National Audit Office

MEASURING UP
HOW GOOD ARE THE GOVERNMENT'S
DATA SYSTEMS FOR MONITORING PERFORMANCE
AGAINST PUBLIC SERVICE AGREEMENTS?

JUNE 2010

Comprehensive Spending Review 2007 covering the period 2008-2011

Review of the data systems for Public Service Agreement 8 led by the Department for Work and Pensions:

'Maximise employment opportunity for all'

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Introduction

1. This report summarises the results of our examination of the data systems used by the Government in 2009 to monitor and report on progress against PSA 8 - maximise employment opportunity for all.

The PSA and the Departments

2. PSAs are at the centre of Government's performance measurement system. They are usually three year agreements, set during the spending review process and negotiated between Departments and the Treasury. They set the objectives for the priority areas of Government's work.

3. This PSA is led by the Department for Work and Pensions (the Department), with data provided by the Office of National Statistics (ONS) and a range of other sources. Each PSA has a Senior Responsible Officer who is responsible for maintaining a sound system of control across Departmental boundaries that supports the achievement of the PSA. The underlying data systems are an important element in this framework of control.

4. The most recent public statement provided by the Department on progress against this PSA at the time this review was carried out was in its 2009 Departmental Report.

The purpose and scope of this review

5. The Government invited the Comptroller and Auditor General to validate the data systems used by Government to monitor and report its performance. During the period September 2009 to November 2009, the National Audit Office (NAO) carried out an examination of the data systems for all the indicators used to report performance against this PSA. This involved a detailed review of the processes and controls governing:

- the match between the indicators selected to measure performance and the PSA. The indicators should address all key elements of performance referred to in the PSA;

- the match between indicators and their data systems. The data systems should produce data that allow the Department to accurately measure the relevant element of performance;

- for each indicator, the selection, collection, processing and analysis of data. Control procedures should mitigate all known significant risks to data reliability. In addition, system processes and controls should be adequately documented to support consistent application over time; and

- the reporting of results. Outturn data should be presented fairly for all key aspects of performance referred to in the target. Any significant limitations should be disclosed and the implications for interpreting progress explained.

6. Our conclusions are summarised in the form of traffic lights (see figure 1). The ratings are based on the extent to which the Department has:

(i) put in place and operated internal controls over the data systems that are effective and proportionate to the risks involved; and

(ii) explained clearly any limitations in the quality of its data systems to Parliament and the public.

7. The remaining sections of this report provide an overview of the results of our assessment, followed by a brief description of the findings and conclusions for each individual data system. Our assessment does not provide a conclusion on the accuracy of the outturn figures included in the Department's public performance statements. This is because the existence of sound data systems reduces but does not eliminate the possibility of error in reported data.

Figure 1: Key to traffic light ratings

Rating	Description
GREEN (Fit for purpose)	The data system is fit for the purpose of measuring and reporting performance against the indicator.
GREEN (Disclosure)	The data system is appropriate for the indicator and the Department has explained fully the implications of limitations that cannot be cost-effectively controlled.
AMBER (Systems)	Broadly appropriate, but needs strengthening to ensure that remaining risks are adequately controlled.
AMBER (Disclosure)	Broadly appropriate, but includes limitations that cannot be cost-effectively controlled; the Department should explain the implications of these.
RED (Not fit for purpose)	The data system does not permit reliable measurement and reporting of performance against the indicator.
RED (Not established)	The Department has not yet put in place a system to measure performance against the indicator.

Overview

8. The aim of this PSA is to maximise employment opportunity for all. This PSA is supported by four indicators as detailed in figure 2 below. There is a named senior

officer within the Department responsible for each of these indicators. This officer is supported by a lead analyst. Performance against the indicators is monitored within the Department as part of its internal PSA performance reporting. Figure 2 summarises our assessment of the data systems. The data systems to support indicators are fit for purpose in that the data systems in place support the accurate measurement of the related area of performance. The same data systems are used for measuring performance against DWP's Departmental Strategic Objective 2 (maximise employment opportunity for all).

9. The Department should document procedure notes, explaining how each indicator is calculated and document the effectiveness of controls in place where third parties are relied upon, including methods of testing the effectiveness of controls. In addition, appropriate disclosures should be made on any deficiency in the data system and the effect this has on reported data.

Figure 2: Summary of assessments for indicator data systems

No	Indicator	Rating
1	An increase in the overall employment rate taking account of the economic cycle.	GREEN (Fit for purpose)
2	Gap between the employment rates of the following disadvantaged groups and the overall rate: disabled people, lone parents, ethnic minorities, people aged 50 and over, the 15 per cent lowest qualified, those living in the most deprived local authority wards.	GREEN (Fit for purpose)
3	A reduction in the number of people on working age out-of-work benefits.[1]	GREEN (Fit for purpose)
4	An increase in the proportion of people who leave benefit who stay off for a sustained period.	GREEN (Fit for purpose)

Findings

10. The Department has a hierarchical management structure in respect of its performance management. The Department's Management Board provides corporate strategic leadership to the Department, in particular setting its strategy and allocating resources, agreeing business plans, monitoring performance and enhancing capability.

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[1] The definition of this indicator has been amended since the Departmental Report 2009 was published. The indicator is now "A reduction in the number of people on Jobseeker's Allowance and other working age out-of-work benefits, and an increase in the proportion of people leaving Jobseeker's Allowance within 3, 6 and 12 months." This was subsequently reported against in the Department's Autumn Performance Report published on 22 December 2009.

11. The Department has integrated the indicators within this PSA into its operational and performance management activities, for instance by integrating them into its business plan and performance reports.

12. The Department's Finance Director General has Board level responsibility for data quality. However, issues of data quality are considered at many different levels within the Department. For example, the Department has a separate Information and Analysis Directorate, which is responsible for the Department's overall strategy on data quality and statistical sampling as well as providing information and training on compliance with the National Statistics framework and good practice for data quality in general to its analysts.

13. The Department's Corporate Risk Management Team within the Risk Assurance Division coordinates departmental risk management. Directors General and Programme Boards are responsible for risk management on individual PSA indicators, and data quality risks will normally be managed at this level. However, data quality risks can be escalated to the Departmental Board risk register for discussion through the Department's Management Board and the Departmental Audit Committee.

14. The Department undertakes internal monitoring though its Policy and Performance team with analysis being completed in respect of its performance against its PSAs and the underlying indicators, including the preparation of detailed reports setting out progress in key areas of activity, current performance against the relevant indicators, significant risks to performance and further action to be taken in order to mitigate the risks identified and to further the achievement of the Department's objectives. The information provided for the performance reports is received via PSA Senior Responsible Officers and their respective Policy Leads and Lead Analysts. Full performance is reported externally twice a year in the Autumn Performance Report and the Departmental Report.

15. The Department has in place satisfactory processes and controls which are designed to ensure the effective operation of business critical IT systems, including those used to collect, analyse and present performance information in respect of the Department's PSAs. The Department's Information Technology Director General is responsible for ensuring sound IT controls are established.

16. Our main conclusions and recommendations on the Department's overall arrangements with respect to its PSAs and the indicators that it encompasses are as follows:

- The Department's governance arrangements in respect of its PSAs are satisfactory. The responsibilities for its PSA indicators and data quality have been clearly assigned and the Department has processes in place to monitor and report performance against those indicators with sufficient regard given to data quality in respect of PSA indicators.

- From our review of the Department's PSA indicators, we note that there is a general requirement for improvement against a baseline figure, as set out in the relevant Delivery Agreements and accompanying Measurement Annexes. The Department has agreed Measurement Annexes for all of its PSA indicators, setting out the definition of the indicator and the data sources to be used.

- There are not, in all cases, detailed written procedure notes in place, explaining how each indicator is to be calculated and how any outliers or missing data should be addressed. For two of the data systems supporting the PSA we found that processes are being reviewed in preparation for a UK Statistics Authority (UKSA) review. However, as up to date procedures are not recorded, this may make it difficult for the Department to ensure the comparability of data over time, particularly if responsibility for the calculation of performance against a given indicator is passed to a different member of staff. The Department should develop, for each indicator, formal procedure notes setting out how the indicator is to be calculated and reported, so that this can be undertaken consistently over time and by different individual members of staff. Such processes should include the formal recording of risks associated with the specific data quality system.

- Where deficiencies in systems are present, appropriate disclosures should be made by the Department together with the effect this has on reported data. Where these findings have implications for individual indicators, we detail them in the next section of this report.

- The Department is currently putting in place the arrangements necessary to implement the new Code of Practice for Official Statistics published by the UKSA in January 2009. At the time of writing this report an updated statement of compliance with the principles and protocols has not been issued by the Department.

- The Department needs to consider the issues regarding attribution and additionality as part of its overall assessment and consideration of its PSA indicators. By this we mean that the Department needs to ensure it and the readers and users of its information on its PSA indicators are aware of the fact that performance against some of its indicators could change and that change could have little or nothing to do with any actions taken or not taken by the Department (for example, it could be simply due to changing economic conditions within the UK).

Assessment of indicator set

17. In undertaking the validation we reviewed the documentation associated with the PSA and considered whether the indicators selected to measure progress are consistent with the scope of this PSA. We conclude that the indicators selected afford a reasonable view of progress, albeit this set of indicators needs to be

considered in light of the fact that performance could change with little or no influence by the Department but rather as a result of changing economic conditions within the UK. In addition, there is no differentiation, and therefore no measure, of the differences in employment opportunities between females and males. However, the issue of changing economic cycles is equally valid for trends in male/female employment.

Findings and conclusions for individual data systems

18. The following sections summarise the results of the NAO's examination of each data system.

Indicator 8.1: An increase in the overall employment rate taking account of the economic cycle

Conclusion: GREEN (Fit for purpose)

19. We have concluded that the data system underlying this indicator is fit for the purpose of measuring and reporting performance against the indicator.

Characteristics of the data system

20. Performance against this indicator is determined by way of a calculation using data produced and published by the ONS as a National Statistic from the Labour Force Survey (LFS), with minimal analysis or processing by the Department. The Department places reliance on the quarterly data quality measures undertaken and reported by the UKSA, which it has reviewed, to gain its own assurance over the quality of the data. Therefore the Department only carries out sense checks and analytical review of the data received by the ONS on the LFS, such as performing quality assurance checks, including trend analysis, completeness checks and file integrity checks on all data received through the survey.

21. The data for this indicator is extracted from the LFS. This data is received by the Department in a seasonally adjusted form, and is then subject to a minimal amount of processing, with a rolling average taken, allowing performance against the indicator to be determined. The seasonal adjustment takes into account the impacts of seasonal working on the employment rate in holiday periods, particularly in June and December, and appears to be reasonable.

22. In developing the data system for this indicator, the Department has given consideration to the various aspects of its specific definition, such as whether to use seasonally adjusted rates or not and what constitutes a statistically significant increase, in order to ensure that these are reflected appropriately in the data system and in the reported data.

Findings

23. The analysts responsible for this indicator use the data from the LFS to calculate performance against the indicator, by way of a simple calculation to create a three month rolling average working age employment rate. The reported indicator is prepared by the PSA 8 team and reviewed independently by the LFS and Statistics team prior to publication, although this review is not evidenced.

24. This indicator has been calculated for several years by the Department. The Department has in place a specific team who receive the LFS data for the whole Department. They perform quality assurance checks, including trend analysis, completeness checks and file integrity checks on all data received through the LFS before it is released to the individual analysts responsible for processing and reporting throughout the Department.

25. Whilst the Department does not have a formal documented process in place to assess the risks to calculation of the indicator arising from system specification or data collection, the Department has considered whether any significant risks are adequately identified, acknowledged and mitigated to an acceptable level as part of its preparation for the UKSA's review. However, the presence of such a document would enable the Department to gain additional assurance that the data system in place is fit for purpose and over the reliability of the reported performance against the indicator. This comment is equally relevant for PSA 8, indicators 2, 3 and 4.

26. Our review of the Departmental Report identified that progress against the PSA is reported in a clear and understandable fashion. However, the Department does not include a description of the quality of the data system underlying the indicator, nor any issues identified with data quality (if there are any identified).

27. The data system does not measure all of the aspects of the indicator, since the indicator is "Overall employment rate taking account of the economic cycle". It would clearly be inappropriate for the Department to adjust the outturn data in this respect. It is noted that the assessment regime was put into place by HM Treasury at the beginning of the CSR07 period, and that the Department has reported against this.

28. The disclosure should clarify that the outturn data does not take account of the economic cycle. The Department should consider giving a narrative interpretation of the Department's performance in the light of the economic conditions, recognising the inherent uncertainty in estimating comparable points in economic cycles.

Indicator 8.2: A narrowing of the gap between the employment rates of the following disadvantaged groups and the overall rate: disabled people, lone parents, ethnic minorities, people aged 50 and over, the 15 per cent lowest qualified, those living in the most deprived local authority wards

Conclusion: GREEN (Fit for purpose)

29. We have concluded that the data system underlying this indicator is fit for the purpose of measuring and reporting performance against the indicator.

Characteristics of the data system

30. Performance against this indicator is determined by way of carrying out a simple calculation which identifies the gap between the two employment rates (i.e. between the rate for disadvantaged groups, as defined by the Department, and the overall rate) using data published by the ONS as a National Statistic, with minimal analysis or processing. The Department places reliance on the quarterly data quality measures reported by the UKSA to gain its own assurance over the quality of the data. Therefore the Department only carries out sense checks and analytical review of the data received by the ONS.

31. As for indicator 1, the data for this indicator is extracted from the LFS. This data is then subject to a minimal amount of processing within the Department, with a rolling average taken and comparison made between the overall rate and the rate for disadvantaged groups, allowing performance against the indicator to be determined.

32. In developing the data system for this indicator, the Department has given consideration to the various aspects of its specific definition, such as whether to use seasonally adjusted rates or not, the impact of timing of the disadvantaged groups data sets on achievement of the PSA, and what constitutes a statistically significant increase, in order to ensure that these are reflected appropriately in the data system and in the reported data.

Findings

33. This indicator has been calculated for several years by the Department. The Department has in place a specific team who receive and own the LFS data for the whole Department. They perform quality assurance checks, including trend analysis, completeness checks and file integrity checks on all data received through the LFS before it is released to the individual analysts responsible for processing and reporting throughout the Department.

34. The analysts responsible for this indicator use the data from the LFS to calculate performance against the indicator, by way of a simple calculation to create a three month rolling average working age employment rate.

35. The employment rates for disadvantaged groups are also derived from the LFS. This data goes through the same quality assurance procedures described above, the only difference being that these rates are calculated in the individual divisions before being utilised centrally by the PSA 8 team to measure achievement against the overall indicator. These rates are assessed for reasonableness by the LFS and Statistics team, including trend analysis and completeness checks.

36. The reported indicator is prepared by the PSA 8 team and reviewed independently by the LFS and Statistics team prior to publication, although this review is not evidenced.

37. Whilst the Department does not have a formal documented process in place to assess the risks to calculation of the indicator arising from system specification or data collection, the Department has considered whether any significant risks are adequately identified, acknowledged and mitigated to an acceptable level as part of its preparation for the UKSA's review. However, the presence of such a document would enable the Department to gain assurance that the data system in place is fit for purpose and over the reliability of the reported indicator.

38. Our review of the Departmental Report 2009 identified that progress against the PSA is reported in a clear and understandable fashion.

Indicator 8.3: A reduction in the number of people on working age out-of-work benefits

Conclusion: GREEN (Fit for purpose)

39. We have concluded that the data system underlying this indicator is fit for the purpose of measuring and reporting performance against the indicator.

Characteristics of the data system

40. This indicator measures the number of people on working age out-of-work benefits. Data to measure performance against this indicator is a combination of 100 per cent administrative benefits data published by the ONS for Job Seeker's Allowance claimant count and the Department's Longitudinal Study data for other forms of benefit. There is minimal analysis or processing undertaken by the Department.

41. As the Department produces National Statistics, it is obliged to demonstrate compliance with the National Statistics Code of Practice. To this end, the Department is subject to review by the UKSA in Spring 2010. The Department is carrying out a complete review of the data system, including all formal procedures, in preparation for this review.

42. The data for this indicator is extracted from two data streams: the ONS Job Seeker's Allowance claimant count and the Department's Longitudinal Study. This data is subject to a minimal amount of processing within the Department, allowing performance against the indicator to be determined robustly and in a consistent manner.

Findings

43. Both of the data streams are produced from 100 per cent administrative data by DWP for the ONS, which then publishes the data, following quality assurance, as National Statistics. The analysts responsible for this indicator use this data to calculate performance against the indicator, by way of a simple calculation to create an aggregate of the two data streams, and to extract only the records of people of working age.

44. Whilst the Department does not have a formal documented process in place to assess the risks to calculation of the indicator arising from system specification or data collection, the Department has considered whether any significant risks are adequately identified, acknowledged and mitigated to an acceptable level as part of its preparation for the UKSA's review. However, the lack of robust formal assessment of the risks to specification of the data system and data collection, and the fact that the processes have not been in operation for a sufficient time to enable them to be considered embedded, may suggest that further strengthening is required. In addition, the presence of such a risk assessment would enable the Department to embed these processes and gain assurance that the data system in place is fit for purpose and over the reliability of the reported indicator. This comment is equally relevant for PSA 8, indicator 4.

45. Our review of the 2009 Departmental Report identified that progress against the PSA is reported in a clear and understandable fashion. However the Department does not include a description of the quality of the data system underlying the indicator, nor any issues identified with data quality, if any. By including this information the Department would enable users of the report to better understand any limitations in the data system and the implications of these limitations for interpreting outturn results.

46. From time to time the Department finds errors in the collected data sets. When this occurs these errors are not recorded or monitored to aid reoccurring issues to be indentified. Through increased monitoring the Department could identify patterns in the errors identified and ensure ongoing improvement of data quality.

Indicator 8.4: An increase in the proportion of people who leave benefit who stay off for a sustained period

Conclusion: GREEN (Fit for purpose)

47. We have concluded that the data system underlying this indicator is fit for the purpose of measuring and reporting performance against the indicator.

Characteristics of the data system

48. This indicator measures the number of people on working age out-of-work benefits who stay off benefits for a sustained period of time. Data to measure performance against this indicator is a combination of 100 per cent administrative benefits data published by the ONS for Job Seeker's Allowance claimant count and the Department's Longitudinal Study data for other forms of benefit. There is minimal analysis or processing undertaken by the Department.

49. The data for this indicator consists of all relevant data from the Departmental benefit systems and is analysed within the DWP's Longitudinal Study. This data is subject to pre-coded procedures within the Department which, once set up correctly, allow performance against the indicator to be determined robustly and in a consistent manner.

50. In developing the data system for this indicator, the Department has given consideration to the various aspects of its specific definition, such as what constitutes a sustained period and what constitutes a statistically significant increase, in order to ensure that these are reflected appropriately in the data system and in the reported data. The Department carries out its analysis using data on claimants who cease receiving benefit in February, May, August and November, following up each case six months later to determine the extent to which claimants have stayed off benefits.

Findings

51. The data stream is produced from 100 per cent administrative data by DWP for the ONS, which then publishes the data, following quality assurance, as National Statistics. The analysts responsible for this indicator use this data to calculate performance against the indicator.

52. An error was discovered by the Department in the code used to calculate the indicator that resulted in previously reported data being incorrect. In its following report the error was disclosed by the Department, the indicator retrospectively adjusted and a paper produced by the Department to explain the error and its resolution. This resulted in a full review by the Department's Information Directorate into the specification, collection and processing of the data.

53. The Department does not have a formal documented process in place to assess the risks to calculation of the indicator arising from system specification or data collection. However, as the Department produces National Statistics, it is obliged to demonstrate compliance with the National Statistics Code of Practice. To this end, the Department is subject to review by the UKSA in Spring 2010, and in preparation, the Department is carrying out a complete review of the data system, including all formal procedures. Nevertheless, the lack of a robust formal assessment of the risks to specification of the data system and data collection, and the fact that the processes have not been in operation for a sufficient time to enable them to be considered embedded, suggests that further strengthening of them may be required. In addition, the presence of such a risk assessment would enable the Department to embed these processes and gain assurance that the data system in place is fit for purpose and over the reliability of the reported indicator. This comment is equally relevant for PSA 8, indicator 3.

54. Our review of the 2009 Departmental Report identified that progress against the PSA is reported in a clear and understandable fashion. However, the Department does not include a description of the quality of the data system underlying the indicator, nor any issues identified with data quality, if any. By including this information the Department would enable users of the report to better understand the limitations in the data system and the implications of these limitations for interpreting outturn results.

55. When the Department find errors in the collected data sets, these errors are not collectively recorded or monitored. Through increased monitoring the Department could identify patterns in the errors identified and ensure ongoing improvement of data quality.