. While there is hope that since the establishment of the Office of the Third Sector, a subset within the Cabinet Office, this situation may be rectified; those working for charities currently believe that their work is ignored in favour of the public and private sectors.

*“...We’ve had a particular beef that so much of what’s out there talks about the public and private sector and, actually, the voluntary sector as a subset in data is often very limited – it’s a blind spot in a lot of data sets...”*

Others make the point that it is entirely possible that the data they need are in existence, but the problem lies with how they are organised. There is a strong sense among decision-makers that there is a lack of effective communications between the different departments and, sometimes, even within departments to uncover what is already available and this can lead to either duplication, or the data not being used as no one is aware that it is accessible.

<sup>3</sup> It is worth pointing out that statistics in this area are published by the Insolvency Service rather than the DTI. Data on ‘profiling’ and the characteristics of those going into insolvency/taking out IVAs are available from one-off studies by the Insolvency Service and others. Also more profiling and characteristics information is likely to become available in the future, both from improved data capture by the Insolvency Service and from the new ONS-run Wealth and Assets Survey.

*“...There’s massive amounts of data collection but the knowledge isn’t managed so that even within a department people don’t know what data exists. I always urge people to do a proper data audit then you’ll find out there’s actually so much more than you know that your Department collects. It’s only after doing that that you realise what gaps you need to plug...”*

This appears to be of particular salience when discussing administrative data. Decision-makers state that there is much information from administrative data in existence. However, they do not believe that best use is made of this as they find it hard to access from departments (who are perceived to be, at times, unwilling to make this freely available). They call for greater transparency and state if such information were to be made more easily accessible then it would be likely that many of their data needs would be met.

## 2.5 The geographical scope of the data

Often, decision-makers state that what are billed as national statistics often only apply to England alone. Obviously, this has greatest ramifications for those organisations that have a national remit such as national charities, private companies and so on.

Devolution is perceived to have played a part in this; since power was transferred to the Welsh Assembly and the Scottish Executive these power bases are seen to have also taken responsibility for collating and disseminating their own statistics.

While all three countries collect the same data, the issue for the decision-makers appears to be that they are collected in different ways. As such, they are forced into the position whereby they have to invest a great deal of time and resources into combining this information to generate one usable dataset.

*“...We cover Great Britain so we get the data from three different countries. Now this is getting more and more difficult...we’re almost having to do country specific studies and not just one survey which is a logistical nightmare...”*

*“...The data sets are all very different so we do quite a lot of work where we’re drawing together official data sets and we just can’t do this for some countries...”*

Aside from the fact that decision-makers need to spend time and money combining data sets for their own use, a few point out that the devolved statistical services may also serve to negatively impact on the quality of the public services – especially if it becomes increasingly difficult to access country comparable data.

Take education as an example. It is thought that in this sector it is becoming increasingly hard to establish a national picture and, as such, much of what is reported on relates to England alone. However, the absence of data concerning Scotland is, in turn, perceived to cause concern as without the evidence to suggest otherwise, people assume that students in Scotland are better off than they are in England (for example, lower rates of tuition fees). In short, the lack of comparable information can result in a consensus based on rumour.

*“...We vote as one country for a parliament of the United Kingdom of Great Britain and Northern Ireland, yet it’s very hard to come up with comparable data. For instance, I’m looking into education and we’re only dealing with England – which is a big chunk of the population – but isn’t by any means the entire body. But it’s hard not to deal with just England because to make comparisons with the rest of the UK is very, very difficult. And that fuels suspicion that Scotland is getting a much better deal but it’s too complicated to work out how...”*

Furthermore, many decision-makers are of the opinion that this issue is going to deteriorate. They are of the opinion that as each of the devolved parliaments tries to make its mark and establish its authority independently of Westminster then this situation will become more pronounced.

*“...It’s a huge block to use, not having that data in a similar format and that will become more of an issue as the different administrations go down their different routes...”*

Given this, many are keen that the proposed legislation concerning the independence for the ONS seeks to address this issue to ensure that, going forward, it is still possible to generate National Statistics in the truest sense.

However, devolution has had some positive side effects. A few decision-makers are of the opinion that the Scottish Executive, in particular, has seized this opportunity to raise the quality of its statistical outputs. In the first instance, the employees working within the Executive are perceived to be approachable and helpful when it comes to dealing with requests for information.

*“...We’ve actually found it easier to get a clear picture of what is happening in Scotland – you know who to talk to and they’re pretty good at giving you answers...”*

Furthermore, the data provided are perceived to be more detailed – especially when it comes to looking at the local level. A few realise that this may be due to the fact that there is a lower population density in Scotland. However, decision-makers do believe that the work of the Scottish Executive may help to create a ‘gold standard’ for other data sets to aspire to thus raising the statistical quality in the UK more generally.

*“...Scotland tends to be a bit more on top of things but it’s partly because they tend to plan at a more detailed level than we do and I guess they’ve got a more manageable area to deal with...”*

Still thinking about the issue of the geographical scope of data – but this time on a smaller scale – those within local authorities and Regional Development Agencies in particular face their own specific set of issues here. They state that while having a sense of the national picture is useful for comparative purposes, what they really need is the ability to understand what is happening in their district and, with the current set-up, this proves difficult.

*“...Economic data frankly falls apart when you get down to district level so we don’t understand economic geographies and we certainly can’t measure economic geographies...”*

As a result, these organisations often need to commission their own research studies so as to enable them to have access to the level of data that they need. A few believe this to be a waste of resources as questions are being duplicated, just in more detail.

*“...If we had something that covered the country – but at a local level – then we wouldn’t have to keep on re-consulting on the same things that are being asked at a national level but are not transferable to the local...”*

However, many of those working in these sectors are hopeful that this situation will be improved in due course. A few are aware that, as of 2007, there will be secondments from the ONS to work in the regions on a permanent basis. The purpose of this is two fold. Firstly, it is to help the ONS produce regional economic data of a higher quality. Secondly, it is to enable the regions to have a voice that can be heard by the ONS at the highest level and to ensure good relations going forward.

*“...Two ONS staff will be coming to every region to work on a permanent basis and they’ll be doing two things –work for ONS that helps to improve regional economic data and providing a conduit for views from regions to be made known to ONS centrally and that’s obviously going to be valuable...”*

Those within the health sector also face similar challenges to those in local authorities and regional development agencies: while they find the National Statistics on health extremely useful, they state that the way they are collected often does not map onto health authority boundaries. This requires them to do their own analysis to understand how each authority is performing in relation to the other. This is another reason why those working in this field tend to use data intermediaries; the reports produced in the Compendium often reflect the structure of the NHS better than those produced by ONS.

## 2.6 Understanding the data

As mentioned throughout, many of the decision-makers are not trained statisticians. When presented with data in their raw form, some are confused about how to read them; which figures are significant, how to pull out the main messages and so on.

*“...It’s extremely difficult. If you’re somebody that’s used to working with numbers then it’s fine and you can quickly get on...”*

This clearly has an impact on the extent to which decision-makers are able to use the data they access. A few are of the opinion that as their understanding of statistics is so limited, they are only using the information contained to a fraction of its potential.

A few organisations are seeking to proactively remedy this. One solution has been for decision-makers, and their teams, to attend training courses which help them to access and, more importantly, digest data in a meaningful way and believe that this has real business benefits.

*“...People have to develop skills for interpreting information – we have had some regular training sessions to help people use statistical information. I think people do need to understand how to interpret statistics – you’re giving them a genuine insight into what’s happening in the organisation...”*

However, a significant number of decision-makers do not believe that it is their responsibility to do this; they believe statistics should be produced and communicated in a way that it is possible for everyone – and not just the experts – to understand what they are saying. While the ways in which this might be achieved are highlighted later in this report, it is perhaps worth mentioning now as it serves to demonstrate the difficulties that decision-makers face when using official statistics to help them in their work.

## 3 The public value derived from official statistics

While decision-makers have a number of specific needs regarding the data they use and do not believe that all of these are currently being met, they are firmly of the opinion that there is real public value derived from the use of official statistics.

### 3.1 Defining public value

Before giving some examples of where official statistics have served to create or, at least enhance, public value it is perhaps worth exploring what the concept of public value means as this provides the context against which this element of the discussion was framed.

First and foremost, the vast majority of decision-makers are absolutely convinced that, without statistics, the quality of their work would suffer which would, in turn, have ramifications for members of the general public. This really matters when considering the nature of their work.

*“...A country that doesn’t produce good quality statistical information – well the quality of political and industrial decision-making would drop quite considerably and, over a period of time that would impact on people’s standard of living...”*

In short, statistics help decision-makers to make sense of the world in which they are operating. Data work to explain the situation as it stands and trend data can help indicate to decision-makers what future projections might be.

Furthermore, such is the power of statistical information that it can help explain public policies and corporate positioning to wider stakeholder groups, such as the general public. Decision-makers state that the weight carried by a statistical evidence base can help to facilitate buy-in from others and thus help carry their decision forward for the benefit of everyone.

*“...The value in using statistics are that they form an integral part of public policy in demonstrating to the public why things are the way they are... they are integral to the process of demonstrating to the public that things have to change...”*

### 3.2 Examples of public value

Decision-makers were able to give a number of examples whereby statistics have helped them to create or enhance public value. Some examples of these are highlighted below.

## The National Council for Palliative Care – understanding palliative care needs

- The National Council for Palliative Care (NCPC) is the umbrella organisation for all those who are involved in providing, commissioning and using palliative care and hospice services in England, Wales and Northern Ireland. NCPC promotes the extension and improvement of palliative care services for all people with life-threatening and life-limiting conditions.
- Working with the Department of Health, it undertook a mapping exercise to highlight what palliative care resources were available across the country including, for example, the number of beds available for people with these specific care needs.
- Alongside this, using measures of deprivation such as the IMD, it sought also to establish where greatest need for these resources was anticipated.
- From this analytical work, the NCPC uncovered that the resource allocation of these services was not as one might expect, for example, there was a concentration of beds in the affluent South East whereas the North East was relatively uncatered for. This was considered strange, especially when taken into account higher levels of deprivation in the region and the different economic base more generally.
- As a result of these findings, the NCPC teamed up with the National Cancer Director to help improve standards across the country.

## Visit Scotland – understanding Scottish Tourism

- Visit Scotland is the national tourist board, designed to promote the country of Scotland as a travel destination of choice. To do this, it requires clear customer insight to help it understand the needs of its current and potential visitors so as to enable it to develop clear and effective marketing materials.
- Traditionally, the old Scottish Tourist Board (which became Visit Scotland in 2001) relied on the assumption that visitors' decision-making process was driven by geography i.e. they chose specific locations within the country that they wanted to go to.
- However, through analysis of visitor numbers and trends, along with their own consumer research, Visit Scotland uncovered that how people actually decided where to go was driven by them choosing an activity that they wanted to undertake, for example, walking, fishing or golf, and then choosing an area that suited this.
- This discovery has completely redefined the way that Visit Scotland conducts their approach to marketing and, subsequently, they have developed a strategy based around 'the product portfolio' which concentrates on activities first, rather than places.

## One North East – understanding regional economic flows

- One North East is the Regional Development Agency for the north east of England. The RDA wanted to gain an understanding of how the region works spatially, for example, where people travel and for what purposes (retail, employment and so on).
- In order to do this, One North East collated a large amount of data comprising ONS statistics on commuting from the 2001 Census along with commercially sourced information purchased from Experian regarding where people shop, where they travel to for entertainment and socialising etc. Alongside this, it accessed data from the University of Newcastle on the local housing market.
- By compiling these data, One North East has been able to write a report detailing local economic flows and, for the first time, it understands how different areas of the region are connected with each other. For instance, the Tyne and Wear is joined geographically to Newcastle and Gateshead and adjacent areas. However, people that live in Sunderland tend to stay in this city and not travel into Newcastle and vice versa.
- While One North East has always suspected this might be the case, having access to these data sets allowed, for the first time, to confirm this with a sound and robust evidence base.
- As a result, it has been able to use these data to feed into the regional economic strategy along with the spatial strategy for the development of the region in the future.

## UCAS – planning university intake years ahead

- UCAS relies on socio demographic data from the ONS to assist universities in fulfilling their legal responsibilities in relation to race discrimination and disability.
- UCAS also needs demographic data to forecast its future income. Its income is partly derived from the number of students who come into the system. In other words, the number of 18 year-olds who are seeking to go to university in any one year.
- UCAS has been able to identify that there is likely to be a dip in their income in 2010 when the steady growth in the number of 18 year-olds, takes a downward turn.
- With this information, UCAS is able to plan ahead and think of contingencies which it would be unable to do if it did not have the data.

## 4 Enhancing public value

While the case studies highlighted in the previous section clearly demonstrate the impact that statistics can have on creating or enhancing public value, decision-makers still believe there is more to be done.

The issue lies in the fact that, in the first instance, decision-makers are not aware of what data are in existence and, thus, are unsure whether they are making the best decisions for those in their constituency. Secondly, there are perceived to be real gaps in data collation and it is thought that if these were filled then they would be able to work from a more robust evidence base.

Some examples of how public value might be enhanced if decision-makers were able to access different sorts of data are highlighted below. While these examples are hypothetical, they do illustrate the importance that decision-makers attach to statistics and how keen they are to ensure that the direction they are taking are in the public's interests.

### 4.1 Examples of how public value might be enhanced

#### The Arts Fund – saving art for the nation

- The Arts Fund is an independent charity that exists to save art for everyone to enjoy.
- However, the acquisitions it makes are often very expensive and, thus, it needs to be able to understand the extent to which it, and the public, will be getting value for money from these purchases.
- In order to do this, the Arts Fund requires improved visitor information from either individual museums and galleries or the Department for Culture Media and Sport. It needs to understand more about footfall – for example, what is the percentage of people that visit each of the different floors/rooms in museums and galleries.
- It is only by knowing this information that it can judge whether the public will gain maximum benefit from an acquisition as, for example, there is less public value gained from the Arts Fund making a purchase only for it to be exhibited in an area that very few people visit.

## The Healthcare Care Commission – hospital stays for mental health issues

- The Healthcare Commission considers race and mental health to be a high priority area. Its Count Me In 2005 census of mental health in-patients in England and Wales (jointly with MHAC) shows significant ethnic differences in relation to hospital admissions and detention rates, particularly in relation to African-Caribbean groups.
- There are a multitude of factors that affect both the levels of mental illness and subsequent pathways of care for certain BME groups. The Commission advises cautious interpretation of the census findings in the light of research evidence on these issues. The evidence indicates that factors beyond mental health services may be implicated, and that a coordinated and sustainable cross-government approach to addressing the issues is required.
- The Commission also cautions that the admission rates are based on population estimates from the 2001 ONS Census, and that there have been significant demographic changes since then which it could not take into account in the derivation of the admission rates.

## The Disability Rights Commission – helping the development of the Commission for Equality and Human Rights

- The Disability Rights Commission (DRC) is working very closely on the development of the new Commission for Human Rights and Equalities (CHRE).
- However, it has noted that in the interim report for the Equality review, many of the recommendations related to where there is much evidence already in existence, for example, on age, gender and race.
- However, due to the relative paucity of data on disability in the UK – and even more so on faith – the recommendations as to what the new CHRE should do were skewed.
- The DRC states it is working to rectify this but that it should be noted that this offers a prime example of how gaps in information can negatively impact on public value.

## Cancer Research UK – providing information to professionals and patients

- Cancer Research uses official data to identify how many people have been diagnosed with and which are the most common cancers. It is also used to monitor knowledge and awareness of lifestyle factors which can contribute to cancer. In this way, health campaigns can be more closely and effectively targeted.
- It also independently commissions surveys to 'scenario plan' so it can monitor trends and try and predict what might have an impact on future trends in cancer incidence.
- A way in which public value might be enhanced is if decision-makers could gain data on the ethnicity of cancer sufferers.
- By being able to identify which cancers are more common in certain ethnic groups, Cancer Research could target their health campaigns at them more precisely. Having limited resources available for their health campaigns, the ability to have a higher impact in certain communities makes a lot of difference.

These case studies represent only a few examples of how decision-makers believe that public value could be enhanced in future if they had access to improved or different data.

Their power lies in the fact that they really do emphasise how central statistics are to effective decision-making both in the public and private sector and thus highlight the importance of data to people in these positions.

## 5 Looking forward

Given how critical statistics are to decision-makers, and the fact that they are so readily able to highlight how using statistics can create real value for the general public, decision-makers perceive that it is imperative that improvements are made to the statistical system in the UK.

Encouragingly, decision-makers are able to highlight a number of suggestions as to how they think the public value of statistics might be enhanced in the future. These include the accessibility of the data and how easy it is to understand. Furthermore, they advocate giving decision-makers a louder voice in determining which data are gathered so as to ensure that they are able to access what they need.

Before discussing these recommendations in more detail it is worth reiterating that qualitative research is entirely concerned with perceptions rather than facts. It may be that initiatives are in place already that address the solutions suggested by decision-makers. However, the fact that they are not aware of them may highlight the need for more targeted communication around this area.

### 5.1 Improving statistical planning

There is a strong sense among decision-makers – and this particularly applies to those working in the public sector – that targets are often set before due consideration has been given to how this information will be collected and analysed and, also, before the policy in question has had a chance to embed itself.

A case in point is the New Deal. Although very much praised as a policy idea, it is thought that the government was too quick to measure its impact before it had actually had a chance to settle in and make an impact. This, in turn, affected how the policy was received; the fact that systems are put in place to measure performance right from the start raises expectations and, when these are not delivered, there is consternation.

*“...Here they were throwing millions and millions of pounds into this new initiative and the initial results suggested no movement. The same is true with all these initiatives – they just aren't properly cooked before they go out and chase the figures...”*

More generally though, decision-makers are of the opinion that improved statistical planning would help them to better meet the needs of those they provide for or serve. Any statistical planning that does take place is perceived to be ad hoc rather than an essential component in how producers of data conduct their business. Furthermore, the planning as it currently stands is perceived to largely bypass the views of those using the data. Improved consultation is called for and how this might work in practice, is outlined in more detail in the next section.

## 5.2 Engaging with users

As highlighted earlier, one of the main concerns among decision-makers is that the data they need are not always collected. Mindful of this, they call for improved consultation between users and data producers and, in particular, the ONS.

The reason ONS is suggested – over and above individual government departments – is that the majority of decision-makers see it as their prime source of information. As such, it is believed that it should lead the way in engaging with users, setting an example of best practice for others. Furthermore, a few believe that, currently, ONS is insular in its way of working and would benefit most from improved consultation practices.

*“...ONS is a closed shop, that’s the opinion from the contact I’ve had. What’s done in ONS is done in ONS and the figures are produced and that’s it – you live with them and they’re the official statistics and that’s the end of the discussion...”*

Decision-makers realise that establishing an effective two-way dialogue will not be easy. In the first instance, they highlight how ONS will need to establish who its key constituency is and this will, of course, vary depending on the data set in question. However, decision-makers are of the opinion that once the relevant interested parties are gathered together then they would come to a decision on the priorities for ONS.

*“...I would imagine that if you got everyone together, from university academics all the way to other people in the street there’d be fairly quick agreement on what the important things are that ought to be measured...”*

In the first instance, it is thought that this process would not only be helpful to ONS in that it would serve to prioritise its areas of work, it would also ensure that the data it gathers are relevant and truly reflective of the situation it is measuring. To illustrate, a few of those working in the health sector mention how the 2011 Census is set to include a question on disability. While this is welcomed as it is hoped that this will help to shed some light on the prevalence of disability and long-term illnesses across the UK, there is concern about how the question will be worded.

In essence, there are two main models of disability; the health model and the social model and while government departments tend to favour the former, lobbying groups and charities prefer to work with the latter as this is perceived to allow for a more inclusive definition and thus is able to capture all the different permutations of disability and long term illness.

However, those working in charities are of the perception that their views have not been sought as to how to word this question on the Census and thus are concerned that the health model will be favoured which, in their minds, will result in an inaccurate depiction of the extent of disability in the UK.

Aside from this, a few also see it as ONS's obligation to consult, given the importance of the data it produces, combined with the fact that it is able to do so as a result of public funding. Some make the point that this engagement is crucial.

*"...They would have to map their key users – it could be 50, could be 200. But 60 million people are paying for it and their lives are shaped by the things it produces..."*

In terms of how any consultation should be carried out, most are of the opinion that it should be conducted face-to-face. While it is recognised that this is a time-intensive approach, and the most costly to conduct, it is thought that this is the best vehicle for truly engaging users; decision-makers state that they have so many other demands on their time that paper or web-based consultations often end up ignored. A few make the point that there is no reason why face-to-face consultations could not be run in conjunction with, for example, an online consultation so as to maximise the numbers of those able to take part.

It is worth pointing out that a limited number of decision-makers realise that the ONS already has established statistics user groups and others also mention that they are aware of a consultation programme for the 2011 Census. However, it is not thought that these strategies to engage with key users are publicised enough to be truly effective.

### 5.3 Enhancing accessibility

Many call for changes to be made in relation to how they are able to access data. As mentioned earlier in this report, the ONS website is seen as being in need of most improvement.

To help rectify the issues raised, a few suggest that data on the ONS's website should be ordered by a classification system – similar to those used in libraries – not only to help signpost more clearly what information is available, but also to enable decision-makers to locate it more easily.

*"...What I want it a library classification system so you can just drill down and there it is. I don't want a search engine that just throws up whatever..."*

Linked to this, many also talk of the need for clearer signposting. Part of the problem for decision-makers lies in not knowing which data are collected. To help with this, a few decision-makers suggest expanding ONS's website so it is ordered by subject or theme and there are individual sites devoted to each of these.

*"...I feel sometimes there's a merit in producing mini websites so you can have a mini website for each of the different topics because, at the moment, the scroll down menus on the ONS website are a little bit cumbersome..."*

However, improving access to information does not necessarily mean confining work to websites alone. A few decision-makers we engaged with lamented the demise of written reports. They speak of how, previously, they used to be sent reports highlighting newly released data on specific issues. They state that these acted as a useful reference tool and one that they can easily refer to time and again. Furthermore, the reports helped to highlight to decision-makers the key trends and thus helped them to understand what areas they should be concentrating on.

In light of this, a few call for this practice to be rolled out. While they do not wish for all data to be sent to them in hard form, the idea of a quarterly or yearly digest is welcomed.

*“...It would be interesting if, for example, one was to get some quarterly digest in fairly straightforward language which gave you some analysis of what’s been happening in key national areas...”*

It is thought disseminating data in this form would not only improve its accessibility but would also allow scope for some element of interpretation to be added.

As stated throughout this report, many of those who use data in their work are not trained statisticians and, as such, deciphering what the statistics are telling them can prove challenging. There is seen to be a real role for both ONS and statisticians within government departments to help mitigate this by releasing an interpretation of the main messages from the data when figures are released. It is thought this would help to add value and would also enable decision-makers to get a good sense of what the data means more quickly and thus, would work to improve the decision-making process.

## 5.4 Encouraging a cultural shift

As mentioned earlier, a few are concerned that ONS and producers from government departments are too deeply embedded in the public sector to be responsive to the needs of those that rely on the information they produce. This is particularly the case for those working in the private sector who are used to being able to access data quickly as and when they need it from private companies.

While they understand that for the ONS in particular, its brand and image is built on the fact that the data it produces are reliable, robust and credible, many would be willing to sacrifice some of this for more timely information. To help make these trade-offs and in order to strike the right balance, it is thought that a consultation process – as outlined earlier in this section – would be useful.

Beyond this, secondments are welcomed as an idea. Those working in regional development agencies are hopeful that the arrival of ONS employees in spring 2007 will herald greater understanding between the producers and users of data; producers will be able to understand the pressures of those using the data in terms of their need to understand a given situation quickly and respond accordingly, while users will have a greater sense of the constraints faced by producers in terms of what can be measured and how quickly.

Given this, it is thought that this scheme of secondments could be rolled out to other organisations – particularly concentrating on those in the private sector. It is believed that such a move would not only establish an effective two-way dialogue between both users and producers but, additionally, would foster greater understanding about what is needed and what is achievable.

## 6 Implications

As this report shows, statistics really matter. Without them, decision-makers would be relying on intuition and gut instinct to help them decide the way forward and this is not perceived to be acceptable.

And the importance of statistics is increasing. The socio-economic climate is such that decision-makers believe it imperative to be able to justify their course of action; private sector companies increasingly need to be accountable to their stakeholders while in the public sector it is essential to be able to demonstrate that tax payers' money is being put to good use.

Therefore having access to relevant, timely and accurate statistics is business critical. As this report demonstrates; there is much to be pleased with. Official statistics are perceived to be credible; while certain data sets produced by individual government departments are treated with a degree of caution, on the whole, there is not perceived to be a need for checking the data for accuracy prior to using it.

However, there is also room for improvement. While the credibility of the data is not called into question, the extent to which they are accessible are. In the first instance, it appears that the producers of official statistics need a greater understanding of who is using the data. For the most part, they are not trained statisticians. As such, they can lack confidence in both sourcing and understanding the information.

To rectify this, there is a real need to both build awareness of what data are collected (building firmer bridges with the media may help here) but also to pay attention to how they are disseminated. Only by doing this will decision-makers be able to best utilise the resources at their disposal and ensure that all major decisions are made with a view to benefiting the public.

So, the key going forward will be to leverage the strengths already noted and praised by those who use the data and to address some of the concerns they have. And the time for doing this is propitious. Many of those we engaged with are aware of the moves towards independence for the ONS and believe that this could herald a new start for statistics more generally. They are keen that the new board of the ONS listens to users and responds to their needs so as to create real examples of best practice to which others can aspire.

## Appendix A1: Recruitment letter

Dear Name

We are writing to invite you to be interviewed as part of a study the Statistics Commission is undertaking into how official figures, and messages drawn from them, are used in decision-making in various types of organisation outside government.

The Statistics Commission exists to give independent advice on official statistics and it is particularly interested in ensuring that the needs of all users of official data are recognised and respected. It has engaged Ipsos MORI to explore the statistical requirements (in terms of official figures) of key decision makers within a range of organisations.

This study will draw on the experience, views and insight of senior figures within key organisations. In total, around 50 interviews will be conducted with members of the business community, the voluntary sector, the media, think tanks, academia, local government and other public sector bodies across the UK.

As such, we would like to invite you to take part in a face-to-face interview with an independent Ipsos MORI Research Director. The discussion will last up to one hour, and will take place at a venue and at a date and time convenient to you. We expect the interview to include discussion of how your organisation uses official statistics to help with decision-making, how accessible you find official statistics, the extent to which they meet your needs and how far you trust the data you use. You would not need to prepare in advance of the meeting and there will be opportunity for you to help shape the agenda of the discussion.

This study will form the basis of a published report, which is likely to include recommendations to Government on ways to ensure that a wide range of user interests is recognised in the planning of statistical services. You would have the option for your comments to remain anonymous should you wish. We would be pleased to send you a copy of the report on publication.

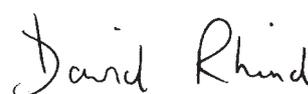
Suzanne Hall, or one of her colleagues from Ipsos MORI, will be in touch with your office in the next few days to confirm whether or not you are happy to contribute and, if so, to arrange a suitable appointment. Alternatively, she can be reached on 020 7347 3000.

We hope that you will feel able to participate in this important study and that you will take this opportunity to express your views and help stimulate wider debate on this issue.

Yours sincerely



Andrew Johnson  
Research Director, Ipsos MORI



Professor David Rhind CBE  
Chairman, Statistics Commission

## Appendix A2: Discussion guide

### The Statistics Commission The Use Made of Official Statistics – In-depth interviews with decision makers

#### Objectives:

- To analyse how official statistics are used by organisations;
- To determine what role official statistics play in the decision-making process;
- To understand at what point official statistics are used to help make decisions;
- To ascertain the extent to which decision makers trust official statistics and find them easy to understand; and,
- To gauge what measures need to be put in place in reference to official statistics to improve the quality of decision-making in the future.

Discussion Area	Notes	Approx Timing
<b>1. Welcome and Introductions</b>		
<p><b>Welcome</b></p> <ul style="list-style-type: none"> <li>– Introduce self, Ipsos MORI, client and explain the aim of the discussion – to understand how official statistics are used by organisations in the decision-making process.</li> <li>– Issues we will be discussing include the kind of decisions you make that require the use of official statistics, what official statistics you use to help you in this, the extent to which you find official statistics are easily accessible/trustworthy/understandable, and how things might be improved in the future.</li> <li>– Stress there are no right or wrong answers – all opinions are valid, interested in finding out a range of views/experiences.</li> <li>– Reassure respondents of confidentiality – will not be personally attributed.</li> <li>– Gain permission to record for transcription purposes – explain about the MRS Code of Conduct and DPA.</li> </ul> <p><b>Introductions:</b></p> <ul style="list-style-type: none"> <li>– First names, their role/organisation, what they are responsible for, how long they have been there.</li> </ul>	<p>The welcome serves to orientate respondents and put them at ease. It also lays down the ‘rules’ of the discussion including those we are required to tell them about under MRS Code of Conduct and DPA guidelines.</p> <p>The introduction serves to ‘warm up’ participants, and gives them a chance to start talking about something easy.</p>	5 mins

Discussion Area	Notes	Approx Timing
<p><b>2. Decision-making – the theory</b></p> <ul style="list-style-type: none"> <li>– What makes for good decision-making? PROBE FULLY.</li> <li>– Why do you say this? Can you give me some good examples of good decision-making?</li> <li>– What are the enablers here? PROBE FOR RELEVANT INFORMATION, SKILLED DECISION MAKERS AND SO ON.</li> <li>– How can these be leveraged/built on in the future?</li> <li>– And on the flip side, what makes for bad decision-making? PROBE FULLY.</li> <li>– Why do you say this? Can you give me some case study examples of this?</li> <li>– What are the barriers that prevent people from making good decisions in the public/private/voluntary sector? How can these be overcome?</li> </ul>	<p>This section will help to ground the discussion in useful contextual information. We will uncover ‘good practice’ regarding decision-making and then seek to refer back to this throughout the discussion to determine the extent to which the reality matches the theory and where the gaps are.</p>	<p>5 mins</p>
<p><b>3. The decision-making process</b></p> <ul style="list-style-type: none"> <li>– Thinking generally, can you tell me about the decision-making process in your organisation? <ul style="list-style-type: none"> <li>o What kind of decisions do you have to make regularly?</li> <li>o What is the decision-making structure for these kinds of decisions? PROBE FOR WHETHER THE DECISIONS ARE REFERRED UP/DOWNWARDS.</li> <li>o Can you talk me through this process? MODERATOR TO MAP THIS FOR LATER REFERENCE.</li> <li>o What impact do these decisions have on the organisation? On the wider public?</li> </ul> </li> </ul> <p>MODERATOR TO PROBE FULLY HERE TO BUILD UP CASE STUDY EXAMPLES</p> <ul style="list-style-type: none"> <li>– To what extent do you use official statistics to help you in your decision-making? <ul style="list-style-type: none"> <li>o What kinds of decisions do you use official statistics to help with?</li> <li>o Which official statistics do you use? Why these?</li> <li>o How useful do you find this?</li> </ul> </li> </ul>	<p>This section will look broadly at the issues of using official statistics in the decision-making process. We will explore the decision-making process generally – the structure this takes, who is involved and so on. Furthermore, we will explore what kinds of official statistics are used along with alternative sources of information to build up a clear picture of the data referred to and the differences between these.</p>	<p>10 mins</p>

Discussion Area	Notes	Approx Timing
<ul style="list-style-type: none"> <li>o What benefits do official statistics bring to the decision-making process?</li> <li>o And what about the drawbacks?</li> <li>– And what other information/statistics do you use to help you in your decision-making process? Where do you get this from? How helpful is this? How do these data compare with the official statistics you use? Why do you say this?</li> <li>– Overall, which data do you tend to call on more often – official statistics or other commercially available data? Why do you think this is?</li> <li>– How has your use of statistics in decision-making changed over time?</li> </ul> <p><b>4. The use made of official statistics</b></p> <p>MODERATOR TO EXPLAIN THAT WE ARE NOW GOING TO EXPLORE SOME OF THE ISSUES RELATING TO THE USE OF OFFICIAL STATISTICS IN THE DECISION-MAKING PROCESS IN MORE DEPTH.</p> <ul style="list-style-type: none"> <li>– You mentioned that you use official statistics to help you with certain decisions here (MODERATOR TO REFERENCE THE SPECIFICS). How do you access this information? How easy do you find this? Why is this? How could this be improved?</li> <li>– And what other messages do you take from official statistics? PROBE FOR INFORMATION CONTAINED IN MEDIA REPORTS E.G. NATIONAL NEWSPAPERS, TRADE PRESS, THE INTERNET AND SO ON</li> <li>– How do you access this information? How easy do you find this?</li> <li>– Why do you use these messages? How far do you consider using the original source material to help you here? Why do you say this?</li> <li>– What decisions are these data particularly useful for? PROBE FOR MARKETING, RESOURCE ALLOCATION, POLICY DEVELOPMENT, EVALUATION AND SO ON. Why is this? Can you give me some examples?</li> <li>– And where are official statistics less useful? Why do you say this?</li> </ul>	<p>This part of the discussion will determine how decision-makers use official statistics in their decision-making process. We will explore what kind of decisions official statistics are particularly useful for and the factors driving this. Related to this, we will also discuss issues such as timeliness, relevance and geographical coverage to help us understand this process in more detail.</p>	<p>15 mins</p>

Discussion Area	Notes	Approx Timing
<ul style="list-style-type: none"> <li>- To what extent do you feel official statistics are timely enough to help you with your decision-making? Why do you say this? Can you give me some examples? And how does this impact on you?</li> <li>- And how far do you feel that the information provided by official statistics is relevant to your business? Why do you say this? What could be done to improve this? PROBE – PARTICULARLY ON GEOGRAPHICAL COVERAGE IF NOT MENTIONED SPONTANEOUSLY.</li> <li>- Why would this make such a difference?</li> </ul> <p><b>5. The quality of official statistics</b></p> <ul style="list-style-type: none"> <li>- Thinking about the official statistics you use, how easy is it to understand what the data is telling you? Why do you say this? And how does this impact on decision-making? Can you give me some examples here?</li> <li>- What makes for data that are easy to understand? PROBE FOR WRITTEN INTERPRETATIONS, GRAPHS AND SO ON. Can you give me examples of datasets you find particularly easy to understand and use?</li> <li>- On the other hand, what makes official statistics hard to understand? Why do you say this?</li> <li>- How could the data you use be improved in terms of how easy it is to understand? Why would this make such a difference?</li> <li>- What impact would this have on the quality of decision-making? And what effect would this have on your organisation? And on the wider public?</li> <li>- And when using official statistics, to what extent do you find the information credible and trustworthy? Why do you say this?</li> <li>- How does this impact on how you use the data in decision-making? PROBE FULLY</li> <li>- How could official statistics be made more credible? Why would this make such a difference?</li> <li>- What impact would this have on the quality of decision-making? And what effect would this have on your organisation? And on the wider public?</li> </ul>	<p>This part of the discussion will probe on issues of understanding and credibility. We will explore the extent to which decision-makers find official statistics easy to understand and how this might be improved in the future. We will also explore the credibility of official statistics – the extent to which users trust the information, the factors driving this, how this impacts on their behaviour and what can be done to improve this in the future.</p>	<p>10 mins</p>

Discussion Area	Notes	Approx Timing
<p><b>6. Improving the public value of official statistics</b></p> <ul style="list-style-type: none"> <li>– If you didn't have access to official statistics at all, how would this impact on the quality of the decision-making in your organisation? Why do you say this? What effects would this have? On your organisation? On the wider public?</li> <li>– What needs to be done to ensure that official statistics meet the needs of users in the public/private/voluntary sector? PROBE FULLY.</li> <li>– What kind of impact would this have? Why would this make such a difference to you and the quality of decision-making in your organisation?</li> <li>– What impact would this have on the wider public? Why do you say this?</li> <li>– How might improved statistical planning impact on the quality of decision-making in your organisation? Why do you say this? What do you think needs to be done here? Why do you say this? And what impact might this have?</li> <li>– Are you aware of the proposed legislative changes regarding the future of official statistics?</li> <li>– IF YES – To what extent do you feel that these changes will improve the situation? Why do you say this? What else still needs to be done? Why do you say this?</li> <li>– IF NO, MODERATOR TO GIVE A BRIEF OVERVIEW AND THEN ASK – To what extent do you feel that these changes will improve the situation? Why do you say this? What else still needs to be done? Why do you say this?</li> </ul>	<p>This part of the discussion will build on previous points raised and will discuss, based on the issues mentioned, what improvements need to be made to the statistical service to ensure that official statistics meets the needs of users. This part of the discussion will also determine the extent to which the proposed legislative changes meet the needs of users and what else need to be done to bridge the gap here.</p>	<p>10 mins</p>
<p><b>7. Improving the public value of official statistics</b></p> <ul style="list-style-type: none"> <li>– Thinking about everything we have discussed today, what are the main benefits that official statistics can bring to the decision-making process?</li> <li>– And what are the main drawbacks?</li> <li>– And what changes/improvements would have the greatest impact on the quality of decision-making in your organisation?</li> <li>– Is there anything that we haven't discussed that you think is relevant?</li> <li>– THANK AND CLOSE. ASK PERMISSION TO REFERENCE IN THE REPORT. ASK PERMISSION TO RECONTACT</li> </ul>	<p>This section will highlight the key learning points and will wrap up the discussion.</p>	<p>5 mins</p>



## **PART 3**

**A review of the literature**

**Report to the Statistics  
Commission by Ipsos MORI**



# Introduction

*"What we know, from schoolchildren upwards, is virtually everybody needs to understand statistics in order to get the most out of their lives"<sup>1</sup>*

Karen Dunnell, National Statistician, 2005

With statistical information being a fulcrum on which so much of national life turns, it is a central concern of the Statistics Commission to establish how and to what ends it is used. The aim of this report is to give a sense of this, by exploring the part played by official statistics, chiefly in the workings of government and business, but also in other sectors.<sup>2</sup>

This report looks principally at the role of statistics in decision-making within public and private organisations, for example as a guide to budgetary allocations, a source of planning information, or as an arbiter of performance. It seeks to pinpoint differences in the purposes, priorities and practices of various sectors when they consult official statistics. However, it also tries to take account of the fact that 'official statistics' are not monolithic; they are outputs variable in scope and comprehensiveness. That variation can seriously affect their usefulness and that of the decisions they inform.

Of course, the use of statistics within even one area of national life, such as marketing strategy in the private sector, is so extensive as to merit a major study in its own right. Some areas, such as the general public's use of statistics, are largely unquantified. Such rigour is beyond the scope of this report. Rather it aims to estimate the general trends in usage through a series of case studies and a review of what academic and official literature is currently available.

Some international comparisons are also made, when appropriate, to indicate how data outputs are used in other countries or trans-national organisations. As a conclusion, the findings of the review are interpreted in the context of 'public value', a definition of the organising principles of public services that has become increasingly popular in the UK since its conception by Harvard Professor, Mark H. Moore in the mid-1990s.<sup>3</sup>

<sup>1</sup> Taken from the evidence given by Ms Dunnell to the House of Commons Treasury Committee regarding the ONS Annual Report and Accounts 2004-05, 9 November 2005  
<http://www.publications.parliament.uk/pa/cm200506/cmselect/cmtreasy/uc666-i/uc66602.htm>

<sup>2</sup> Official statistics are outputs prepared by or on behalf of government which may or may not conform to the National Statistics Code of Practice. This encompasses National Statistics and other GSS outputs, but could also include published departmental statistics produced by officials who are not part of the GSS, as well as statistics produced by other public bodies.

<sup>3</sup> *Creating Public Value: Strategic Management in Government*, M H Moore (Harvard University Press, 1995)

## Background

Although the use of statistics is clearly of major interest both to the Statistics Commission and many other organisations, there has been less research in this field than might be imagined. Particularly obscure is the use made of official statistics by the private sector, although this is partly owing to the understandable reticence of companies regarding matters of planning and strategy. Much of the enquiry done so far has come through the Commission itself in three 'User Perspective' reports on the way health, education and crime outputs are used across sectors.<sup>4</sup> However, even despite extensive research, it has still proved difficult "*to obtain robust information about which data ultimately informed which kinds of decisions*".<sup>5</sup> As has been discovered, 'official statistics' is a very broad term, which may mean different things to different users. Not only that, but figures are disseminated through a plethora of formats and sources and the number of potential users is legion. All of these considerations hinder the investigation of official data usage in policy formation.

This state of uncertainty comes at a time of considerable change to the governance of official statistics in the UK. The current administration is seeking both to encourage greater public use of official statistics and to restore trust in them which, as is widely recognised, currently stands at a low ebb.<sup>6</sup> With the first consideration in mind, it set up the Advisory Panel on Public Sector Information (APPSI) to foster the use of government information through liaison with the Office of Public Sector Information. Regarding the latter, Gordon Brown announced at the CBI Conference in November 2005 that the ONS would be reconstituted as a department wholly independent of the government. It is within this context of reorganisation that greater efforts are being made to gauge how statistics are used. Similarly, the Statistics Commission has asked Ipsos MORI to assess the use being made of official statistics, a part of which is the literature review presented here.

<sup>4</sup> *Enhancing the Value of Health Statistics: User Perspective* Report no.21 Statistics Commission (2004), *Schools Education Statistics: Users Perspectives* Report no.26 Statistics Commission (2005), *Crime Statistics: User Perspectives* Report no. 30 Statistics Commissions (2006)

<sup>5</sup> *Enhancing the Value of Health Statistics: User Perspective* Report no.21 Statistics Commission (2004), p.8

<sup>6</sup> 'Future Governance of Official Statistics', Statistics Commission conference organised with, the Royal Statistical Society and *Financial Times* on 17 May 2006. Press release by the Statistics Commission, p.1

# Methodology

This report is partly a review of information provided by organisations using statistics. Government departments and front-line public sector organisations are obvious and important sources. So is the Statistics Commission itself which, as noted, has undertaken much of the existing research in this field. However it also includes a range of bodies that all have a stake in national statistical outputs; this covers institutions as diverse as the National Audit Office, the Demographic Users Group and the national media. The report also draws upon the existing academic literature. Appropriate places to search were identified (eg databases, articles, books, journals) and the principal bibliographic databases were consulted: Blackwell-Synergy, International Bibliography of the Social Sciences, Ingenta-Connect, Jstor, Google Scholar, SocialSciSearch and Mathsci. The search itself was based on certain keywords (for a full list, please see Appendix A). Contact was also made with institutions likely to hold relevant literature; the ONS Library, the Statistics Commission Library and the British Library.

For the sake of clarity, it is also useful to define the principal elements of 'official statistics' before examining their use. Three key outputs are identified and the differences in the way they are used underpin the report. They are:

- 2001 Census: the critical point of reference for data about the people and households of the UK, producing a population profile right down to the neighbourhood level of Output Areas;
- National Survey Data: the regular high-profile research studies undertaken by the ONS or on behalf of government departments to examine particular experiences or behaviours. Chief among them are the British Crime Survey (BCS), the Labour Force Survey (LFS) the General Household Survey (GHS) and the Expenditure and Food Survey (EFS); and,
- Administrative Data: the main data outputs produced by government departments. For example, immigration figures (Home Office), school exam results (DfES), hospital waiting times and episode statistics (DH) and patterns of energy consumption (DTI).

## Use in public sector

The diverse use of statistics in the state sector reflects the variety of organisations that are 'public'. For example, the Bank of England uses the Consumer Price Index, among other outputs, to decide interest rates. Government departments use statistics to gauge policy effectiveness, to allocate spending and to set objectives. Front-line organisations can use them to benchmark their own performance, develop a picture of the local populations they serve and thereby determine their priorities. This chapter looks at their use in the public sector according to the three elements of official statistics.

## Census

As *the* source of information about the UK population, the Census has four broad applications within the public sector: guiding the allocation of resources, informing departmental planning, evaluating performance and assisting further research.

A good example of its role in apportioning resources is the Formula Spending Shares used by the DCLG to assign spending among local authorities for such services as education, policing and road maintenance. In each case, the share is calculated by multiplying a basic financial amount by the local population but with top-ups to take account of local circumstances. So for example, the policing allocation is based on the population of an area (taking account of visitors and commuters) with top-ups for such additional variables as the numbers of people in overcrowded households. Similarly, the allocation for children's social services has top-ups for the number of children living in flats or with one adult only, among other factors.<sup>7</sup>

By mapping the characteristics of the population, the Census can identify the links between social trends, with major implications for policy making. Taking health as a case in point, comparison between data on long-term illness and socio-economic factors can increase understanding of what influences national health, something clearly relevant to other fields such as housing and welfare. In this respect the Census has the advantage over other sources such as the Health Survey of England. It might ask fewer questions about health but it has an unmatched national coverage, statistical robustness and potential for socio-economic analysis.<sup>8</sup> Similarly, by giving information on demographic groups particularly susceptible to an illness, the Census can assist the appropriate allocation of resources to primary and acute trusts (eg tackling sickle cell disease).<sup>9</sup> It is this value of the Census as a guide to the

<sup>7</sup> *Local Government Finance Report* (England) 2004/05: Amending Report 2006, Office of the Deputy Prime Minister (2006) pp. 23, 27-8

<sup>8</sup> *2001 Census Bulletin: Limiting Long Term Illness in South East England*, South East Public Health Observatory, (2006), p.1.

<sup>9</sup> *Screening for Sickle Cell Disease and Thalassaemia: a systematic review with supplementary research*, S C Davis, E Cronin, M Gill, P Greengross, M Hickman, C Normand, Health Technology Assessment, (2000), Vol.4: Number 3, pp. iii, 19, 30, 48.

population that underpins the geodemographic systems used in public decision-making such as MOSAIC and ACORN. More recent are the ONS Output Area Classifications based on data for 41 Census variables. This allows all output areas to be grouped into socio-economic categories (eg urban, rural, city living, prospering suburbs) used by departments, local and health authorities in understanding the needs of local populations and in identifying pockets of social deprivation.

Front-line organisations make frequent use of the Census in setting policy. Local authorities are known to produce their own indices of deprivation using Census data to suit their needs. For example, North Somerset has abandoned the free school meal entitlement as a guide when calculating its funding strategy, replacing it with a set of Census-based indicators; *“The schools involved identified the social factors from the Census that they felt had the most impact on their work in school and the type of additional support that schools would need to provide to lessen the impact that deprivation can have on both behaviour and standards. Each ward was compared to the English national average for the statistics selected and a sample of the home addresses of pupils from each school used to generate a deprivation score”*.<sup>10</sup> Elsewhere, local authorities base their Local Transport Plans on Census data for local transport patterns – deducing the number of commuters entering an area daily and the forms of transportation most commonly used.<sup>11</sup> Similarly, Census information is applied in transport ‘accessibility planning’ aimed at reducing levels of social exclusion, as set down by the Department for Transport.<sup>12</sup>

The other principal usage of the Census is as the basis for all other national surveys performed by the ONS or on behalf of government departments. High profile research studies such as the Labour Force Survey or the British Crime Survey are dependent on the Census for deriving an accurate sample of the UK’s population and applying the appropriate weighting to results.

<sup>10</sup> *Technical Review of Deprivation Indicators used in Local Authority Funding Formulae*, Department for Education and Skills, (2006). See Appendix B3 under ‘Existing Use of Census Data by Local Authorities in School Funding’

<sup>11</sup> *Swindon Borough Council Local Transport Plan 2006-2011*, Swindon Borough Council, see ‘Introduction’, pp. 10-11

<sup>12</sup> *Data Sources for Informing Accessibility Planning*, Department for Transport

## National Survey Data

By probing attitudes and experiences not broached in the Census, national statistical surveys figure highly in planning and policy formation. The Expenditure and Food Survey (EFS) is used by the Nutrition Foundation Survey to track trends in food consumption but also by ONS in calculating the Retail Prices Index and GDP. The Department of Health uses the General Household Survey (GHS) and the Health Survey of England (HSE) to establish associations between health and such variables as recreation, alcohol consumption, fertility, household composition and formation, education and housing.

The wide application of survey data is well illustrated by the British Crime Survey. It arguably provides users with a truer measure of crime by revealing incidents not reported to the police. As a barometer of public attitudes it is an influential qualitative indicator, examining the experience of crime and perceptions of the police and the criminal justice system which are not reflected in other outputs. As a benchmark, it is important in monitoring and setting Home Office/DCA objectives, such as reducing the fear of crime and building confidence in the justice system.<sup>13</sup> As an indicator of local crime patterns, it is important for front-line organisations. Constabularies use it to identify the types of neighbourhoods and social groups most at risk, such as student and single parent dwellings, allowing crime prevention initiatives to be targeted more effectively,<sup>14</sup> an approach that is leading to some more geodemographic methods of policing, with area profiles being used to tailor tactics to suit communities.<sup>15</sup>

The use of national survey data in profiling populations extends across public organisations. Regional development agencies use the LFS to determine local levels of unemployment<sup>16</sup> and the representation of demographic groups in the workforce.<sup>17</sup> Similarly data from the EFS and the Health Survey for England have been used to estimate local eating habits when devising regional health strategies.<sup>18</sup> The need to make survey data as relevant and useful as possible can also drive improvements to their public value. Previous difficulty in comparing employment and financial data prompted the Annual Business Inquiry (ABI – published from 2001 onwards). Purely as an employment measure, it can inform local as well as central government about the demography of the workforce, and the changing manpower sizes of sectors and business units.<sup>19</sup> However, data for businesses' expenditure and

<sup>13</sup> *Department of Constitutional Affairs, Strategic Review 2004: Public Service Agreement Targets: Technical Notes*, Department of Constitutional Affairs (2005), p.3

<sup>14</sup> *Burglary, Practice Messages from the British Crime Survey: Briefing Note 5/01*, Home Office, (2001), pp. 1-3

<sup>15</sup> *Crime Mapping and the Neighbourhood*, David Ashby (UCL/Centre for Advanced Spatial Analysis), presentation given at the Second UK Crime Conference 9th – 10th March 2004

<sup>16</sup> *South West England Regional Economic Strategy Review 2005: Contextual Paper*, South West Regional Development Agency, (2005), p.3 note 12

<sup>17</sup> *Race Equality Scheme for the East of England Development Agency*, East of England Development Agency, (2002), p. 14

<sup>18</sup> *The East Midlands Food and Health Action Plan*, Emphasis, the East Midlands Public Health Network, (2006), pp. 9-11

<sup>19</sup> *Annual Business Inquiry 2003: Hertfordshire*, Hertfordshire County Council (2003)

turnover are used widely by central government. Information on employment costs is fed into the calculation of GDP. The DTI uses the ABI to calculate the energy needs of business sectors. Regional accounts are devised partly with reference to the ABI data for Gross Value Added and Gross Fixed Capital.<sup>20</sup>

However, drawbacks to survey data have been noted. The limited number of participants may make it difficult to extrapolate, nationally, data gained from smaller sub-groups in the sample such as 16-24 year olds or BME populations. Unlike the Census, survey data are subject to sampling errors and even a small confidence interval can be significant when small changes (i.e. of two or three percentage points) are being measured. There is also the problem of proxy answers, such as parents answering questions on their teenager's school qualifications asked by the LFS – some may not be able to recall them accurately.<sup>21</sup> Other criticisms of survey data include the exclusion of potentially significant variables; the BCS has been criticised for understating the true level of offences by not touching on crimes against businesses or those involving no direct assault on the person, such as drug dealing.<sup>22</sup> Certainly, the Commercial Victimization Survey (CVS) in England and Wales and Crime Against Business in Scotland Survey (CABS) fill many of the omissions in the BCS. However, as the Statistics Commission has pointed out, these surveys are run infrequently (CVS in 1994 and 2002; CABS once in 1998) which constrains their usefulness.<sup>23</sup>

## Administrative Data

As defined by the OECD, administrative data are *“the set of units and data derived from an administrative source”*.<sup>24</sup> The data produced in government departments underpin the monitoring and evaluation of policies and front-line performance down to the level of individual units such as hospital departments and council directorates. Looking at Hospital Episode Statistics, these are used by a variety of NHS and social care organisations in generating a picture of local health patterns and thereby policy priorities. For example, in determining treatment needs for young people in Worcestershire, they have been used to compare local hospital admissions for

<sup>20</sup> *Report on the Quinquennial Review of the Annual Business Inquiry* pt 2 – The Financial Questionnaire Office of National Statistics (2004), pp. 14-15

<sup>21</sup> *Review of the Measurement of the Attainment of Young People*, National Statistics Quality Review Series Report No. 38, Department for Education and Skills, (2004), p. 6

<sup>22</sup> ‘The jury is still out on which set of crime figures reveals the truth’, *Daily Telegraph*, 22nd April 2005

<sup>23</sup> *Crime Statistics: User Perspective* Report No. 30 Statistics Commission (2006), p. 159

<sup>24</sup> <http://stats.oecd.org/glossary/detail.asp?ID=4328>

accidents among under -16s against figures for neighbouring counties, for the West Midlands South Strategic Health Authority and for England as a whole.<sup>25</sup> Episode Statistics are also used widely by Public Health Observatories, for example in determining where and how treatments are administered (i.e. NHS or private) or the treatment of illnesses across demographic sub-groups.<sup>26</sup>

Educational statistics are another case in point. Figures for A-level, GCSE and key stage exam performance and for attendance are used by the DfES to track national progress in reducing truancy and raising the attainment of pupils, but they allow it to identify performance at the level of LEAs and individual schools, isolating areas of underachievement whether by school, subject or pupil cohort. The Statistics Commission's own research also shows both a range of public sector users and priorities outside central government. Within schools themselves, they are used to track the performance of pupils in relation to which they act as performance benchmarks and indicators of future performance. However there is less evidence that teachers use them systematically to improve teaching styles. Governors appear mainly to use statistics in comparing performance against other schools or in predicting cohort outcomes, but less tangibly in making decisions. On the other hand, local authorities are more likely to incorporate data into strategic plans and budgetary decisions.<sup>27</sup>

Administrative data are used in producing indices designed to measure the cumulative effect of certain factors and which are used across public organisations. For example, Home Office statisticians have devised the Drug Harm Index based on figures for, among others, drug related deaths (ONS), overdoses and drug-related behavioural and health problems (Hospital Episode Statistics) and numbers of HIV/AIDS cases related to intravenous drug use (Communicable Disease Surveillance Centre) to quantify the social damage of substance abuse.<sup>28</sup> Even wider ranging are the various deprivation indices which draw on administrative data for health, transport infrastructure and educational attainment, among others, and are used to identify neighbourhoods in acute poverty. The 2000 and 2004 deprivation scores, for example, were used by the DCLG as an analytical starting point in a recent case-study comparison of diversity management in four deprived local authorities (Blackburn, Burnley, Oldham, and Rochdale).<sup>29</sup> The importance of deprivation

<sup>25</sup> *Assessment of Need: Children and Young People in Worcestershire 2005*, Worcestershire County Council, (2005), pp. 28-9

<sup>26</sup> *SKIL – Sharing Knowledge and Information in London: Annual Report of the London Health Observatory's R&D Programme: Year Three 1st January – 31st December 2004*, London Health Observatory, (2004), pp. 6, 9.

<sup>27</sup> *Schools Education Statistics: Users Perspectives Report no.26* Statistics Commission (2005), pp. 48-53

<sup>28</sup> *Measuring the Harm from Illegal Drugs using the Drug Harm Index*, Z Macdonald, L Tinsley, J Collingwood, P Jamieson, S Pudney, Home Office Report 24/05 (2005), p. 4

<sup>29</sup> *Managing for Diversity: A Case Study of Four Local Authorities'*, Department for Communities and Local Government, (2006), pp. 58-60

analysis is here grounded in the belief *“the critical issue for social cohesion is not so much the fact of segregation by faith and/or ethnicity or even necessarily its level, but its association with more general material disadvantage. This is because underlying tensions and conflict are exacerbated by gross inequality”*.<sup>30</sup> With deprivation measurement underpinning many decisions, the IMD (Index of Multiple Deprivation) is consequently a major contributor to public policy. Alternatively, administrative data can form the basis for survey research in a manner not dissimilar to the Census. The Inter-Departmental Business Register, which has details for 99 per cent of all companies active in the UK, is the source of samples for the Annual Business Inquiry. Similarly, Scottish Enterprise used the IDBR as the basis for its 2005 e-Commerce Survey among over 8,000 organisations.<sup>31</sup>

## Strategic uses of statistics

To provide an overview of how statistics are used in the public sector, a brief examination of strategic usage may prove useful. An obvious instance is the statistical basis for performance monitoring. Although government has habitually used data outputs to track policy effectiveness, the introduction of Public Service Agreements for each department as a result of the 1998 Comprehensive Spending Review represents a major extension of this practice. It has certainly been interpreted as such within recent political debate.<sup>32</sup>

Performance monitoring serves three main purposes for central government: the assessment of public policy effectiveness, the identification of successful and underachieving units and the accountability of ministers for public service management. Although the considerable discourse surrounding PSA targets is beyond the remit of this paper, it is difficult to examine the use of statistics without touching on it. Broadly speaking, concerns about performance monitoring (PM) have not been that it is intrinsically flawed but rather that its misuse has serious consequences. As the Royal Statistical Society working party noted in 2003, *‘PM done well is broadly productive for those concerned. Done badly, it can be very costly and not merely ineffective but harmful and indeed destructive’*.<sup>33</sup> One example is the setting of extreme targets, for which even one setback leads to the whole target being missed.<sup>34</sup> Similarly, there are concerns about the complicated use of

<sup>30</sup> Ibid, p. 58

<sup>31</sup> Scottish E-Business Survey 2005, *Scottish Enterprise*, p.65

<sup>32</sup> *George Osborne Speech: speech by the shadow chancellor to the Policy Exchange think tank*, *The Guardian*, 17 July 2006

<sup>33</sup> *Performance Indicators: Good, Bad and Ugly*, S M Bird, Sir D Cox, V T Farewell, H Goldstein, T Holt, P C Smith, *Journal of the Royal Statistical Society, Series A (Statistics in Society)* Vol. 168, Number 1, (2005), p.1

<sup>34</sup> Ibid, p. 9

multiple indicators in measuring performance.<sup>35</sup> The difficulty in measuring certain social phenomena, such as child poverty, is also problematic, because the lack of a baseline measure of change can undermine conclusions and thereby the wider credibility of government information.<sup>36</sup>

If statistics can inform government on its current performance, it can also guide its future priorities. According to CACI, the market analysis company, 25 per cent of Britons were 'Wealthy Achievers' in 2001 (up from 19 per cent in 1991), but the combined proportion who were 'Moderate Means' and 'Hard Pressed' also grew from 33 per cent to 37 per cent.<sup>37</sup> The 1980s has been characterised as the decade of polarisation, but results from the 2001 Census suggests that this trend was consolidated and continued well into the 1990s.<sup>38</sup> This movement towards an increasingly polarised Britain has implications across government for future health needs, levels of social security, crime and economic performance.

These implications are likely to be felt in housing planning, for example, where an emphasis already exists on identifying the most deprived social groups and their needs. Whitehall advises that it is "*important to identify the difference between areas within the local authority when assessing [housing] needs, eg rural versus urban, and between different types of people eg the needs of black and ethnic minorities may differ from other residents in the area*".<sup>39</sup> In Essex, Thurrock Council's housing policy for 2004-7 is partly based on the Census finding that 4.7 per cent of the population is non-white; this formed the basis for subsequent investigation among this group that shows they have particular needs relating to overcrowding, disrepair and a lack of amenities.<sup>40</sup> A Census-generated ethnic profile is also a factor in West Berkshire's housing plan, but so too are Census data for housing tenure, employment and learning disability, all of which may affect future demands on the quality and quantity of housing stock.<sup>41</sup>

Frequently, at the heart of public planning lies the demographic projection. Again with regards to housing, the proportion of residents aged 65+ is expected to rise from 16 per cent in 2001 to 19 per cent 2011 in South Kesteven, in Lincolnshire. An ageing population will likely increase demand for social care and home adaptations. It may also make it more difficult for young people to buy a home nearby, with ramifications for the local economy if they choose to leave the area. These considerations help

<sup>35</sup> Ibid, p. 14

<sup>36</sup> *On Target? Government by Measurement*, House of Commons Public Administration Select Committee (2003) pp. 21

<sup>37</sup> *Census exposes unequal Britain*, The Observer, 23rd November 2003. In 2001, 15 per cent of the population were 'moderate means' and 22 per cent were 'hard pressed'

<sup>38</sup> *A nation still dividing: the British census and social polarisation 1971-2001*, D Dorling & P Rees, Environment and Planning, Vol. 35, (2003), p. 1309

<sup>39</sup> *Informing Policy Making: New Approaches to analysing the 2001 Census*, C. Gardner, Local Government Studies, Volume 27, (2001), p. 76

<sup>40</sup> *Housing Strategy 2004-2007*, Thurrock Council, p. 31

<sup>41</sup> *Housing Strategy, 2005-2010*, West Berkshire Council, pp. 14, 17, 47, 52

underpin the District Council's housing strategy for 2005-09.<sup>42</sup> Data outputs may be used to predict future housing trends at a regional level. For example, when the South East Regional Assembly commissioned a study into intermediate housing needs until 2021, the selected method was to pool the results for the Survey of English Housing for three consecutive years to provide a robust sample for further research.<sup>43</sup> At the national level, a major consideration in long-term housing strategy is the fact that 60 per cent of the anticipated increase of 4.8 million in English households from 2003-26 will be concentrated in London and the South and East of England.<sup>44</sup>

## Private Sector

Although the use of official statistics by companies is less well documented, there is indication of considerable usage to gain advantage in the market. Beginning with pioneer geodemographic systems like ACORN but now including OA data, the cumulative use of Census information alone 'has exploded in the last two decades'.<sup>45</sup> This is evinced by the formation of the Demographic User Group, which represents the interests of the major high-street names that utilise national statistics – companies like Boots, Asda, Marks & Spencers and Tesco.<sup>46</sup>

A prime example is the prominence of geodemography in the location of supermarket outlets. According to Alison Green, Sainsbury's Strategic Development Manager in Location Planning, '*very few large companies still rely on old-school 'gut-feeling' when reviewing their branch network. The investments involved are just too large....the immediate financial costs and long-term losses caused by poor location decision cannot be overestimated*'.<sup>47</sup> Supermarkets are patronised by different demographic groups – in 2004, Waitrose drew 47 per cent of its customers from professional social classes A and B, whereas Kwik Save drew 66 per cent from grade D and E.<sup>48</sup> Census, survey and administrative data can help such companies find their niche market. Such variables as age, wealth, transport patterns, qualifications and car ownership are all useful indicators of the most appropriate store location. The advantage that Census OA data enjoy over postcode files,

<sup>42</sup> Calculations are based on the data tables in 'Housing Strategy 2005-2009, Achieving Housing Solutions', South Kesteven District Council, pp. 25-26

<sup>43</sup> *Need for Intermediate Housing in the South East*, Cambridge Centre for Planning and Housing Research, Cambridge University/South East Regional Assembly, (2005), i.

<sup>44</sup> *New Projections of households for England and the Regions to 2026*, DCLG Press Release, 14 March 2006

<sup>45</sup> K Dugmore (2001) *Why the Census is so important to Commercial companies*  
<http://www.laria.gov.uk/content/features/74/feat6.htm>

<sup>46</sup> <http://www.demographic.co.uk/dug.html>

<sup>47</sup> *The 2001 Census and its Significance for the Commercial World*, BRC Solutions, 2004, p. 57

<sup>48</sup> *I'm rich and I'm living well. Shopping here is part of that*, *Guardian*, 12th March 2004

previously commerce's main geodemographical source, is that the boundaries of Census output areas remain consistent whereas postcode areas are frequently readjusted to assist the Royal Mail. Census OA data are therefore a more dependable and consistent guide to a locality. Furthermore, information of output area boundaries is now available free of charge. With this in mind, the commercial use of Census information is likely to maintain a strong upward curve.<sup>49</sup>

It can also help supermarkets decide how to market particular products, with 'finest' items being offered in branches located in more affluent areas.<sup>50</sup> On a still larger scale, parent companies use statistics to decide which of their subsidiaries would be best suited to a locality. A case in point might be the Whitbread Group and its various chains – Costa Coffee, David Lloyd Leisure, Pizza Hut UK, and TGI Friday; the Group Market Research department of Whitbread has been noted as a 'seriously heavy' user of geodemographic systems since its inception.<sup>51</sup>

Banks also use demographic information in marketing and tailoring their products, by identifying social groups with particular financial needs. For example, the marketing of student loans, car loans and home improvement loans depends very largely on the demographic profile of local areas. However, banks also incorporate statistics into 'risk' assessment. In terms of credit risk, indicators of income or social deprivation can be used to calculate the likelihood that members of a demographic group will meet debt repayment, thereby informing the limit of credit made available. Looking at insurance, statistics for local levels of crime, health, housing quality and ownership can all be used to deduce the risk involved in various forms of insurance.<sup>52</sup>

The need to comply with governmental policy can also be a spur for the use of statistical information. Energy suppliers are obliged by the government to help combat fuel poverty (10 per cent of disposable income being spent on energy bills). However, although companies know the identity of their customers and their level of consumption, they do not know how they use energy or how efficiently they do so. To target fuel efficiency measures and programmes effectively, energy companies use IMD figures, Census data, NeSS figures, (Neighbourhood Statistics) and administrative data on benefits (DWP) to identify areas likely to have problems with fuel efficiency.<sup>53</sup>

<sup>49</sup> *The 2001 Census: An Essential Information for Gaining Business Advantage*, K. Dugmore and C. Moy (ed.), National Statistics/Market Research Society, (2004), p. 115

<sup>50</sup> *Guardian*, 12th March 2004

<sup>51</sup> *Under the Microscope* R. Flowerdew, B. Leventhal, based on the article appearing in *New Perspectives Magazine*, 1998, p. 1

<sup>52</sup> *The Use of Neighbourhood Statistics in Banking*, J Steenstra. Strategic Users Forum Conference, 1st November 2005, pp. 2-3

<sup>53</sup> *Targeting Energy Efficiency Measures*, S. Robbins, presentation to the Demographic User Group Conference, 10th November 2005, [http://www.demographic.co.uk/2005conf-pres05-STEWART\\_ROBBINS.pdf](http://www.demographic.co.uk/2005conf-pres05-STEWART_ROBBINS.pdf), slide 9

Furthermore, there are certain companies and sectors for which statistics are not only an important tool but a fundamental necessity. Yell, the producer of business directories, depends on the Inter-departmental Business Register (IDBR), produced by the ONS from the outputs of Companies House, PAYE records from employers and VAT business registration.<sup>54</sup> Together with NeSS data on local employers and the workplace information derived from the Census, this allows Yell to produce a commercial atlas of the UK by categorising regions economically, eg 'County Towns' and 'Old Industrial'. Similarly, market and opinion research agencies are dependent on the Census to ensure their surveys are representative of the population or of specific demographic groups that are being targeted. Quotas may be set to make the sampled population conform to the wider demographic profile. However, randomly selected sampling is no less grounded on the Census, with both methods drawing on the population profile at output area level.

Looking at the private sector as a whole what might distinguish its use of statistics is the aggressive use of geodemography in the pursuit of markets; targeting rather than simply redirecting. Being intimately concerned with consumer psychology, companies use geodemography to penetrate behind output area data to identify market behaviours and patterns. Mark Callingham, formerly of Whitbread GRM and now visiting professor at Birkbeck, recently argued that the commercial sector uses systems like ACORN and MOSAIC because it *"thinks of these of systems as being able to locate demographics (which will be associated with behaviour)"*.<sup>55</sup> This is not to say the public sector does not use geodemographics. But its priorities in doing so are likely to be different. It has to vary allocations within the framework of comprehensive national services, whereas companies arguably have to be more selective and precise because their commitment to an outlet or product is proportionally greater. The difference proposed by Callingham is between a focus on 'areal classification' in public services and geodemographic market targeting by commerce.

<sup>54</sup> *Using Government Data to help understand the Business Market Place*, M. Fishwick, ibid

<sup>55</sup> *From Areal Classification to Geodemographics*, M Callingham, ibid, slides 3 and 10

## Academic use

There is ample evidence of the usage of statistics in academic research, particularly in areas of public policy. This may reflect the fact that academia and government are known to overlap, with universities frequently conducting research on behalf of departments. For example, population predictions for England and Wales are produced for the DCLG by the Population and Housing Research Group based in Anglia Ruskin University.<sup>56</sup> Similarly, the Centre for Advanced Spatial Awareness at UCL has worked with the National Reassurance Policing Programme in developing geodemographic policing methods.<sup>57</sup>

The review process for this paper located numerous instances of academic researchers using official outputs. For example, the British Crime Survey has been used to study the fear of crime, in particular its variation according to such variables as wealth and the type of neighbourhood.<sup>58</sup> It has also been taken as a guide to the spread of repeat victimisation according to the type of crime committed.<sup>59</sup>

Data for the General Household Survey, the Health Survey of England and the Scotland Health Survey have been compared in an attempt to explain the widely differing levels of alcohol abuse that they suggest.<sup>60</sup> The considerations that affect satisfaction with a local neighbourhood have been analysed through the Survey of English Housing.<sup>61</sup> Similarly, the Census was used in a high profile study in 2005 on behalf of the Joseph Rowntree Foundation to assess the social distribution of deprivation<sup>62</sup>, one of the principal findings of which was that “wide and persisting inequality is reflected in big differences between ‘rich’ and ‘poor’ areas in terms of housing, education and health care as well as economic wealth”.<sup>63</sup>

<sup>56</sup> New Projections of Households for England and the Regions to 2026, DCLG Press Release, 14 March 2006

<sup>57</sup> <http://www.casa.ucl.ac.uk/projects/projectDetail.asp?ID=43>

<sup>58</sup> *Fear of Crime, Vulnerability and Poverty: Evidence from the British Crime Survey*, C Pantazis, The British Journal of Criminology, Vol. 40, (2000)

<sup>59</sup> *Population Inequality: the Case of Repeat Crime Victimization* A Tseloni, K Pease, International Review of Victimology, Vol. 12, (2005)

<sup>60</sup> *Establishing Rates of Binge Drinking in the UK: Anomalies in the Data* J McAlanay, J McMahon, Alcohol and Alcoholism, Vol. 41, Number 4, (2006)

<sup>61</sup> *What makes people dissatisfied with their neighbourhoods?*, A Parkes, A Kearns, R Atkinson, Urban Studies, Vol. 39, Number 13, (2002)

<sup>62</sup> *Life in Britain: Using Millennial Census Data to understand Poverty, Inequality and Place*, B Wheeler, M Shaw, R Mitchell, D Dorling, (Policy Press 2005)

<sup>63</sup> *Rich-poor divide as wide as 60 years ago*, Daily Telegraph, 2nd September 2005

## Public use

The public's use of statistics is a grey area, having been the object of apparently little scrutiny. However, some insight may be provided by a MORI survey of June 2005 into parental attitudes towards school performance tables. Of the 210 parents participating, 27 per cent claimed they used the tables in choosing a primary school and 30 per cent indicated they did so at secondary level. About a third of parents say they used tables to track the progress of their child's school at primary (36 per cent) and secondary (34 per cent) level. Opinion about the utility of performance tables was very evenly split; with equal proportions agreeing (44 per cent) and disagreeing (43 per cent) that tables are a useful gauge of how well a school supports their child's progress and attainment. They were a little more likely to believe tables are a sound measure of how well a school supports all of its pupils (47 per cent agree and 39 per cent disagree).<sup>64</sup>

There is also considerable evidence for the popularity of previous censuses made available to the public. Between the launch of the 1901 Census website in January 2002 and its sale to Friends Reunited in 2005, there were 120 million hits and a total of 12 million paid downloads.<sup>65</sup> Another indirect indication of the public use of statistics is the growth of IBNIS (Internet Based Neighbourhood Information Systems) websites. Through various formats and combinations these repackage official data outputs to construct a picture of a local neighbourhood, which can be used by prospective home buyers. Most notable is the official Neighbourhood Statistics service, but there are a growing number of commercial sites such as [www.homestore.com](http://www.homestore.com) or the rather more tongue-in-cheek [www.craptowns.com](http://www.craptowns.com).<sup>66</sup> However, it remains the case that the public's use of statistics is largely an unknown quantity. Much of the evidence is anecdotal or at best indirect. As such it may be an area for detailed further examination.

<sup>64</sup> *Parents on Performance Tables*, MORI survey on behalf of the General Teaching Council. A total of 210 parents in England were interviewed by telephone between 24 and 26 June 2005.

<sup>65</sup> <http://www.nationalarchives.gov.uk/news/stories/73.htm>

<sup>66</sup> A detailed study of IBNIS websites is presented in *Neighbourhoods on the Net: the Nature and Impact of Internet-based Neighbourhood Information Systems*, R Burrows, N Ellison, B Woods, The Policy Press & Joseph Rowntree Foundation (2005)

## Some International Comparisons

The use of statistics internationally warrants a major study in its own right. Here it can only extend so far as a glimpse at several interesting cases. Nonetheless, even a cursory examination suggests that official data play as important a role in decision-making in many countries as they do in the United Kingdom.

Looking at the US Census, a 2000 report by the Council of Economic Advisers (the team of economists who advise the President) shows broad-ranging usage. For example, at a federal level it allows the targeting of resources for social groups with special needs, such as the decision on where to locate hospitals designed for veterans. It can also be a tool in the implementation of federal law; by identifying the distribution of minorities within the population it assists in monitoring compliance with civil rights legislation. At a state level, Census information serves much the same function in the allocation of resources for public services as it does in the UK through the Formula Spending Share.<sup>67</sup>

Also as in the UK, the Census enjoys sizeable authority as a commercial tool. US retail and leisure giants and banks use the data in locating outlets and marketing products just as their British counterparts do. However, language data is also an important marketing guide for advertising companies and non-English newspapers. Census questions on housing are used by architects, builders and estate agents to inform the design of houses and apartments. Similarly, TV channels are known to use Census data as a means of audience profiling, shaping programme content and advertising strategies. As the business section of one newspaper has put it, “*For Business, Census is a Marketing Data Motherlode*”.<sup>68</sup>

Major facets of public policy might depend on statistical data. A useful instance is the use of outputs from Statistics Denmark within the Danish government’s plans to increase national IT capability. Among the principal measures of progress are the proportion of those with an IT education and those who work in the IT sector, the levels of PC ownership, IT related import and export figures and the number and performance of Danish IT companies. In total, 160 statistical indicators are used to determine national progress.<sup>69</sup> A good example of the allocation of resources governed by statistical outputs is the use of Diagnosis Related Groups (DRG) in Norwegian health services. In-patients are banded together according to their principal diagnosis and other circumstances or characteristics in order to produce relatively homogenous groups. These units of patients then form the basis for the assignment of funding. First introduced to Norway from the USA in the 1980s, the DRG-calculated indicators have determined between 30 per cent and 60 per cent of

<sup>67</sup> *The Uses of Census Data: An Analytical Review*, Council of Economic Advisors (2000), pp. 2-3

<sup>68</sup> *Ibid*, pp. 4-5

<sup>69</sup> *The Use of Statistics in Danish IT Policy*, M Ronnebaek, paper delivered to the Conference of the International Association of Statistics, London, August 2002, p.6  
[http://www.statistics.gov.uk/iaoslondon2002/contributed\\_papers/downloads/IP\\_Ronnebaek.pdf](http://www.statistics.gov.uk/iaoslondon2002/contributed_papers/downloads/IP_Ronnebaek.pdf)

health funding in recent years.<sup>70</sup> In terms of performance monitoring, Norway's use of the MBOR (Management by Objectives and Results) system provides an interesting comparison with the UK's PSA mechanism. MBOR entails the setting of clear and specific goals for public organisations and the development of statistical indicators against which to gauge performance. The Norwegian experience suggests it is not only in Britain that indicator-based monitoring is proving problematic. One recent survey of public sector organisations there shows over one in five have over 20 performance indicators, "implying that there is not much prioritization of goals and objectives".<sup>71</sup>

Looking more directly at the 'public value' of statistics, an interesting example is Bolivia where discussion of how the National Institute of Statistics (INE) can improve its performance has borrowed heavily on the models of Prof. Moore in identifying viable strategies.<sup>72</sup> Conscious attempts to generate a sense of public worth are particularly notable in a country like Bolivia which has little history of democratic politics.

Survey and administrative data are also deployed to assess social and economic experience. In the academic world, the aggregated data from the German Socio-Economic Panel (equivalent of the UK Census and General Household Survey) have been taken to measure the working life patterns of the self-employed.<sup>73</sup> Similarly, a 2003 comparison of American pedestrianism and cycling rates with those of Germany and the Netherlands drew upon a myriad of statistical measures to argue that US should do more to encourage citizens to walk or cycle. From the US it utilises survey data from the 1995 Nationwide Personal Transportation Survey and the 2001 National Household Travel Survey, together with administrative data on traffic fatalities from the National Highway Traffic Safety Administration and on traffic injuries from the Centres for Disease Control and Prevention. The German comparison is based on travel data from the federal Ministry of Transport and Institute of Economic Research and fatality and injury figures from the Federal Statistical Office and the Federal Traffic Institute respectively. Statistics Netherlands and the Dutch Ministry of Transport provided the relevant figures for the Netherlands.<sup>74</sup>

<sup>70</sup> *Performance Management and Public Sector Reform: The Norwegian Hospital Reform*, T Christensen, P Lægheid, I M Stigen, Stein Rokkan Centre for Social Studies, University of Bergen/UNIFOB AS, (2004) p. 13

<sup>71</sup> *Performance Management in Practice: The Norwegian Way*, P Lægheid, P Roness, K Rubecksen, Financial Accountability and Management, Vol. 22, Number 3, (2006), p. 261

<sup>72</sup> *Public Credibility of Statistical Offices: Generating Public Value*, United Nations Commission for Latin America and the Caribbean, (2003), pp. 5-6

<sup>73</sup> *Life Cycle of the Self-Employed in the German Socio-Economic Panel: a Descriptive Panel* J Guitard, (Eurequa and UCL), research paper delivered at UCL, May 2006

<sup>74</sup> *Promoting Safe Walking and Cycling to Improve Public Health: Lessons from the Netherlands and Germany*, J Pucher and L Dijkstra, American Journal of Public Health, Vol. 93, Number 9 (2003), p.5

This example raises the issue of the international comparability of statistics, one of the principal challenges facing the producers and users of data and which has been thrown into stark relief by the growth of trans-national organisations such as the EU or the African Union. The point was illustrated by the President of the European Central Bank, Jean-Claude Trichet, in 2004 when he observed that “countries will only be able to achieve a common analysis of their bilateral economic and financial relationships if their mutual external statistics mirror each other”.<sup>75</sup> At present, such key indicators as the level of direct investment cannot be wholly aligned between the Euro area, the US and Japan. A lack of adequate statistical measures was partly blamed for the failure to diagnose the warning signs of financial crises during the 1990s, a problem that led to pressure on the IMF to produce firmer guidelines for the dissemination of data.<sup>76</sup> The development of common statistical measures will therefore be a priority in improving their value, particularly with the appearance of governmental EU institutions (like the ECB) that draw upon data from all member states in formulating policy.

## Conclusions

One way to assess the use of official statistics is through the idea of ‘public value’, a concept that has become increasingly common currency since the mid-1990s. The return that shareholders receive on their investment is the classic analogy if we think of members of the public as investors in public services (and therefore national statistics) through their taxes. However, the fact that “ultimately, the [public] value...is decided by the citizen”, suggests it may not be a commodity straightforwardly divined.<sup>77</sup> Furthermore, it is not a term that has been taken up universally.<sup>78</sup> This is not to say that the ideas behind public value are not widespread but the question of classification is an important one – especially in the realm of statistics, taxonomy matters.

What ‘return’ then does the public derive from official statistics? Most directly, official data outputs inform the decisions made by the public, such as choices on schools or places to live. However, as has been noted earlier, this remains largely uncharted territory. Suffice to say that statistics can be used by the public and are used. However, the precise extent of this remains unknown. Much of the public value of

<sup>75</sup> *The ECB’s Use of Statistics and Other Information for Monetary Policy*, Keynote Address from Jean-Claude Trichet at the OECD World Forum on Key Indicators “Statistics, Knowledge and Policy”, Palermo, 11th November 2004, p. 3 <http://www.bis.org/review/r041115b.pdf>

<sup>76</sup> *Revisions Policy for Official Statistics: A Matter of Governance*, C S Carson, S Khawaja, T K Morrison, IMF Working Paper WP/04/87 (2004), p. 3

<sup>77</sup> *Adding Public Value*, L. Horner, L Hazel, The Work Foundation (2005), p. 5

<sup>78</sup> There was little reference to public value and statistics in Eurostat or OECD literature.

statistics is generated by proxy in that they are used by state sector organisations to provide services to the public. Official data outputs assist the allocation of resources, the planning of long-term policy, and the monitoring of performance, all within comprehensive national service frameworks. The development of data analysis beyond simple area classifications into complex geodemography is occurring within the public sector. For instance, since the 1991 Census university-based research has been conducted into using geodemographic techniques to guide policy priorities. An example is the co-operation between Merseyside Police and academics based in the University of Liverpool into the relationship between crime, risk and neighbourhood characteristics.<sup>79</sup> That in itself suggests the potential overlap between public and academic statistical usage.

The boundary between public and private value becomes obscure when statistics are used by the private sector, for companies evidently are making significant use of them for commercial purposes. Gut feeling is no longer acceptable in decision-making when the financial, logistical and psychological investment in an outlet or a product is so large, arguably more so than in public organisations. Unlike in much of the public sector, market forces will punish an ill-advised decision, so corporate choices are increasingly evidence-grounded to reduce that risk. Geodemography therefore seems to be an increasingly intrinsic feature of business strategy, perhaps more so than in the public sector although this conclusion is cautious and the gap, in any case, may be narrowing. Looking above national parameters, this picture of statistical prominence in public and business decision-making and in academic research is replicated in other western countries.

However, if we accept that the public are investors in national statistics, one could argue that it is an investment of trust as well as taxation. Public value is derived from the credibility of statistics, not just how they are used, and repeated controversy over governments' handling of official data is not conducive to a high valuation. Recent criticism voiced by the Statistics Commission over the treatment of crime figures is a case in point, with recommendations for greater distance between the setting of policy and collection of data. Setting aside the rights and wrongs of the issue (if that is possible), the media climate is an added variable in public value that is still less easy to control. Looking again at crime, it may be inevitable that *"[the public] get crime figures from the media, and all the footnotes and explanations in the world will not stop journalists from cherry-picking the figures that best support the story they want to write"*.<sup>80</sup> More clearly defined independence for the ONS may help to improve matters. However, if the value of statistics is defined by public debate as well as public usage, then it is a currency liable to fluctuation.

<sup>79</sup> *Adding Value to Census Data, Public Sector Applications of the Super Profiles Geodemographic Typology*, P J B Brown, A F G Hirschfield, P W J Batey, *Journal of Cities and Region*, Vol. 10, (2000), pp. 24-7

<sup>80</sup> *Crime Statistics: User Perspective* Report no.30 Statistics Commission (2006), p. 77

# Appendix A – Search Specifications

Subject: Use of Official Statistics

Time Scale: Academic papers published in the last ten years

## **Databases:**

International Bibliography of the Social Sciences

Ingenta-Connect

Blackwell-Synergy

Dialog host

Mathsci

SocialSciSearch

Wilson Social Sciences Abstracts

## **Search Terms**

Official Statistics

Decision-making

Public Policy

Policy Formation

Evidence Based

Labour Force Survey (other surveys etc)

Census

Public Value

School Performance Tables (other administrative data etc)

Neighborhood Statistics

Geodemographic

## Appendix B – Sources of information used

### UK Government Departments

Department for Constitutional Affairs, Department for Education and Skills  
Department for Transport, Home Office, Office of the Deputy Prime  
Minister/Department for Communities and Local Government

### Parliament

House of Commons Public Administration Select Committee

### Front-line Public Sector Organisations

Scottish Enterprise, South East Regional Assembly, South West Regional  
Development Agency, East of England Regional Development Agency, East  
Midlands Regional Development Agency, South East Public Health Observatory,  
London Health Observatory, Hertfordshire County Council, Worcestershire  
County Council, Swindon Borough Council, Thurrock Council, South Kesteven  
District Council, West Berkshire Council

### Other Public/National Organisations

National Audit Office, Office for National Statistics, Statistics Commission

### Other Bodies/Groups

British Retail Consortium, Demographic User Group  
Market Research Society, Work Foundation

### Journals

Alcohol and Alcoholism, American Journal of Public Health  
British Journal of Criminology, Environment and Planning, Financial Accountability  
and Management, Health Technology Assessment  
Journal of the Royal Statistical Society, Series A (Statistics in Society)  
Journal of Cities and Region, Local Government Studies, Urban Studies

### Newspapers

The Daily Telegraph, The Guardian, The Observer

### Foreign/International Organisations

The Council of Economic Advisors (USA), Organisation for Economic  
Co-operation and Development, Bank for International Settlements.



## **PART 4**

### **The Use Made of Official Statistics: preliminary research**

#### **Report by the Statistics Commission**



## Summary

- The aim of the research was to examine the extent to which private and public sector organisations use official statistics in their decision-making. This report gives an illustrative account of the use of statistics in decision-making by a small number of organisations.
- Statistics Commission secretariat staff carried out sixteen interviews with a non-random sample of public sector (outside central government) and private sector organisations. They represented a cross section of organisations (eg financial services, utilities, retailers, local authorities, charities, trade unions) spread around the UK.

## Findings

- The findings indicate that there is extensive use made of official statistics in the private and public sector. Statistics, or the messages from them, form the basis of decision-making on a daily basis.
- Statistics are used in marketing, resource allocation, monitoring, policy development, benchmarking, targeting, lobbying, bidding, planning services and for internal research purposes.
- The study indicates widespread use of Census data; either directly from the source or through the use of repackaged value added products provided by data intermediaries. Increasing accessibility of Census data, through technological change, has increased their use over time.
- The research highlighted various user needs – including improving data accessibility, better timeliness and simplifying data formats. Increasing the use of ‘common keys’, such as the ONS Output Area Classification, across a range of statistics would help make data linking easier. Other issues were raised around better communication and user engagement – especially in the context of the 2011 Census.
- These findings raise important questions about statistical planning and its role in ensuring that official statistics are responsive to all users’ needs. The Commission believes that there is a need for improved statistical planning across government.

## Introduction

This report covers a research study undertaken by the Statistics Commission secretariat as the first stage of a review of the use made of official statistics. The aim of the review was to examine the extent to which private and public sector organisations use official statistics<sup>1</sup> in their decision-making. This research study was completed in July 2006; thereafter further research for the review was commissioned from Ipsos MORI (and is reported in Parts 2 and 3).

The focus of this study is the use of statistics in the decision-making process in a small number of public and private sector organisations. It examines the extent to which decisions are informed by official statistics and provides examples of specific uses. It also examines why official statistics are not used when they could be helpful and what could be done to increase use.

## Background

Identifying the use made of official statistics has been a long standing concern for the Statistics Commission. We have some knowledge about the uses made within central government, but wanted to know more about uses by the private sector and the rest of the public sector. Previous research on perceptions and trust found that opinion formers use official statistics for making a wide variety of decisions, and felt them to be essential to this process.<sup>2</sup> The responses to the Treasury consultation on proposed statistical legislation provide some examples of how official statistics are used by a variety of individuals and organisations.<sup>3</sup>

Research carried out on specific topic areas – health, schools education, crime – from the Commission’s ‘user perspective’ reviews indicated a diversity of users and uses of these statistics. The uses made of schools education statistics by government included monitoring policy targets and identifying policy options (eg education statistics are used as one component of deprivation indices, which in turn can influence resource allocation for geographically targeted schemes in fields not directly related to education, such as neighbourhood renewal). Local authorities used statistics to monitor the performance of schools, schools used statistics to inform management decisions and parents used the messages from statistics to make choices over schools.<sup>4</sup>

<sup>1</sup> Official statistics are statistical outputs prepared by or on behalf of government. This includes National Statistics and other government statistical service (GSS) outputs, but could also include published departmental statistics produced by officials who are not part of the GSS, as well as statistics produced by other public bodies.

<sup>2</sup> *Official Statistics: Perceptions and Trust*. Report no.24 Statistics Commission (2005)

<sup>3</sup> *Independence for Statistics: A Consultation Document*, March 2006, HMSO  
[http://www.hm-treasury.gov.uk/budget/budget\\_06/other\\_documents/bud\\_bud06\\_odstatistics.cfm](http://www.hm-treasury.gov.uk/budget/budget_06/other_documents/bud_bud06_odstatistics.cfm)

<sup>4</sup> *Schools Education Statistics: Users Perspectives* Report no.26 Statistics Commission (2005)

The uses of health statistics identified included the use of cancer registry data by public health observatories to provide briefing on cancer incidence and the use of data on smoking trends by local authorities to inform local 'stop smoking' campaigns.<sup>5</sup>

Users of crime statistics included central government, local delivery organisations eg Crime and Disorder Reduction Partnerships, and members of the general public. Government and local delivery organisations used the statistics to develop policy on criminal justice and crime reduction programmes; to manage performance at the national and local level; and to communicate information about crime to the public. Members of the public used the statistics to assess risk in their daily lives; to understand the rationale for national and local government policy and to hold local delivery organisations to account.<sup>6</sup>

## Methods

Given the nature of the research it was decided to carry out a series of face-to-face interviews with staff working in both public and private organisations using a topic guide (attached as Appendix A). Interviewing allows for a more in-depth exploration of the governance of decision-making within organisations, and examination of which official statistics were used for which decisions.

Organisations were identified through known contacts, using 'snowball' sampling. This is a non-random approach to sampling using existing networks eg the Statistics Users Forum and the Demographic Users Group to help identify and approach appropriate individuals within a variety of organisations. In total 21 organisations were invited to participate in the research including representatives from the devolved administrations as well as organisations involved in banking, insurance, charities, local authorities, academia, communications, unions, large retailers and lobby groups.

The Commission secretariat carried out 16 interviews (please see Appendix B). In order to ensure good quality research, the interviews were recorded (permission was sought) and the data transcribed and analysed using the framework approach.<sup>7</sup> This technique involved five distinct steps: 1) familiarisation, 2) identifying a thematic framework, 3) indexing, 4) charting and 5) mapping and interpretation. The method is both flexible and systematic and encourages objectivity and maximum use of the data.

<sup>5</sup> *Enhancing the Value of Health Statistics: User Perspectives*. Report no.21 Statistics Commission (2004)

<sup>6</sup> *Crime Statistics: User Perspectives*. Report no.30. Statistics Commission (2006)

<sup>7</sup> Ritchie J. and Spencer L (1994) *Qualitative data analysis for applied policy research*. In Bryman A. and Burgess R (eds.) *Analysing Qualitative Data* London: Routledge

# Findings

The structure of this section follows the order of the topic guide used in the interviews and describes the users of statistics, the decision-making process and examines users' needs. It then explores the role of data intermediaries and provides some examples of the use which is made of official statistics.

## **Users of Official Statistics**

This research study covered a variety of users of statistics working in a range of organisations. Most respondents incorporated whatever official data were available to inform decision-making within their organisation. Official statistics were used on a daily basis, along with commercial and internal sources of information.

The majority of the people interviewed worked in an analytical role and many had a research/statistics background. Their job was to provide insight into specific topics eg population trends or customer behaviour to help inform the decision-making process. These could be decisions around stock for supermarkets, which fashion trends to follow, where to deploy resources to encourage employment, customer profitability or the location of a Connexions Service.

Unsurprisingly different types of users emerged from the research, with different needs and levels of sophistication. In the following paragraphs these are grouped into three main types. This categorisation is overly simplistic, as many typologies are, but it does provide a good outline of the types of users found in this research.

The first type was the more expert user who accessed raw data directly online or via CDs received in the post. They were very familiar with the data and happily manipulated it, repacking to suit internal information needs. Such users had the confidence and ability to carry out detailed modelling of a combination of data sources (official, commercial and internal) to inform strategic decision-making eg expenditure decisions in terms of building new stores/branches, location of new cash machines.

The second type of user accessed the raw data indirectly and made extensive use of data intermediaries, eg Experian, CACI, who carried out bespoke analysis for them. As a consequence there was more limited manipulation of the raw data in-house. However, statistics still informed the decision-making process within the organisation. The final group were much more novice in their approach to data and analysis. There was little access to raw data and little manipulation of the data but extensive use of the messages from statistics provided by reports written by others.

## **The decision-making process**

Respondents were asked to describe what sorts of decisions were taken in the organisation, by whom, how often and whether they were informed by statistics. The findings indicate that data were often considered 'crucial' to decision-making by respondents and there was a strong desire to make 'fact based decisions'.

Most organisations had a clear decision-making structure, with decisions being taken within the context of a governance structure comprising of boards and sub boards. The majority of respondents were in the role, in varying levels of seniority, of providing briefing to a board on specific issues to inform decisions.

Generally respondents indicated that there was sufficient communication between themselves and the board and that they had input and influence on the decisions made – particularly in the private sector. The decisions could be strategic, tactical or operational depending on the nature of the business. This is exemplified in the following description where the respondent is explaining the way in which Census information is used to understand trends and patterns in their business (financial services), and also to inform decisions on the type and geographical distribution of financial products they should offer (eg mortgages, saving plans):

*“... At the very local level, we can use it [Census data] to understand business performance... so we would understand if a branch isn't selling mortgages in a predominantly elderly catchment, so we would hopefully target savers in that catchment because we know the positives in savings are related to old age...”* (006)

### **Users' needs**

Respondents were asked about their needs in relation to the data and whether any improvements could be made by producers of the data. It was acknowledged that there had been substantial increases in the amount of data available from government – particularly with the advent of the Neighbourhood Statistics website. However, there are areas where users' needs are not being met. These are discussed below.

The strongest theme to emerge within this section was the cultural difference between the users of the data in the private sector and the providers of government data. These differences lay mostly in the approach to data and the working environment. Private sector analysts needed a broad knowledge of all data sources available in a specific area and actively sought out new sources which they were required to assess and incorporate (if appropriate) very quickly. They needed easy access to data to support a rapid judgement on its quality. Often this 'easy access' was difficult to obtain for government data, because of the structure of data files and the sheer volume of the data available. In contrast, users within government tend to have to a narrower, but much deeper, knowledge of data and data sources in their specific areas of interest.

There was also a perceived difference amongst respondents in terms of the climate in which the users and producers work. The pace of work in a commercial environment was considered to be faster-moving compared to government. This led to a difference in the users' and producers' needs – and possible tension. A respondent commented:

*"...in the government statistical service people want to make sure that things are absolutely right and proper...and the extra six months really doesn't matter..." (005)*

The need to make sure things were 'right and proper' was acknowledged by respondents to be a good thing but not at any cost. In the context of matching records to examine trends, a user working in the private sector said:

*"...Government worries much more about accuracy than we do... the fact that it [the data] starts at 90 per cent accurate rather than 95 per cent is not a big deal because you're going to lose 15 per cent anyway by the time you have matched through. Timeliness is an issue because Government, as you will know, has a bit of an obsession with being as close to 100 per cent accurate as you could possibly be. The hard reality is it's a trade off between speed and accuracy...And from a commercial perspective that is probably too much accuracy and not enough speed. I accept that accuracy's a good thing – but not at any cost..." (002).*

From a commercial perspective a good way to reduce the time taken to process data was to improve accessibility. Respondents suggested that the best way to do this was to simplify the data structure so that less time was spent restructuring within the organisations. Another improvement identified by commercial users was in the use of 'common keys' which could be used across government data sources to link datasets together. Their use was important because of the capacity to link data quickly from different sources. One user said:

*"...Neighbourhood Statistics has been so good for us because you can get the data out and join it on postcode or output area... what we're always searching for is common keys, and also that common language, because when we talk to people we have to be able to convey the meaning of our analysis in a way they'll understand..." (002)*

The ONS OAC was considered beneficial because it was available from government and if used by all government departments it would enable data sources to be linked together. One user said in the context of how to improve data provision:

*"...hopefully more and more reports ONS publish will be published using OAC classifications at the finer level. If we can start to incorporate that into our databases, we can start to augment the findings of ONS with our own findings from our members' behaviour and so forth, and build up a picture using OAC..." (006)*

Other issues, which were less frequently mentioned, included disclosure control methods for the Census, providing data at a lower geography to enable users to build atypical geographies and the issue of trust between central government and users of the data in the public sector. These issues were also reflected in the responses to the Treasury consultation on statistical legislation. With regard to trust and in the context of wanting more data at a local level a user working in local government said:

*“...We also want a lot more trust that local government is a partner of central government and isn't somebody who's just going to go off and use something in a totally irresponsible manner, but that we are a responsible partner, we are producing a lot of the data anyway and therefore ought to have access to it, not be treated as children who are going to misuse the information...” (004).*

Another user observed:

*“...there might be a bit of superiority about oh, I don't like the idea of these people out there who don't really know it [the data] and might make mistakes with it. Can we trust them? They might misuse it....And so I don't think there are many incentives for people working in ONS to think yes, we've got this out and we got it out in a popular version and all these people out there are using it...” (005)*

### **Use of data intermediaries**

Many of the users interviewed use the services of data intermediaries like Experian, CACI or Claritas. The larger organisations in this research used them less frequently but the smaller organisations, which had fewer analysts, tended to rely on big value-added resellers to do much of their data manipulation.

Many of the products purchased are sourced from government data which have been reformatted to be much more user-friendly. This was perceived by respondents as the key role of data intermediaries – they take the data and quickly make them much more accessible, geared to what the user wants. Most of the organisations in this research use products like MOSIAC, ACORN and CAMEO. What many data intermediaries provide are the 'common keys' identified as necessary in the previous section.

### **Uses of official statistics**

Respondents were asked to discuss the nature of the official statistics they used, along with any other data source, how they received the information to inform decision-making and to outline the nature of the decision within their organisation.

The findings indicate that there are many diverse sources of data used by respondents including official statistics (eg Census, ONS OAC, national surveys and administrative data); commercially produced products (eg Pay check, MOSIAC, ACORN, CAMEO) and information generated internally by organisations (eg customer store card details, transaction information, basket sales information, footfall data).

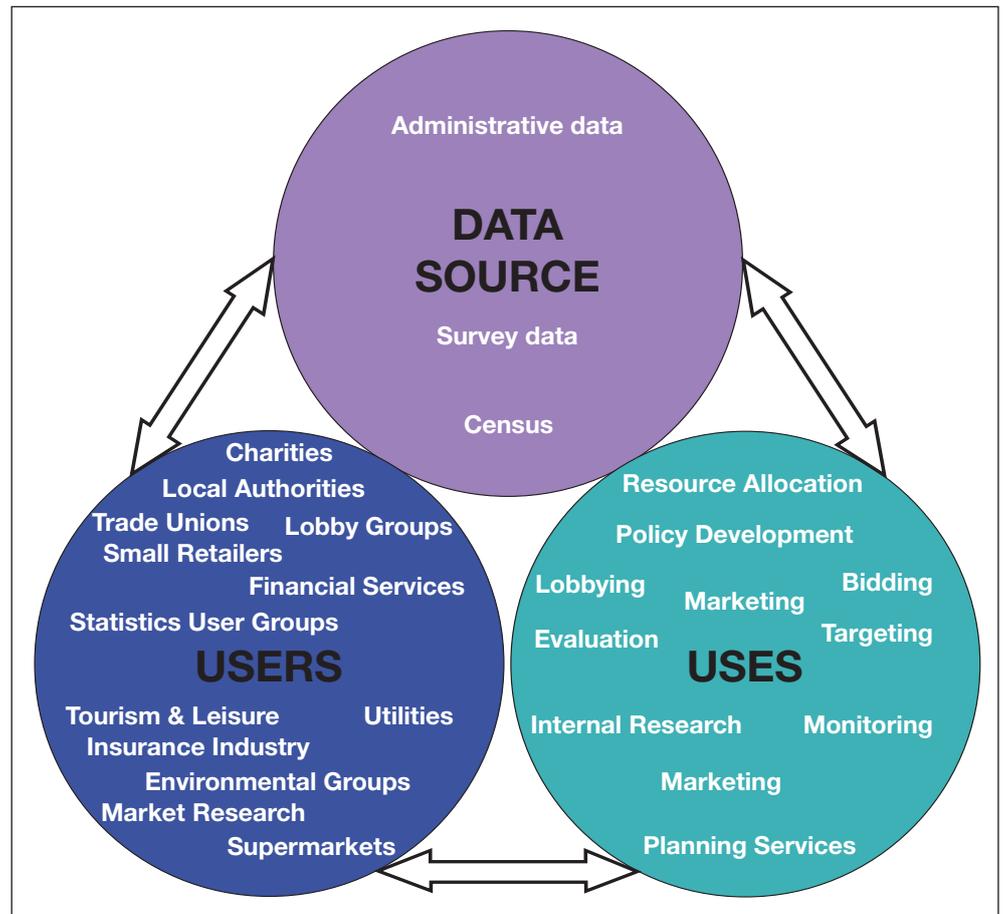
Government data are used on a more or less daily basis either directly or after being repackaged by data intermediaries into geo-demographic classifications. The ONS OAC is not well known but it is considered a positive step forward by those who are aware of it because of its potential to provide easy linkages between government data sources.

Official statistics are used extensively to inform decision-making within the majority of the organisations involved in this research. They were considered essential in many cases to good decision-making. One user, working in financial services, said:

*“...there won’t be a data series the ONS produce that we won’t have looked at and/or used regularly. Everything – you name it we will scour everything – it’s our job to gain insight on the economy and then to apply it to our businesses...”* (016)

Statistics, or the messages from them, are used in marketing strategies, resource allocation, monitoring trends, advertising campaigns, evaluation of policy initiatives, policy development, background information for internal research projects, for benchmarking individual organisations against a national average or against competitors, meeting government targets, briefing for meetings, in lobbying, in bidding for funds and in planning services.

The following diagram attempts to represent the diversity of users and the variety of uses to which official statistics are put within organisations.



### Uses of Census data

Respondents were not asked explicitly about their use of the Census data but it often arose in discussion. This might be a reflection of the sampling strategy employed for the research, or perhaps simply because Census data are so commonly used.

Census data were used extensively as the basis of decision-making – both in their original and derived formats. The key statistics were considered to contain a wealth of information and were used as a building block to which other data sources eg council tax bands were ‘glued on’. Census data were used mostly to examine key trends in the UK and for making comparisons across the UK. It was considered the best source of information available on ethnicity (although timeliness was an issue). The Census was also valued for the derived products it spawned like geodemographic profiles.

Many users in the private sector appreciated that the data are provided free of charge, and felt that the Census had become more useful over time with a finer geography available:

*“...the Census particularly has become massively more useful with the advent of output areas, because it’s at a lower level, whereas ward level, ED, still a bit big really...”* (002).

Frustrations were expressed with the Census data however. These included the time taken to disseminate the information (although the enormity of this task was appreciated) and the fact that the data were not released for the whole of the UK. For organisations which had an UK or international remit this made compiling the data more difficult, especially if the data for the devolved administrations were in a different structure. Finally some users expressed a desire to be more fully involved in the consultation for the next Census.

### Statistical planning

Some respondents felt that when the government set a target eg to increase participation in sport or to decrease fuel poverty, little planning had gone into how to measure or collect the data. The problem arises when there is insufficient data provided by government to measure these targets. In terms of fuel poverty energy retailers have an obligation under the terms of their supply licence to achieve energy savings through investment in energy efficiency measures. As part of this there is focus on alleviating fuel poverty (defined as spending more than 10 per cent of take home pay on energy). The problem of trying to meet the fuel poverty reduction target is explained thus:

*“...you have your little old lady who sits in the cold. Well, we don't know if she's little, we don't know she's old, we don't know she's poor and we don't know she's sitting in the cold, so how do we know that we should be targeting her...if we had good information about the areas of particular concern, even at output area level, then we can be much more targeted in our activity. As it is, where do little old ladies live?...We don't know because nobody collects that information...” (002)*

### **Illustrative examples of use made of official statistics**

The following case studies illustrate how official statistics are used in some of the organisations included in this research. (More case studies have been included in Part 1.) The case studies briefly describe the organisation, the data sources used, the decisions made and the use made of official statistics. It should be noted that most of the organisations will carry out most of these functions.

Use made in lobbying:

## **Women's Sports Foundation**

- The Women's Sports Foundation is a charity dedicated to improving and promoting opportunities for women and girls in sport and physical activity. It is a small organisation governed by a board of trustees which campaigns for change at all levels of sport through raising awareness and influencing policy.
- The type of official statistics used included Census data for information on ethnicity and morbidity, General Household Survey data for information on participation in sport, Health Survey data for information on health, the Taking Part Survey for information on individuals' participation and labour market data.
- Examples of the use made of statistics include briefing provided to the Chief Executive for a 2012 Olympic meeting. Census data were used to profile the population of East London. The variables included age, gender and ethnicity. The purpose of the meeting was to see what contribution the Foundation could make to increasing participation of women from specific ethnic minority groups in light of the coming Olympics. Ethnicity and health data are also used for funding applications (eg the Big Lottery Fund) and in annual evaluations of the state of women and girls in sport and health.

Use made in targeting:

## Nationwide Building Society

- The Nationwide Building Society is one of the UK's largest savings providers and mortgage lenders with over 12 million members. It is a large organisation overseen by a board of governors.
- The type of official statistics mostly used includes Census, Neighbourhood Statistics and population projections. They are used for targeting areas (for decisions on branch location), households or people (for decisions on product provision).
- An example of the use made of this is in provision of financial services. In a trial of local marketing Census data are used to model the propensity of people in specific areas to need particular products or services. From Census data it is known which parts of the country contain a predominantly retired population. From internal data it is known that retired people are less likely to need mortgages and so branches change their window advertising to reflect likely financial need eg in the case of older people, investment products.

Use made in profiling:

## News International

- News International is the UK newspaper arm of News Corporation. News International publishes four national newspapers, *The Sun* and *News of the World* and *The Times* and *Sunday Times* as well as related news and entertainment web sites. Recent developments have included the launch of a consumer magazine division and *the londonpaper*. It has a board of directors.
- Many sources of economic and demographic statistics are used including Gross Domestic Product, Retail Prices Index, Consumer Prices Index and Census data.
- The data are used to provide background information on key economic and demographic trends within the UK. For example, Census data are used to profile household occupancy – especially the rise of single person households. This is important to the company because advertising space in newspapers is sold on readership as well as sales figures.
- Census data are also used to examine where different ethnic minority groups live to target specific features/advertising. This helps with forward business planning.

Use made in business planning:

## Royal Bank of Scotland

- The Royal Bank of Scotland Group is made up of eight divisions which in turn incorporate over 41 brands. It provides banking and related financial services to around three and a half million customers. It is an international organisation governed by a board.
- Official statistics used include all statistics on economic growth and the various components of Gross Domestic Product and labour market data. Administrative data on benefits are used along with Census and survey data.
- Examples of the use made include population and demographic projections in planning the location of branches and cash machines. This is combined with internal data held on consumer behaviour which indicates individual preferences.
- Labour market data were judged important in assessing the broader credit environment.

Use made in internal research:

## Scottish Enterprise

- Scottish Enterprise is Scotland's main economic development agency, funded by the Scottish Executive. It aims to help the people and businesses of Scotland succeed by helping new businesses and supporting existing businesses amongst other things. The agency covers the area from the Grampians to the Borders. It is governed by a board.
- Official statistics used include survey data (eg the Labour Force Survey, Annual Business Inquiry, Annual Survey of Hours and Earnings), administrative data (eg Scottish publications on school leavers and Higher Education Statistics Agency data) and the Census.
- Examples of the use made include reviewing policy and strategies for life long learning in Scotland.
- It is also used to compare the skills profiles of different countries within the UK in order to anticipate future labour supply planning and policies. Migration statistics are also used for this – the Worker Registration scheme being the main source.

## Conclusions

A general move towards evidence based decision-making and performance monitoring both in public and private sector organisations has highlighted the importance and value of statistics. The aim of this research study was to provide some evidence of the uses made of official statistics by organisations in their decision-making.

The main conclusion is that official statistics are used extensively in decision-making in public and private sector organisations. Statistics were considered essential in many organisations and they, or the messages from them, inform decision-making on a daily basis. Statistics are used in marketing, resource allocation, monitoring, evaluation, policy development, benchmarking, targeting, lobbying, bidding, planning services and internal research.

The findings provide insights into user needs, as perceived by non-government users of official statistics. A striking feature that emerged from the research was the cultural difference that users perceived between themselves and the producers of the statistics. An example is the emphasis that private sector users appear to place on easy – and thus rapid – access to statistics. However access is often made difficult by the structure of government data files, and sometimes by the sheer volume of data presented. In this context, the use of ‘common keys’ across a range of official data sets is seen as helpful, as it enables users to link datasets together. The ONS output area classification (OAC) is an example of such a ‘common key’. Another way of meeting the same demand is through websites like Neighbourhood Statistics. More developments of this kind and other kinds, eg simpler data file formats, might increase the use made of official statistics by non-government users, and the value of those statistics to them.

This raises important questions about statistical planning and its role in ensuring that official statistics are responsive to all users’ needs. The Commission believes that there is a need for improved statistical planning across government; in previous publications we have outlined the case for a more structured and coordinated approach, informed by user consultation. The challenge for producers of statistics is to ensure that the needs of all users, not just government departments, are at the forefront of future changes to data structure or dissemination.

## Appendix A – Topic Guide used for interviews

Introduction to Commission, Introduction to Project, Confidentiality (tape recording)

1. Tell me a bit about your organisation?  
probe – approximate knowledge of statistics/data/how long working there/role

### **Decision-making**

2. Can you explain a bit about the decision-making process in this organisation?  
probe – decision-making structure – what sort of decisions are taken, by whom, how often, what sort of impact does the decision have on the organisation, get examples
3. Are the decisions made here informed by the data/information/statistics?  
probe – which decisions, how informed, examples

### **Use Made/Users Needs**

4. What sort of official statistics/national statistics/figures/information/data is used in your organisation?  
probe – source of data (govt dept, newspaper, trade magazine), how initially found, do they look for alternatives, how do they change the data (if at all), frequency of use, examples
5. What sort of messages from official statistics/national statistics figures/information/data is used in your organisation?  
probe – examples of messages, from where – trade magazines, websites, newspapers, why not go to the direct source?
6. How does your organisation use the (health/crime/economic/population) data/messages?  
probe – marketing, resource allocation, monitoring, evaluation, policy development get examples
7. Is there anything which could be done to improve the information/data/figures?  
probe – presentation, accessibility, timing, cost, metadata, web design
8. Anything you would like to add

Thank you

## Appendix B – List of organisations consulted in the research

Cambridgeshire County Council  
Competition Commission  
Centre for Criminal Justice, Kings College  
Demographic Decisions  
Invest Northern Ireland  
Marks and Spencer's Group  
Nationwide  
News International  
Oxfordshire County Council  
Powergen  
Royal Bank of Scotland  
Scottish Enterprise  
Tesco  
UNISON  
Visit Wales  
Women's Sports Foundation

