Paper for ISI Dublin: The challenge of cost reduction; the opportunity to reshape a sta

Office for National Statistics

DG Office BDB on NGROUP1

Created By: Stephen Penneck on 08/03/2011 at 08:52

Public

Title: Paper for ISI Dublin: The challenge of cost reduction; the opportunity to reshape a statistics office

Categorisation
Presentations\2011

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Editors: Stephen Penneck; judith thomas
Status: Default

The ONS has used the challenge of a reducing budget settlement to reshape its activities and approach to statistics.

The budget settlement

The UK government operates a four year planning cycle and ONS' most recent budget settlement ended in March 2011. The spending review held during the summer of 2010, which set government budgets for the financial years 2011/12 to 2014/15, followed the global financial crisis and was extremely challenging for all government agencies.

The statutory position of ONS changed with the Statistics and Registration Services Act in 2008. ONS is now the executive office of the UK Statistics Authority; itself a non-ministerial government department, reporting directly to the UK Parliament. The 2010 spending review was the first spending review under these new arrangements. Although the Statistics Authority reports directly to the UK Parliament, it looks to Cabinet Office ministers to sponsor statistical legislation in Parliament, and as a non-ministerial government department is subject to government wide expenditure reviews and controls as set down by HM Treasury. Early discussions with Treasury at the beginning of the new Spending Review (SR2010) established that the government accepted the role of the Authority in setting its statistical priorities including those for the ONS.

The settlement agreed for the Authority (of which the ONS takes up 98 per cent of the costs) was a reduction of 17.5% in real terms over the four years (5% a year). In addition we gained additional funds to complete the 2011 census and for two high profile programmes. The census had been a difficult project to budget for. Census day in the UK was 27 March 2011, falling not only at the end of a financial year, but at the end of a spending review period, and the previous spending review had not allocated any budget for the important follow up and other activities needed in 2011/12. SR 2010 provided this funding. It also funded a new programme, which we call Beyond 2011, looking at alternatives to the census for the future; and National Well-Being, a programme of work to explore measures of societal well-being beyond GDP.

Setting ONS priorities

Early in 2010 we began to think what a difficult settlement might mean for ONS and how we might respond. The previous settlement had required savings of 5% a year, and we had achieved this largely through efficiency savings - our menu of statistical outputs had remained largely intact. The relocation of our London work to Newport and Titchfield, now complete, had contributed a significant saving in office rental. We felt that we could not continue to find further savings purely through efficiency. We needed to take a zero based approach and consider what our 'bedrock' or 'core' statistics were. These would be the statistics we would produce if we were starting from nothing. We concluded that these would be our economic statistics (including labour market and business statistics) and population and demography. These made up around three quarters of our statistics. The choice partly came essentially from what we are required to do by legislation (not only UK legislation, but more substantively, EU Regulation), though we also considered statistics that have a high impact on the public policy debate, and where ONS is the only possible or best placed provider. In fact the choice of our bedrock statistics matched our legal obligations quite closely. We decided that

in this area we would ensure that we were doing no more than the legal minimum (unless any additions could be justified); and challenge the legal basis for some of these - especially in Europe, but would seek savings through producing these statistics more cost effectively, by integrating sources, and making greater use of administrative data.

We considered how far we could save money by reducing the quality of our statistics. Our aim has always been to produce statistics that are fit for purpose. This requires consultation with users on the use of statistics. We looked at the dimensions of quality, and felt that we should pay particular attention to ensuring that relevance, accessibility and coherence of our statistics are maintained but that statistics could be reviewed in respect of their frequency, accuracy and comparability. We looked to make savings where we could, while still meeting user needs.

For our non-core statistics (the remaining 25%), we recognised that we had to make some clear choices on priorities, and we could only do this with the help of our users. The non-core statistics included:

Statistical compendia, secondary analysis and public reporting
Some economic, social and labour market analysis
Regional statistics and statistical advice
Other dissemination channels - Neighbourhood Statistics and NOMIS (labour market statistics)
Public sector productivity analysis
Health statistics
Access to micro data - the Virtual Microdata Laboratory

The consultation on our work programme

We launched a public consultation on priorities in October 2010. We had previously conducted a consultation on priorities four years earlier. Although this had yielded valuable information on how our users use our statistics, we had learned that asking users which statistics should be cut does not yield balanced results. Hardly any of our users are able to prioritise across the whole range of our statistics. We decided to focus the new consultation on two questions: firstly we asked users which of our outputs they used and in what way; secondly we asked users to say what the impact would be of a reduction in statistics for the non-core outputs.

We were very pleased by the extent and quality of the consultation responses. Over 300 responses were received and the depth of information about the uses of our statistics will help all our statisticians have a better appreciation of who their users are and how their statistics are used. The responses on the impact of cuts enabled us to make final decisions on our work programme.

The statistical work programme

In balancing our budget we benefitted from savings achieved from previous agreed investment projects, especially an improved IT platform for national accounts. We also agreed 3% efficiency savings across the board. This still left further savings to be found. The consultation had shown that such a level of output cuts was unlikely to be acceptable to customers. We needed to look at the costs of some of our 'core' statistics.

Although many of our surveys were deemed to be 'core' outputs and so high priority, we were keen to reduce their cost where this could be done with little impact for users. It is important to continue to review surveys to ensure they continue to meet user needs. The International Passenger Survey meets a number of requirements, but its main use now is its contribution to international migration statistics where it is the main source of data. Reviewing the sampling procedures to align them more closely to this main use will realise savings. We will also remove duplication between two household surveys, the Family Resources Survey and the General Lifestyle Survey, ensuring that we continue to meet the needs for statistics on income and living conditions. We have a number of projects underway to see how we can exploit administrative data, especially on payroll to provide statistics on business activity, in conjunction with our business surveys, thereby reducing costs.

Such changes in surveys, designed to have minimal effect on users, were not sufficient to meet our

reduced budget and we also had to agree some reductions in lower priority outputs. Here some difficult choices were made based on strategic fit, what we considered to be our core work, and the results of the consultation.

Reductions in outputs have been made in four areas:

Statistical compendia and journals

We have been following an agenda of online publishing for some time, and in 2010 produced our last paper publication. However, little change had been made to many of these publications and their format and content on-line resembled that in print. Following a review we decided on some significant changes. Articles would generally be shorter and written for the web, and they would no longer be bundled into compendia or journals, but indexed by theme. The key to the success of this would be the enhanced search capability being introduced into our new web site in summer 2011. The new approach would yield savings, as well as benefits for users.

Refocus of our analysis

The discussion on what statistics were 'core' had led to a lively debate about the role of analysis in ONS. Some of our more analytical customer had suggested that we should simply produce datasets and leave the analysis and commentary to them. We rejected this view. We felt that we had a unique role in providing this analysis: firstly only we could do this at the time when the statistics are released; also we are best placed to provide analysis and commentary which takes into account the quality of the statistical source. That is not to say that others are not better placed in other ways: more complex analysis, contextual analysis, policy analysis. We did look hard at the analysis we publish and concluded that some refocusing around current areas of public concern would save some resource. Consequently, we have made a significant reduction in regional analysis and reduced the resource developing our estimates of public sector productivity, where many of the statistical gains have now been made.

Concentrating on the core

There are some further areas of analysis we have reduced, which we would probably not have done, but for the need to reduce costs further. This included cutting back on the useful work we have done on the knowledge economy, and on specific areas of health analysis and reporting. This latter cut was especially difficult given the long history of ONS work in this area, but we felt that our analytical offer here went beyond what we do in other areas.

Reducing statistical services and support

Finally we were able to make some small savings by reducing our support for the Virtual Microdata Laboratory facility we run. This enables academics to come into the office and analyse confidential ONS data under controlled conditions. We could do this following the launch of the ESRC Secure Data Service which provided an improved facility. We also reduced our support for the development of the cross government longitudinal strategy, which is now coming to an end.

This package of reductions informed a work programme which fitted with our reduced budget and enable the production of a four year plan for the future. It also provided some resource for investment to reshape the future ONS.

Our investment strategy

Our budget strategy has enabled us to set aside around £24m each year for investment, similar to recent years. This is around 15 per cent of our budget. The investment budget covers the two new programmes funded by SR 2010 (Beyond 2011 and National Wellbeing), statistical developments, maintaining our IT infrastructure and our estate. In deciding priorities for investment we agreed that we needed to address five priority needs (and these are not in priority order). Firstly we needed to give priority to projects which would deliver substantial reductions in costs for the future. These include a number of our survey re-engineering projects as well as initiatives in data collection. Secondly we will give priority to legislative requirements, essentially EU regulations, such as the new

regulation updating the European System of Accounts which has major implications for our national accounts and business surveys. Thirdly we would give priority to essential emerging user needs. For example we are discussing with the Bank of England what new statistics they may need for macro-prudential oversight, following the banking crisis. Fourthly we recognise the need to continue to invest for the future - for example we need to continue to develop our web capability, and to make greater advances in internet data collection. Finally there are a number of corporate requirements, both in IT, where we need to continue our programme of infrastructure and security upgrades, and for our estate.

These investment priorities have placed extensive demands on our investment resource. To reduce the cost of statistical development and future maintenance we have needed to continue to develop a more systematic and standardised approach.

Ten years ago ONS embarked on a statistical modernisation programme designed to exploit a more standardised approach to statistical production, and produce improvements for users and cost reductions. We had difficulty delivering the programme within the original timeframe and on the scale initially envisaged. Our experience with the programme was reviewed at the Modernising Statistical Production conference in Stockholm in November 2009. Out of this review grew a new approach to taking forward development projects, including a new IT strategy based on updating our technical infrastructure; a Design Authority which has set down explicit design principles for future developments; a more step by step approach, approving funding for smaller stages of projects; developments to be business led, dependent on clear business case benefits, and explicitly exploiting the infrastructure this investment generated.

Our approach uses a number of corporate tools, such as Oracle and SAS, and we have used these as the basis for statistical systems capable of being applied widely across the office. Two of these are our Central ONS Repository for Data (CORD) and our Common Architecture for Statistical Processing and Analysis (CASPA).

CORD and CASPA are both common platforms for statistical processing. They provide controlled and audited environments with a managed data repository, allowing secure access to processes and data and integration with statistical tools. CORD use time series data, usually national accounts or business survey based, is designed for large scale data models, and allows users to build the models themselves using pre-defined functionality; while CASPA is particularly suitable for unit record data based systems such as we find in social surveys and administrative systems.

CORD was developed through our national accounts re-engineering programme, and has been further developed through its use in workforce jobs, earnings indicators and retail sales systems. CASPA came about through a redevelopment of the International Passenger Survey. This has been developed further through further projects - the redevelopment of sub-national population projections and the Labour Force Survey. It is also being used in the International Migration System.

They have both delivered a reduction in costs - for development, training and support compared with other developments, and there is sharing of functionality between the two systems. CASPA has saved 20% to 40% of development costs for subsequent projects, with this percentage increasing as each project extends the available functionality.

Our success with this development approach, together with the imperative to reduce costs and meet new challenges, has led us to restate our statistical business strategy in clearer terms.

Responding to future challenges

However, the world is not standing still, and all statistical institutions face new challenges. Our approach for the future will enable ONS to respond to a variety of challenges:

1. the structures and changes in the UK we are trying to measure get more complex and move more quickly, whether it is the financial markets, demographic structures, the pace of innovation or institutional frameworks;

2. our users want to engage with us through a variety of social media and technology interfaces,

which enable them to pick up statistics in a variety of formats - either simple headlines or full datasets they can analyse themselves;

3. our users have a sense of having a 'right to data' fuelled by the new coalition government's transparency framework, encouraging agencies to publish more about themselves so that the public can hold them to account;

4. the EU vision is based on access to microdata from member states being integrated into their own data model;

5. there is continued focus on reducing regulatory burden; collecting fewer statistics ourselves and making greater use of administrative data;

6. the citizen continues to be concerned about data privacy and sharing information within government, while advances in technology continue to challenge data producers.

ONS wants to respond to these challenges, becoming known as an information centre of excellence, continuing to provide trusted statistics and analysis about the UK; central to the debate about what is important to the UK; and providing the information that other analysts and commentators need.

Our statistical business vision

To achieve this will require a fundamental change, towards an integrated data model, as this is the only solution which will provide the data integration and flexible analysis that our users will need. The main elements will be:

Dissemination

- using more open formats and Application Programming Interfaces in our web site to enable users to re-use and exploit our statistics; seeking partners to widen re-use and create innovative products
- simplifying and improving presentation standards for our releases to widen our user base to the informed citizen
- continuing the development of our web site and our use of social media

Analysis

- exploiting our advantage of knowing the strengths of our statistics to produce insightful analysis on topics relevant to public debate
- drawing on a range of statistics to produce cross cutting analysis and reporting

Integrated processing

- continuing to exploit our statistical tools to process data in an integrated environment
- using a common data model regardless of the data source
- focusing on a (conceptually) single data store, where data is cleaned, transformed and made ready for use

Data collection

- moving to multi-mode collection with a preference for electronic collection to improve quality and reduce costs
- collecting an integrated set of information about businesses and households from a range of sources, administrative and statistical
- better exploiting administrative data to reduce our costs and those of our respondents

All this will be underpinned by an information infrastructure which guarantees the security of our statistical processes, provides a common language for data interchange and is sustainable for the future.

Conclusion

The financial constraints of the public sector have led us through:

- a zero based appraisal of our statistical activities
- a significant public consultation on our priorities
- reforming and in some areas reducing our statistical work
- reprioritising our investment programme

to a restatement of our statistical business strategy which learns the lessons of the past.

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Last Modified : 02/06/2011 16:42:51