



STATISTICS DIRECTORATE

National Accounts and Financial Statistics Division

Progress in the measurement of public sector output and productivity in the UK since the Atkinson Review

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Workshop on measuring Education and Health Volume

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Château de la Muette,
Room Roger Ockrent

Beginning at 9:30 a.m. on the first day

1 Introduction

All countries face demands for better public services, but are constrained by limited finances. This has led to a greater emphasis on bringing more transparency to public spending and what it achieves. This highlights the importance of good quality information about the output and productivity of public services.

This paper describes recent developments and future plans in measuring output and productivity in publicly-funded services in the UK. Section 2 gives some background to the organisation of such activity in the UK. Section 3 describes the recent public consultation on methods for measuring public sector output, and how this has influenced our strategy. Section 4 then outlines some specific recent improvements we have made in the areas of health and education. The paper ends with some concluding thoughts.

2 Organisation

2.1 Overview of structure

The UK Centre for the Measurement of Government Activity (UKCeMGA), an integral part of the Office for National Statistics (ONS), was launched in July 2005 with a remit to implement the recommendations of the Atkinson Review (Atkinson 2005) *Measurement of Government Output and Productivity for the National Accounts*.

Moving forward from this review, UKCeMGA's aim is to strengthen ONS's service to customers by publishing independent, authoritative, credible analyses of the productivity of public-funded services. This will also strengthen the UK National Accounts – public services account for around one-fifth of Gross Domestic Product (GDP) in spending terms – and improve economy-wide estimates of output and productivity growth. We aim to achieve this by:

- publishing high quality products, including both statistical outputs and reports of improvements made to methods;
- making significant progress in a development programme designed to enhance the authority and credibility of productivity analyses over time, in particular by implementing the recommendations of the Atkinson Review; and
- being collaborative in its working methods. By interacting with other relevant research institutions, other government ministries and public service providers and users, as well as with other parts of ONS, it is intended to be a focus and centre of excellence for the high quality work that is required.

2.2 Advisory Board

As an integral part of ONS, UKCeMGA reports through an Executive Director to the National Statistician. However, in order to reflect the inherent political sensitivity of the area in which it is engaged, the National Statistician has established an independent Advisory Board that is external to ONS, so that politically sensitive judgments may be discussed with national experts alongside the professional judgment of ONS experts.

The Advisory Board comprises people of high profile and calibre, with a mixture of skills and experience in public service delivery, analysis and national accounting. It is coordinated by a non-executive Chairman (the first of whom is Professor Peter Smith from the Centre for Health Economics at the University of York). The Advisory Board's roles include:

- ensuring UKCeMGA’s work is governed by a principled and publicly defensible framework. This involves promotion of the highest standard of openness and integrity, for example, through ensuring that the decision making process is transparent;
- reviewing and providing advice on UKCeMGA’s work programme, in the light of the overall priorities for development work to improve measures of public services output and productivity;
- overseeing UKCeMGA’s quality assurance processes in order to ensure that these are comprehensive and in line with best practice;
- providing advice on specific issues facing UKCeMGA, including:
 - reviewing the overall publications strategy and draft publications; and
 - individual Advisory Board members participating in peer group appraisals and other such quality assurance roles, drawing on their specific backgrounds and expertise;
- promoting and participating in informed discussions of UKCeMGA’s methods, publications and plans; and
- facilitating links between UKCeMGA and appropriate external bodies, for example, equivalent international bodies, expert think tanks, and the public services themselves, to strengthen the work programme by facilitating joint development work, expert review pre-publication, promulgation of publications at conferences etc.

2.3 UKCeMGA products

UKCeMGA is responsible for producing a range of statistical outputs as follows:

2.3.1 Productivity analyses

We publish regular productivity analyses which present and discuss data on the productivity of key public services.

2.3.2 National Accounts time series

UKCeMGA supplies times series that are used in compiling the National Accounts. In particular, we supply volume measures for health, education, social services, social security administration, fire services and part of the courts system. This list will expand as improved methods for other public services are accepted for use in the National Accounts.

2.3.3 Satellite accounts

We propose to develop and publish satellite accounts for health, education and eventually social services. Satellite accounts are extensions of the National Accounts but can provide the opportunity to analyse particular questions in more detail than is usual in the National Accounts themselves, enlarge the scope of the accounting framework by adding non-monetary information, and can move away from the definitions and accounting definitions of the National Accounts where deemed appropriate.

2.3.4 Methodology reviews

UKCeMGA will continue to publish reports on the development of improved methods. We also plan to publish rolling reviews of methodology as they take place, public service by public service. Atkinson stressed that public services operate in a dynamic setting. Both the needs they serve and the modes of delivery change over time. Periodic reviews of methods will enable UKCeMGA to keep up with such changes.

2.3.5 Documentation

Transparency in the calculation of estimates of output and productivity of public services is also important. UKCeMGA will continue to publish documentation that will maintain the transparency of the statistical production system for these estimates. This will allow users and suppliers at all points in the production chain to have a clear view of how estimates are produced and on what basis, allowing constructive challenge as necessary.

3 Consultation and forward strategy

3.1 The consultation process

Public confidence in our approach is important. We have been working in partnership with the research community, other national statistics institutes and other government ministries to improve and refine the methods used in the measurement of government output and productivity. During 2006-07, we expanded our consultation more formally with the external expert community on some cross-cutting methodological issues, as well as on how to proceed with developing the specific measures for education and health.

In each case, we began with the publication of a consultation paper and included consultation seminars to facilitate a discussion of the issues part way through the consultation period. The seminars were attended by a range of people including academics and professionals in the relevant field. The written responses and a summary of the consultation seminars were then published on our UKCeMGA web pages after the end of each consultation period. The three consultations were as follows:

- *Establishing the Principles*. This consultation focused on two key methodological questions common to the measurement of all public service output.
 - *Adjusting output for quality change* – to discuss the principles that should underpin the measurement of quality change in the public services.
 - *The value of public services in a growing economy* – to discuss the economic foundations for recognising public sector/private sector complementarity in the measurement of output of public services.
- *Measuring the Output of the Education Service*
- *Measuring the Output of the Health Service*

The process of formal consultation proved very effective. The seminars were very productive and the formats enabled a lively and fruitful discussion to take place; feedback from participants after the seminars was very positive. Following the seminars, UKCeMGA has been developing a strategy for the future development of measures of government output and productivity.

3.2 Future strategy

Fundamental to the measurement of output, and subsequently productivity, of public services is the development of an overall quality measurement framework. This was a vision included in the Atkinson Review and our consultation papers, and was strongly supported by those who attended the consultations.

Three key concepts determine how we measure the quality of public service output. First, the *dimensions of quality* – in other words, the range of outcomes that public services yield. Second, the techniques we can use to measure the actual contribution the *output makes to outcomes*. Finally, we consider the *capacity for benefit* – the extent to which individual users can actually benefit from the output delivered.

We then consider three particular methodological issues: *the relative importance of quality dimensions* – for example, how much weight should we give to educational attainment compared with other objectives of the education system such as keeping children active and healthy; *using value weights instead of costs weights* – recognising that cost weights traditionally used to measure output may not reflect the value of public services as perceived by users of the service (in the way that prices do, in a market); and *time lags* – recognising that the effects outputs have on outcomes may be delayed or spread over a number of years.

Based on this quality measurement framework, the key direction for measuring the quality of education output will include: a more refined use of examination results; developments to take account of a wider range of qualifications, for instance diplomas; developments to measure quality of under-five childcare and education.

The main direction for measuring the quality of health output will include: a more refined set of quality dimensions by dropping ‘speed of access’ as a separate dimension and putting more weight on those based on health gain; more dedicated work on activities to prevent illness although it is recognised to be a more complex area; and extending further beyond the current set of quality indicators, in particular for health gains from treatment for which there is currently a worrying lack of information. In addition, we will continue to develop work on value weights for healthcare, but will not be using a mixed ‘value and cost’ weight combination for productivity purposes.

3.3 Quality Measurement Framework Project

UKCeMGA has additional funding to investigate specific areas of quality measurement, linked in with the general quality measurement strategy.

The *Quality Measurement Framework Project (QMF)* is being carried out in partnership with Department of Health (England’s health ministry), Personal Social Services Research Unit (PSSRU), based at the University of Kent, National Council of Voluntary Organisations, National Institute of Economic and Social Research and Kent County Council.

The Government has made clear that value for money should determine who delivers public services – whether public, private or third (voluntary and community) sector providers – and that the third sector has the potential to contribute more than at present. By way of practical promotion of this policy, Her Majesty’s Treasury (HMT – the UK’s finance ministry) identified the need to ‘improve the evidence base demonstrating the sector’s contribution to higher quality service provision’ and posed the question ‘What measures and evaluation processes can be used to identify the direct and wider benefits of third sector organisations?’. We aim to help provide direct answers to this question.

The QMF Project builds on preliminary work undertaken by PSSRU into the output of adult social care services. This work was sponsored by Department of Health as part of the implementation of the Atkinson Review. The research suggests a way of more accurately measuring the output of social care based on: the

number of person weeks of care, the average need of recipients, and the quality of care delivered. We aim to push forward this work across government functions at three different levels of intensity:

- To fully establish the robustness of the core methodology for measuring the output of Care Homes. This will involve studies to accurately determine the relative weights of different social care outcomes and to establish a connection between existing measures of performance (used by inspectors) and quality.
- To investigate the potential of the methodology in other areas. In particular where the outputs are less easily observed (for example in the provision of information), less immediate (pre-school education), the recipients may have difficulties in communicating satisfaction (people with learning disability) and where the service is meeting low levels of need (low intensity home care).
- To suggest the possibility of the extension of the methodology into all other major areas of government services where there is current or potential third sector provision.

As the project aims to look across government services, the expertise that UKCeMGA has in areas such as health and education will be drawn upon. Similarly government accounting and classification skills will contribute to the quality of the final products.

The key benefits of the project will be to establish a simple but robust quality measurement system that will enable service procurers to distinguish the relative quality of service providers and thus establish their relative value-for-money. The system will manage this without imposing a large data collection burden on service providers or procurers.

We will publish an initial report in summer 2007. This will set out the problems and issues with the relationships between local authorities and third sector service providers and show how these result in a monitoring system that is unduly burdensome without providing the quality information necessary to truly determine best value for money provision. The report will then outline how the QMF Project aims to overcome these problems and detail progress to date.

4 Some recent developments

This section describes some of the achievements to date in improving the quality of expenditure data, and progress and improvements made in measuring outputs in the specific areas of health and education.

4.1 Improving expenditure data

Expenditure data, which are used as the basis of inputs when considering productivity, come from government accounting records. These data suffer from some of the problems common to such administrative systems – they are often not delivered to appropriate deadlines, data are misclassified etc.

ONS has worked closely with HMT to enable the delivery of better quality data on expenditure through a new system that other ministries use to report data centrally. This has made it easier for ministries to input data. Rationalisation and improvements to the classification of data have made it easier for ONS to access usable data, and government spending is now available allocated to Classification of Functions of Government (COFOG) divisions.

UKCeMGA made important progress on government procurement data this year. We are now working with provider ministries to improve the quality of data availability to ONS, the results of which will improve both UKCeMGA's analyses and the National Accounts.

Significant improvements have been made to the timeliness of delivery of local authority data to ONS. In particular, annual data on final consumption of local authorities are now provided in August, earlier than in previous years.

We have also worked in collaboration with HMT and colleagues in National Accounts to improve transparency in the derivation of National Accounts expenditure data from accounting data. ONS and HMT have agreed on new arrangements for transparency using the new reporting system. From April 2007 ministries were able to access full transparency reports from ONS, which will show adjustments made and other data added by ONS in deriving final National Accounts series.

4.2 Education

Currently, school education output reflects pupil attendance (cost weighted), adjusted for changes in attainment.

The consultation responses point to widening the output measure to take account of extra curriculum activities, for example sports and drama clubs. In addition, the consultation also proposed extending the coverage to include sixth form colleges (for 16 to 18 year olds) as well as further education colleges in line with the Government's new initiative to broaden the range of qualifications available to children.

The consultation suggested that the quality adjustment for schools should be extended beyond pupil attainment to take account of the other skills children gain from attending school, for example, communication and social skills. The consultation proposed using the five Every Child Matters (www.everychildmatters.gov.uk) outcomes as a starting point. These are:

- enjoy and achieve;
- make a positive contribution;
- achieve economic well-being;
- be healthy; and,
- stay safe.

One of the key challenges will be to isolate the contribution of the education system to each of these outcomes. This will take some time to develop.

Meanwhile, over the last few months, we have updated the current quality measure to take account of later information about examination results as recommended by the Atkinson Review. Further work is proposed to review the model of education which underpins the current quality adjustment method, and to ensure that our methods for quality adjustment are effective. The model will need to take account of the wider range of qualifications now available. As part of our research, we will consider a quality adjustment model that links attainment to earnings, along the lines proposed by the Scottish Executive at this conference.

The education output measure also includes government funded pre-school places as well as professional courses funded by government (initial teacher training and health professional courses, such as podiatry training). Initial discussions have also taken place to identify options for a new quality adjustment for these courses.

