

Changes to Pension Statistics in the Annual Survey of Hours and Earnings

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Summary

The introduction of the new 2005 questionnaire has improved the pension results from the Annual Survey of Hours and Earnings (ASHE) survey. In particular the 2005 questionnaire provided better estimates of the number of employees who have pension provision with their employer. Estimates of employee and employer contribution rates are now available, which, when combined with other information available from ASHE, allows for a wealth of analysis.

Methodology has been developed to rework the results for 1997 to 2004 for comparison to the results produced from the new questionnaire. However, differences in the questions mean that these earlier results do under estimate pension provision. Therefore, comparisons between the 2005 and earlier results should be done with caution. Changes to the 2005 questions mean that the 2005 results now include a category covering employees who had a pension but did not give their pension type. It is not possible to estimate the size of this type of non-response in the 2004 and earlier results.

The range of tables available from the ASHE has been extended with nine new tables added and some tables now include breakdowns by earnings. The full set of published tables is available on the National Statistics website at www.statistics.gov.uk/statbase/Product.asp?vlnk=14058. Further analysis reports will also be published on the website as part of the Pension Trends publication, see www.statistics.gov.uk/pensiontrends. Further information on ASHE can be obtained by contacting the ASHE help desk at earnings@ons.gov.uk or on pensions in general from pensionsanalysis@ons.gov.uk.

Section 5 contains a few examples of the type of analysis possible from the new tables. These include for the period 1997 to 2005; membership by sex, pension type and whether the pension scheme is contracted out or not. Employee and employer contribution rates for the public and private sectors are also given from the 2005 survey.

1. Introduction

One of the recommendations of the Review of ONS Pension Contributions Statistics (2002) was to use the New Earnings Survey (NES) to collect pension contributions data. The NES was chosen because of its large sample size and the fact that it was entering a period of review. At around the same time the Review of Statistics on the Distribution of Earnings (2002) made several methodological recommendations for improving the NES that resulted in the new Annual Survey of Hours and Earnings (ASHE). The ASHE was introduced in 2004 and used the same NES questionnaire but with improved estimation methodology and better coverage.

A new questionnaire was introduced in 2005 for ASHE, which gave the opportunity to improve existing questions as well as to add new questions on pension contributions from employees and employers. Pension results from the new questionnaire have recently become available. This article looks at the impact of the changes and presents some summary results from the new questions.

2. Background

2.1 NES pension questions

The ASHE estimation methodology has been applied to data collected using the NES questionnaire for the period 1997 to 2004. NES questionnaires before 1997 did not include questions on pensions. The NES questionnaire had two pensions questions (5 and 6) which both dealt with the type of pension scheme the

employer provided. The questionnaire also had four pages of guidance notes, one page of which related to guidance on how to complete these two questions.

5. Pension arrangements (see page 4, guidance note 5)			
What pension provision has the employee made within your company? (for stakeholder pensions see note 5).			
● Please use the guidance notes on page 4 to identify the code to enter here.			<input type="text"/> 3 1
6. Stakeholder Pensions (see page 4, guidance note 6)			
(a)	Does the employee have a stakeholder pension?	Yes - 1 No - 2	<input type="text"/> 3 2
(b)	Is it paid through payroll deductions?	Yes - 1 No - 2	<input type="text"/> 3 3

The answer given for question 5 could take a numeric value ranging from 1 to 9, indicating a variety of different pension schemes. The respondent would pick the relevant pension scheme for the employee from those listed in the guidance notes and repeated below:

1. contracted-out salary related scheme (COSR)
2. contracted-out money purchase scheme (COMP)
3. not contracted-out salary related
4. not contracted-out money purchase
5. contracted out salary related scheme **and** a not contracted out occupational pension
6. contracted out money purchase scheme **and** a not contracted out occupational pension
7. group personal pension - employee contracted out of State Earnings Related Pension Scheme (SERPS)
8. group personal pension - employee not contracted out of State Earnings Related Pension Scheme (SERPS)
9. none of the above

Question 6 was added in 2002 and simply requested a yes/no answer for parts (a) and (b).

2.2 ASHE pension questions

The new ASHE questionnaire was introduced in 2005 and had no separate guidance notes. Section 5 deals with pension arrangements and contains 6 questions. Questions 5a, 5b and 5c replaced questions 5 and 6 of the NES questionnaire, although there are important differences in wording and structure of these questions.

Section 5 - Pension Arrangements

On 6 April 2005,

- 5a** was the employee contracted out of the state second pension scheme?
When contracted out, the employer and employee pay lower national insurance contributions Yes No
- 5b** did the employee have any pension provisions in place with your organisation?
Include: if the employer or employee is currently on a contribution holiday. Yes → **5c** No → **6a**
- 5c** what was the employee's main type of pension provision?
Defined benefit scheme: those in which the rules specify the benefits to be paid, some based on final salary and some based on average salary
Defined contribution scheme: those in which benefits are determined by contributions paid into the scheme and the investment return on those contributions
Group personal pension scheme: an arrangement made of employees to participate in a personal pension scheme on a grouped basis. This is not a single scheme, it is a collecting agreement
Stakeholder pension: must meet certain conditions laid down by the Government and be registered with the Occupational Pensions Regulatory Authority (OPRA). Include employer sponsored and other stakeholders

For the pay period given in question 4a which includes 6 April 2005,

For each question, where the value is known to be nil, please write a single zero.

- 5d** how much of the employee's pay was pensionable?
Pensionable pay is the pay on which benefits and/or contributions are calculated under the scheme rules..... £ . p
- 5e** how much did the employee contribute to their main pension?..... £ . p
- 5f** how much did the employer contribute to the employee's pension?..... £ . p

Questions 5d, 5e and 5f were added to the questionnaire following recommendations from the Review of Statistics on the Distribution of Earnings (2002). These three questions ask for the amount of pensionable pay, employee contributions and employer contributions.

2.3 Differences between NES and ASHE questions

With the exception of the contributions questions, the ASHE questions attempt to collect the same data as the NES. The ASHE questions improve on the NES in that they are clearer to the respondent, the wording has been updated, guidance is with the question and not on separate notes and the stakeholder question is included with the other pension types for consistency. Changes to the structure of the questions make it easier to compile results on the total number of employees who have an employer sponsored pension. The 2005 survey asks three separate questions; whether the employee is contracted out of the State Second Pension scheme, whether the respondent has any pension provision, and if so, what type of pension it is, whereas the 2004 survey asked these three questions as one.

The changes have had an impact on how respondents complete the questions, with some respondents completing the ASHE questions differently to how they completed the NES. An analysis of responses indicates that respondents are answering the new questions with more internal consistency than the old. However, because it is difficult to assess the size of the impact, no attempt has been made to correct the 2004 and earlier results for these differences.

Changes to the questions for the 2005 survey mean that the number of respondents with a pension where the type of pension is unknown is now available. For the 2004 and earlier surveys it was not possible to identify these employees separately. Therefore, previously published results based on the NES questionnaire did not include an estimate of the total number of employees with pensions, only the number with salary-related, money-purchase-related and group personal pensions. No estimate was published of the number of people without a pension. The stakeholder question for 2004 was separate from the other pension questions and results including it were not included in the tables published on the National Statistics website, but were available as special analyses on request.

The new questionnaire allows for the estimation of the total number of employees with and without pension provision with their employer, as well as the number of employees with stakeholder pensions as their main pension provision. Work has been done to map the 2004 and earlier data sets onto a basis that is similar to the 2005 question structure so that comparable results can be produced. While the majority of responses can be mapped, a number cannot for the reasons outlined above, in particular responses for those who did not have any pension provision or did not answer the old question 5 on pension arrangements. Therefore, total counts of employees with a pension for 2004 and earlier will still exclude a significant number of employees whose employers did not respond to the pension questions. It is impossible to determine how many of these non-responders had a pension. Therefore results presented for 2004 and earlier will under-estimate the number of people with a pension.

It is still possible for employers to not answer question 5b on the 2005 questionnaire and for these cases it is not known whether their employee has any pension arrangements with the employer. However, the simplification of this question in 2005 has considerably reduced the number of employers who do not answer this question

3. Data issues

3.1 Missing responses to the new questions

The 2005 ASHE had a total of 170,953 responses of which 53.4 per cent (91,374) stated that they had pension provision with their employer. The following table summarises the non-response for the three new pension variables on contributions, after imputation of some missing responses:

	Number of missing responses	Per cent
Of the 91,374 respondents with a pension the number with at least one missing response to the contribution questions was:	8,012	8.8
Of which:		
pensionable pay missing	331	0.4
employer contributions missing	5,659	6.2
employee contributions missing	6,208	6.8

3.2 Imputation of missing responses

Imputation was performed for the small number of missing responses for pensionable pay. Analysis confirmed that basic pay was a good estimate of an employee's pensionable pay and so was used to replace missing pensionable pay.

Employees who have pension provision in place with their employer are either contracted out of the State Second Pension or not. A small number of respondents did not answer this question and it was decided to impute for these cases. Analysis determined that the two most relevant indicators for contracted-out status was the employee's type of pension scheme and the sum of contributions provided by both the employee and employer. A probabilistic model was created using these two factors to impute for contracted-out status.

3.3 Calculation of contribution rates

The questionnaire collects data on amounts contributed to pensions but it was decided to publish information on contribution rates. Employee and employer contribution rates were derived by dividing pensionable pay by employee and employer contribution amounts respectively, after imputation of missing pensionable pay.

Missing values were assigned to both the employee and employer percentage contributions if:

- the employee did not hold a pension with the employer
- the employee held a valid pension with the employer but no information was given regarding their pensionable pay and it had not been imputed.

If neither of the above conditions held but no information was given regarding the employee's pension contribution then a missing value was given for the employee percentage contribution. Similarly, if no information

was given regarding the employer's pension contribution then a missing value was given for the employer percentage contribution.

3.4 Quality assurance of the results

As is normal practice with ONS surveys, individual responses were validated against a set of criteria to identify large errors that may impact on results. In addition the aggregate results from the survey have been compared with other data sources such as the Occupational Pension Scheme Survey and HM Revenue and Customs data. While a direct comparison is difficult because of differences in definitions and coverage, the new ASHE results are in broad agreement with results published from these sources. Key government users of the data have also been involved in the quality assurance of the final results.

4 Availability of results

4.1 Tabulations

Three tables of pension type by age, occupation and industry were published from the ASHE for the period 1997 to 2004. There were seven pension types; salary-related (contracted out and not contracted out), money-purchase-related (contracted out and not contracted out), group personal related (contracted out and not contracted out) or none of these. Each table was also broken down by sex of the employee and whether they worked full- or part-time. The number of tables published has now been extended, taking into account the extra information available in 2005 and making use of the mapping of old to new questions. The following tables are now published:

	Pension Type	Employee Contributions	Employer Contributions
by age group and earnings	1	5	9
by industry and earnings	2	6	10
by occupation and earnings	3	7	11
by size of employer and earnings	4	8	12

The new pension type is similar to that used in previously published tables, with salary-related changed to defined benefit, money-purchase to defined contribution and the addition of stakeholder pensions. Tables 1 to 4 are broken down by the sex of the employee. For tables 5 to 12 breakdowns by sex and whether an employee worked full- or part-time are not given as the results are not of sufficient quality. Extra tables by size of employer have also been added. Further tables are available on request; contact the ASHE help desk for more information.

Previous pension tables published from the ASHE were based on those employees on adult rates of pay whose pay was not affected by absence. Membership of a pension scheme and contribution rates do not change with absence and so this restriction has been removed for the new tables. Tables 1 to 12 are now based on all employees.

4.2 Backseries

The NES and ASHE questionnaires both captured information on the type of pension scheme, albeit in different ways. It is therefore possible to transform the NES pension variables to the relevant ASHE variables for the years 1997 to 2004. In this way a backseries of pension data has been produced for tables 1-4 given in section 4.1 above. For the reasons already noted above it is not possible to do a perfect match between the 2005 and 2004 and earlier series and hence caution should be exercised when comparing results between 2004 and 2005. With no information on pension contributions available before 2005, it is not possible to create a backseries for tables 5 to 12.

5 Summary results

As well as collecting information about employees' pensions, ASHE also collects other information either directly through the questionnaire or indirectly through linking to other data sources. Hence it is possible to break down the pensions results by variables including sex, age, hours worked, earnings, company size, and industry. The following are a few examples of the type of analysis possible. As noted above 2004 and earlier results do not estimate the number of persons with an employer sponsored pension. The following results are presented as percentages only. If you assume that the missing responses for 2004 and earlier are representative of the population as a whole then using percentages gives a better comparison over time.

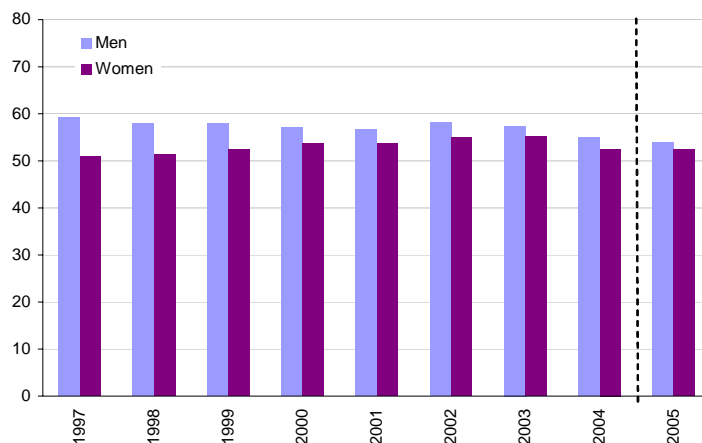
5.1 Employee membership of employer-sponsored pension schemes

5.1.1 Membership by sex

Overall, the percentage of employees belonging to any type of employer-sponsored pension scheme has fallen since 2002. The decrease has been particularly marked for men, falling by more than four percentage points from 58.2 per cent in 2002 to 53.7 per cent in 2005, to reach the lowest level in the post-1997 period covered by the ASHE backseries.

Employee membership of an employer-sponsored¹ pension scheme: by sex United Kingdom

Percentages



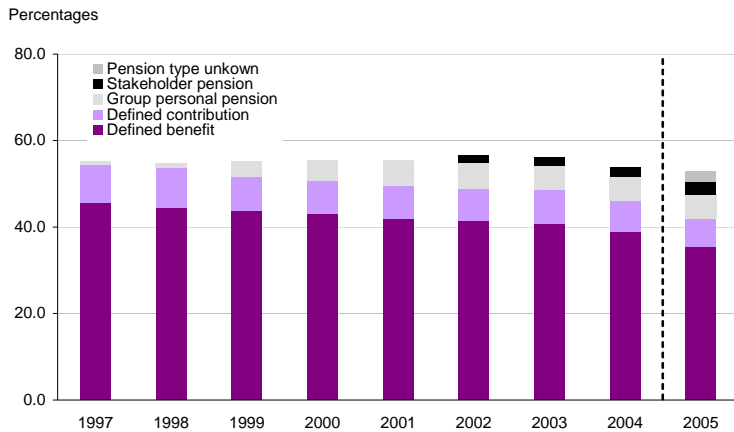
¹ Occupational, group personal and stakeholder pensions

² Figures for 2004 and earlier are discontinuous with 2005 due to a change in the questionnaire

5.1.2 Membership by scheme type

There has been a steady fall in the percentage of employees who are members of defined benefit pension schemes, from 45.7 per cent in 1997 to 35.3 per cent in 2005. While we advise caution when comparing results between 2004 and 2005 for reasons given earlier, the fall of 3.5 percentage points between 2004 and 2005 is larger than in previous years. A similar sized fall was noted by the 2005 Occupational Pension Scheme Survey for private sector schemes, falling from 78.2 to 75.3 per cent. The proportion of employees with group personal and stakeholder pensions has increased to 5.4 and 3.1 per cent respectively between 1997 and 2005. Stakeholder pensions were first introduced in 2002.

Employee membership of an employer-sponsored¹ pension scheme: by pension type
United Kingdom

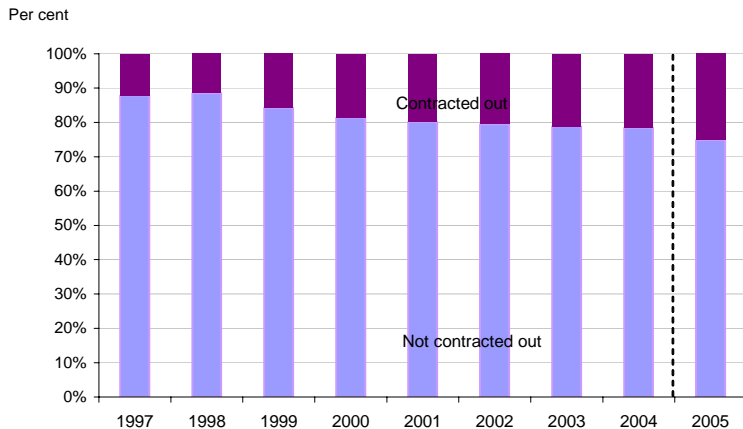


¹ Occupational, group personal and stakeholder pensions
² Figures for 2004 and earlier are discontinuous with 2005 due to a change in the questionnaire

5.1.3 Membership by whether pension scheme is contracted out or not

The percentage of employees who contracted out of the State Second Pension (formerly SERPS) has fallen from 87.9% in 1997 to 74.9% in 2005, with a fall of 3.6 percentage points between 2004 and 2005. The Occupational Pension Scheme Survey shows a similar fall between 2004 and 2005, from 79 per cent in 2004 to 76 per cent in 2005, although its analysis covers only the private sector.

Employee membership of an employer-sponsored¹ pension scheme: by whether contracted out or not
United Kingdom

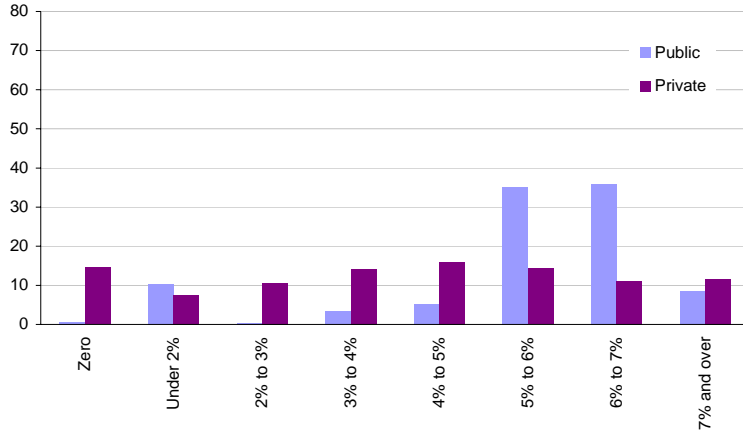


¹ Occupational and group personal pension, excludes stakeholder pensions
² Figures for 2004 and earlier are discontinuous with 2005 due to a change in the questionnaire

5.2 Employee and employer contribution rates

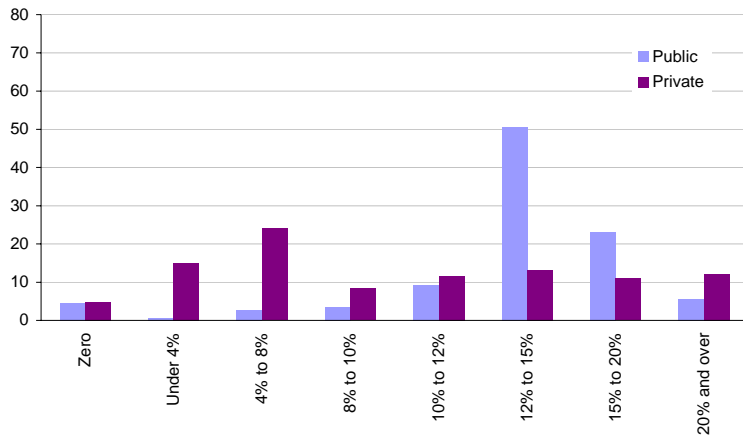
The distribution of employee and employer contribution rates for defined-benefit and defined-contribution schemes was strongly linked to whether the employee was in the private or public sector. This factor has a dominant effect on the distribution of contribution rates to schemes overall. As shown in the chart below, public-sector employee contribution rates to all types of employer schemes combined most frequently fell into the 5 to 7 per cent band. Private sector employee contributions were distributed more broadly. Because the public sector is concentrated in the service rather than manufacturing sector, similar employee contribution peaks also occurred in the 5 to 7 per cent range for service sector employees.

Employee contributions to all employer-sponsored pension schemes by sector
United Kingdom
 Percentages



The public-private sector split played a similarly strong role in employer contributions, with contribution rates being most frequent in the 12 to 20 per cent band for public sector workers and in the 4 to 8 per cent range for private sector workers (shown below). Again, because of the concentration of public sector employees in services and private sector employees in production, employer contributions to the service and production sectors also peaked in the 12 to 20 per cent and 4 to 8 per cent ranges respectively.

Employer contributions¹ to all employer-sponsored pension schemes by sector
United Kingdom
 Percentages



¹ Figures are solely for regular contributions