

National Statistics Quality Review of the Distribution of Earnings Statistics: Implementation Plan

The report on the National Statistics Quality Review of the Distribution of Earnings Statistics was published on 10 October 2002 and is available on the National Statistics website.

The review concluded that there were a limited number of topics that should be addressed in order for ONS to produce earnings data that are fully fit-for-purpose. It recommended that a body of work be undertaken in respect of six topics, which should lead to recommendations for improvements to one or more of the existing statistics on earnings. The topics concern:

- i. Measuring low pay, hours and part-time employment.
- ii. Survey designs, outputs, frequency and respondent burden.
- iii. Data linkages and integration.
- iv. Quality and data collection.
- v. Short-term indicators.
- vi. Developing a framework for earnings statistics.

The following table contains the actions planned to address the recommendations. Most of these actions are already part of ONS's firm plans, but some are dependent on the Office finding additional funds for which a range of high-priority statistical improvements are also competing. Decisions on these will be reached soon, but in the meantime planned completion dates for actions noted in the table by the use of an asterisk must be treated as provisional.

Recommendation	Action	Planned completion date
(i) Measuring low pay, hours and part-time employment (section 1.5.1)		
The review recommended that a study be undertaken to develop the methodology, particularly associated with the New Earnings Survey, used for producing estimates of the low paid.	A project will be established from October 2002 to consider the methodological redesign of the business survey of employees' earnings and hours of work. This project will address the issues as follows:	
frame coverage i.e. the extent to which the PAYE system is not representative of the population of employees, particularly low-paid and part-time employees, and how it might be addressed with a supplementary survey;	Pilot surveys will be conducted to assess the degree of under-coverage of the PAYE system and to inform the design requirements of a supplementary survey to the NES.	
	A 'pre-pilot' will be conducted with businesses that do not have a PAYE system recorded in the ONS's business register (task 1).	February 2003
	A second 'pre-pilot' survey will be conducted to identify whether businesses with a PAYE return also have employees that are excluded from the records submitted to Inland Revenue, for example because they do not earn enough to warrant paying tax (task 2)	February 2003
	A larger pilot survey will be conducted, at the same time as the NES 2003 survey, into businesses that do not have a PAYE system recorded in the ONS's business register (task 3*).	October 2003*
	Subject to the outcome of tasks 1, 2 and 3, the ONS business survey of employees' earnings and hours of work will be modified to address the frame under coverage, and this new survey design will be used for the NES for 2004 (task 4*)	April 2004*
non-response bias i.e. the extent to which the response is not representative of the PAYE sample, particularly for the smallest businesses where part-time and low paid employees may be more densely concentrated;	As part of the NES for 2003 an enhanced response chasing exercise will be conducted to ascertain the degree to which bias might be introduced as a consequence of non-response. This will allow ONS to adjust subsequent survey results to address non-response bias issues (task 5*)	December 2003*
survey exemptions i.e. the extent to which those employees exempt from the survey ¹ are atypical when compared with respondents;	The number of employees reported as having changed employers between the sample selection and survey reference date has grown substantially in recent years and accounted for around 30,000 of the non-response to the NES in 2002. To study the implications of this issue a 'pre-pilot' survey will be conducted to assess whether data for employees changing employers is likely to be available for the survey reference period (task 6).	March 2003
	A pilot survey will be conducted against the NES 2003 to obtain data for employees exempt from the survey because they have changed their employer (data will be sought from the new employer). These data will be analysed to assess the degree to which data for this category of employee can be imputed, or whether the survey processing will need amending to capture data for these employees (task 7*)	December 2003*
inadequate weighting procedures;	A quality assured methodology for weighting the business survey results will be developed and applied to NES results for 2001 and 2002 to generate consultative datasets (task 8).	August 2003
	The final weighting method, which will draw on the outcome of for example Task 5, will be applied to the output from the 2002 and 2003 NES prior to being used for the ONS's business survey of employees' earnings and hours of work in 2004 (task 9)	October 2004

Recommendation	Action	Planned completion date
<p>derivation of estimated hourly rates of pay, particularly the extent to which data on employees earning below the national minimum wage can be captured in a business survey;</p>	<p>ONS will complete a review of the user requirement for measures of hourly rates of pay. In light of the requirement ONS will conduct cognitive tests for appropriate survey questions that are likely to lead to a redesigned questionnaire for the NES. Additionally, this work may lead to changes to the household survey of employees' earnings (task 10).</p>	<p>November 2003</p>
<p>whether respondents are able to provide the relevant information at reasonable cost, particularly hours worked.</p>	<p>ONS will conduct a survey of employers to assess the degree to which data on hours worked are available (task 11).</p>	<p>February 2003</p>
<p>For the Labour Force Survey (LFS) the issues include the quality of earnings and hours data that are provided without recourse to documentary evidence;</p> <p>the impact of proxy responses on earnings and hours estimates;</p> <p>the estimation process whereby hourly rates are produced using 'donor data'</p>	<p>ONS will review the quality of earnings and hours data obtained in the LFS with a view to improving their quality. The review will be conducted with due cognisance for the development of the Integrated Social Survey that is currently under development and take account of survey changes that will arise as a consequence of the NS Quality Review of the LFS (task 12)</p>	<p>November 2003</p>
<p>the classification of occupation and industry;</p>	<p>This issue was addressed in the NS Quality Review of the LFS. The Implementation Plan for that review notes that "ONS will publish a plan for increasing, to the extent possible, the quality of classification - by public/private sector - of the existing employment and jobs data available from the LFS in terms of their alignment with National Accounts concepts. The plan might contain details of the piloting, during 2003, of new LFS questions, and modifications to existing ones, designed to improve the quality of the sectoral data collected. It might also include details of new editing procedures to be applied to the LFS industry, occupation and public / private sector data in order to classify the sectoral data, as far as possible, in line with National Accounts concepts." (task 13).</p>	<p>March 2003</p>
<p>the exclusion of employees in communal establishments;</p>	<p>The Implementation Plan for the NS Quality Review of the LFS notes that "ONS will publish an article setting out a proposed plan for extending the coverage of the LFS to communal establishments." (task 14)</p>	<p>June 2003</p>
<p>the combination of business and household survey data in generating estimates for low paid employees;</p>	<p>ONS will review the relevance of the current methodology that underpins the 'central estimate' for the low paid in light of changes planned for the business survey data, see tasks 4, 5, 7 and 9 above. (task 15)</p>	<p>August 2004</p>
<p>poor/falling response rates</p>	<p>This issue is dealt with under section 5.3.2 of the NS Quality Review of the LFS and its associated Implementation Plan.</p>	<p>See the National Statistics Quality Review of the LFS at: http://www.statistics.gov.uk/methods_quality/quality_review/downloads/LFS_Rev_Final_Rep_020902.doc</p>

Recommendation	Action	Planned completion date
(ii) Survey designs, outputs, frequency and respondent burden (section 1.5.2)		
The review found that the current survey designs are sub-optimal and can be improved. ONS should assess whether a new sample for the NES would improve efficiency while maintaining robust estimates of the required outputs. Additionally, the review found that the estimation of standard errors has yet to be developed.	A project will be established to consider the methodological redesign of the business survey of employees' earnings and hours of work.	
how, while retaining its current sampling base of specific national insurance numbers to yield the benefits of data linkages, the representativeness and efficiency of the NES sample can be improved in terms of sample efficiency and respondent load distribution ;	The project will develop a stratification system that best meets the output needs, while minimising respondent burden (task 16).	August 2003
what alternative sample frames might be available for a supplementary business survey, and how these might be linked to other sources, for example through personal identification numbers, to improve accuracy and coherence and minimise burdens;	This issue will be considered as part of the development of the weighting method to be produced as a consequence of task 9 (task 17).	August 2003
the level at which multi-way analyses are required, can be produced, and their frequency (for example, are occupation by industry data required less frequently than annually? are sector level data more important than industry in the context of assessing pay?);	This issue will be considered as part of the development of the weighting method to be produced as a consequence of task 8 (task 18).	August 2003
how should the load on the smallest businesses be managed when the unit of selection is the employee;	The project will develop a stratification system that best meets the output needs, while minimising respondent burden (task 19).	August 2003
cognitive research into the quality of different data from different sources;	ONS will complete a review of the user requirement for measures of hourly rates of pay. In light of the requirement ONS will conduct cognitive tests for appropriate survey questions and, in light of the findings, make recommendations for changes to either the household or business surveys of employees' earnings (task 10).	November 2003
population frames ;	This issue will be considered as part of the development of the weighting method to be produced as a consequence of task 9 (task 20).	August 2003
estimating standard errors for survey outputs, including growth estimates;	The project will develop the estimation methodology for producing the required standard error statistics (task 21)	July 2003
whether a sample identification process that takes repeat extracts from a dynamic frame would improve response and representativeness;	The project will consider this issue as part of its work on tasks 8 and 9 (task 22).	October 2004
how multiple survey frames can be linked , and the associated implications for estimation systems	Will be addressed as part of the work undertaken in response to task 9 (task 23)	October 2004

Recommendation	Action	Planned completion date
(iii) Data linkages and integration (section 1.5.3)		
<p>The review recommended that a study be undertaken to assess the feasibility of developing the linkage and integration potential of the NES data. The issues of data linkages and integration extend to all sources of earnings data and so the issues for the study to encompass include:</p> <ul style="list-style-type: none"> what business and employee data are available in other administrative and statistical systems for matching with the NES identifiers; what legal and confidentiality impediments and limitations imposed by the National Statistics Code of Practice exist to extending data linkage, and how might these be addressed in the longer term; how data linkages at the level of the individual might be achieved, from a methodological and practical perspective, between ONS and other government departments; how business data, for example on the industrial classification of an enterprise, might be used in a household survey context; whether the NES data can be linked with the Census of Population micro-dataset; whether there are options for using data fusion techniques to generate larger data sets; whether a household survey can be used to generate a sampling frame for a business survey of employees' earnings, and vice versa; can the business and household surveys that yield earnings data be better co-ordinated to improve coherence and provide better possibilities for data linkages; and, whether longitudinal data can be used to impute for non-response. 	<p>ONS will establish a project to look at issues around data linkage. The project will report on the potential for developing the linkage and integration of the NES with other sources and make recommendations for implementing its findings (task 24*)</p>	<p>October 2004*</p>
(iv) Quality and data collection (section 1.5.4)		
<p>The review recommended that ONS considers whether there was scope for collecting earnings data from businesses in a better way. It also recommended that a body of work be undertaken to look at the ways in which pay and hours data can be obtained in household surveys. The issues that will be considered by this work are:</p> <ul style="list-style-type: none"> the use of proxy responses; the use of payslips and other documentary evidence for earnings data; integration of household surveys; identifying the economic classification of respondents' employers; the treatment of multiple jobs; and, the ability of time use surveys to provide quality assurance by allowing comparisons at aggregate levels to check the quality of data on hours. 	<p>The ONS will establish a project to consider whether there is scope for more responses to be obtained directly from employers' payroll systems. If appropriate the project will recommend how to amend the data collection processes (task 25)</p>	<p>December 2003</p>
	<p>The ONS will establish a project to look at the quality of pay and hours data captured in a household survey. The project will produce a report making recommendations for change if appropriate (task 26).</p>	<p>March 2004</p>

Recommendation	Action	Planned completion date
(v) Short-term indicators (section 1.5.5)		
<p>The review found that one of the top priorities for earnings statistics was the provision of a monthly estimator of inflationary pressures emanating from the labour market. In this respect the Average Earnings Index (AEI) is currently used, but was found to be short of the ideal. The review also found that the presentation of the AEI including bonuses as the "headline rate" placed too great an emphasis on this more volatile measure. Similarly, the reliance on growth estimates that compare periods 12 months apart means the signalling of turning points may be delayed. There are a number of complementary indicators that might be developed to augment the short-term data currently available, and these should be explored further.</p>	The ONS will establish a project to develop a quarterly Labour Cost Index (task 27).	December 2003
	The ONS will establish a project to assess the feasibility of developing annual labour price indicators from existing sources (task 28*)	December 2003*
	The ONS will develop an index of gross wages and salaries, an Average Earnings Ratio (task 29) .	December 2003
	Using the current monthly wages and salaries survey, from which the AEI is produced, the ONS will develop a new indicator of growth in pay excluding bonuses and arrears (task 30), which will ultimately form the basis for the 'headline rate' of growth.	June 2003
	Once developed, the ONS will assess the coherence of the complementary indicators and recommend compilation and publication frequencies for each (task 31).	December 2004
	The ONS will review the use of comparative estimates for points 12 months apart as the basis for its indicator of growth in the AEI (task 32)	December 2003
(vi) Developing a framework for earnings statistics (section 1.5.6)		
<p>The review recommended that ONS develop a comprehensive framework for earnings statistics to attempt to identify the linkages between earnings, income and hours data, offer a means for describing how the data are used and allow the exploration and resolution of issues of coherence of different statistics within the framework. The study should define the concepts and identify the inter-relationships between data on 'pay', 'income' and 'labour costs' etc.. It should consider the treatment of gross and net earnings, and how items like working family tax credits should be handled. It should look at the impact on the concepts of the social security, and economic/financial systems and review the presentation of the outputs in terms of geographies, social/corporate sub-groups, and averages/distributions. It should consider whether the treatment and measurement of bonuses is appropriate and assess the development of data at an aggregate and cross-sectional level, including time series and longitudinal data</p>	The ONS will establish a project to consider issues around a framework for earnings statistics. The project will produce a report setting out proposals for developing an extensive framework (task 33).	August 2004

1 The survey exemption categories (EC) are set out in Annex B of the Quality Review Report, but primarily relate to employees changing their jobs between survey sample selection and questionnaire despatch (EC3), a temporary worker via an Employment Agency not working during the relevant period (EC11) and a company director not receiving a salary (EC5).
