

	<p>Quality Statement for Department for Work and Pensions Statistics on the Lifetime Labour Market Database publications</p>

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Introduction

The Department for Work and Pensions (DWP) is committed to producing accurate, timely, high quality official statistics publications that take into account user needs and which are produced and disseminated in accordance with the UK Statistics Authority's (UKSA) Code of Practice. The quality of statistics found in the Department for Work and Pensions Lifetime Labour Market Database (L2) publications, are assessed according to the European standard for quality reporting, which contains nine quality dimensions which are: relevance; accuracy; accessibility and clarity; timeliness and punctuality; coherence and comparability; output quality trade-offs; user needs and perceptions; performance, cost and respondent burden; and confidentiality, transparency and security. This document aims to address each of the above standards in as much detail as possible.

The DWP L2 National Statistics publications are:

- National Insurance Contributions and Qualifying Years; and
- Second Tier Pension Provision.

Note: This document should be read in conjunction with the “Department for Work and Pensions Policy Statement on Quality Guidelines”, which can be found here: <https://www.gov.uk/government/organisations/department-for-work-pensions/series/dwp-statistics-policies-and-procedures>.

Relevance

The degree to which the statistical product meets user needs for both coverage and content.

The Lifetime Labour Market Database (L2) consists of a 1% sample extract from the National Insurance Recording System / Pay As You Earn System (NPS) containing details of those who were alive at and since 5th April 1975. The type of information which is held relates to annualised National Insurance Contributions and related data items such as personal characteristics, employer information, pay details and awards of National Insurance Credits. The data is longitudinal.

Publications based on the L2 database are annual, containing update for each tax year. The possible analyses are subdivided in to two main products:

- National Insurance Contributions and Qualifying Years: analyses the types of contribution paid and gives a broad indication of the number of people accruing a qualifying year for State Pension through those contributions. Detailed analyses are included on gender, by ages and earnings); and
- Second Tier Pension Provision: analyses people in the United Kingdom who are members, or have been members of, a contracted out occupational pension, an Appropriate Personal Pension or Stakeholder scheme or have contributed to the State Earnings Related Pension Scheme or the State Second Pension. It shows the membership trends for each type of scheme since 1997/98 (1978/1979 for Summary Table), including membership commencements, membership terminations and the number of scheme members current at the end of the year.

Alongside these publications, there are a number of datasets which enable the analytical user to perform their own analysis. These are provided to internal users who have an associated Business Case for using and analysing the data.

Access to the National Statistics are via:-

- First Release which provides high level key findings for :-
 - National Insurance Contributions and Qualifying Years
 - Second Tier Pension Provision.
- The DWP Tabulation Tool – the Tabulation Tool provides the user with an interactive tool to select one of thousands of possible tabulations. Tables are available back to 1997 with information broken down by duration gender, age and earnings.
- Other tables and background information via links on the Tabulation Tool pages (e.g. links to long time series spreadsheets; descriptions of pension schemes). These summary tables are available back to 1978.

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The First Release contains a "Notes" section which will notify users of changes planned in future publications. It will also describe the detail of the issues, changes and revisions which form part of the latest release. The latest First Release and accompanying tables can be found here:

<https://www.gov.uk/government/organisations/department-for-work-pensions/series/national-insurance-contributions-statistics>

For further information regarding uses and users see the Uses and Users link at::

<https://www.gov.uk/government/organisations/department-for-work-pensions/series/national-insurance-contributions-statistics>.

Accuracy

For administrative databases, accuracy is how well the information is recorded and transmitted.

The numbers included within the First Release are calculated from databases derived from the HMRC National Insurance Recording System (NIRS) which forms part of the administrative system NPS (NIRS and PAYE System). This extract is well established and further information on processes within HMRC who create the data can be found here: <http://www.hmrc.gov.uk/thelibrary/manuals.htm>

Sampling Error

All data provided by HMRC is based on a 1% extract from the NIRS administrative systems. Numbers derived from this 1% sample are subject to sampling error and are actually estimates of the true population value. By chance, an estimate of the population value, obtained from the 1% sample data, may be slightly lower or slightly higher than the true population value. To minimise the impact of this, when a figure from the 1% sample are quoted, confidence intervals should be noted.

A confidence interval provides a range of values which, it is estimated, includes an unknown value. In the context of these statistics, the confidence intervals summarise the variability in the estimates caused by the calculation of estimates from a 1% sample. It is therefore important to look at the confidence intervals as well as the estimate when using these statistics. The range of a confidence interval is expressed in terms of lower and upper limits. If many independent 1% samples were drawn from the HMRC NIRS system and the same value calculated, 95% of those samples would produce estimates which lie within the limits in the table below.

For example:

If the figure quoted was 1,000 then there is 95% confidence that the true figure would lie between 350 and 1650, ie within 65% of the estimated figure.

If the figure quoted is 1,000,000 then there is 95% confidence that the true figure would lie between 980,500 and 1,019,500, ie within 2% of the estimated figure.

If the sample were larger than 1% then the confidence intervals would be lower as there is less of an estimate of the true figure ie a 100% extract would not be subject to confidence levels as there'd be no estimate of the true value.

Estimated value	95% Confidence Interval	Confidence interval as a % of the estimate
1,000	+/-650	+/-65%
2,000	+/-850	+/-43%
3,000	+/-1,050	+/-35%
4,000	+/-1,250	+/-31%
5,000	+/-1,350	+/-27%

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6,000	+/-1,550	+/-26%
7,000	+/-1,650	+/-24%
8,000	+/-1,750	+/-22%
9,000	+/-1,850	+/-21%
10,000	+/-1,950	+/-20%
20,000	+/-2,750	+/-14%
30,000	+/-3,350	+/-11%
40,000	+/-3,900	+/-10%
50,000	+/-4,350	+/-9%
60,000	+/-4,750	+/-8%
70,000	+/-5,150	+/-7%
80,000	+/-5,550	+/-7%
90,000	+/-5,850	+/-7%
100,000	+/-6,150	+/-6%
500,000	+/-13,750	+/-3%
1,000,000	+/-19,500	+/-2%
5,000,000	+/-43,650	+/-1%
10,000,000	+/-61,650	+/-1%

In all tables, figures are rounded to the nearest thousand and those two thousand or less are marked with a star and labelled "Figures are subject to a high degree of sampling variation and should only be used as a guide".

Retrospection

In some circumstances, contribution postings have a lengthy timeframe in which they can be paid and input onto the system. In previous years, in order to capture the vast majority of postings, HMRC extracted the data from NIRS 14 months after the tax year has closed. To determine the amount of retrospection used, we look at providing an acceptable trade-off between quality and timeliness. In 2012 we are moving to using an extract nine months after the tax year has closed. The published numbers capture the vast majority of these retrospective entries to the computer systems but are classed as provisional for the most recent years.

As these data are subject to retrospection, it is collected not only at the reference date but also during further extracts, permitting delayed information to be added to the database retrospectively. These retrospective changes mostly affect the last two tax years, however, smaller changes can affect earlier periods. These database revisions completely refresh the contribution history for each person, so that the statistics show the most up-to-date information from the National Insurance Recording System. For example, postings made after the last set of statistics will now be included; corrections made to the database will also be included.

The magnitude of these revisions varies from year to year and for different types of information. For example, employers are required to submit details of class 1 National Insurance within 2 months of the end of the tax year; whilst class 3 contributions can be paid up to 6 years after the end of the tax year. Changes in employer and HMRC administrative practice can also change the number of

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retrospective changes. The level of changes seen in previous years can serve as a useful guide to the level of increase that might be expected.

For example, using 2008/09 numbers:

When the figures for 2008/09 tax year were first published in 2010 they were marked as provisional as there would be further P14 returns made and amendments to early records. Our 1% extract showed that 29,390 people made National Insurance contributions in 2008/09 according to the information we had in 2010.

In 2011 the figures for 2008/09 were still marked as provisional to allow for further P14 returns and amendments. Our 1% extract showed that 29,607 people made National Insurance contributions in 2008/09 according to the information we had in 2011, an increase of 0.73% from the original reporting of this data in 2010.

In 2012, we are confident the vast majority of returns and amendments have been made for the 2008/09 tax year and take away the provisional status. However, the figures will continue to be revised each year in accordance with the revision policy. Our 1% extract showed that 29,649 people made National Insurance contributions in 2008/09 according to the information we had in 2012, an increase of 0.88% from the original reporting of this statistic in 2010.

For details of retrospective changes for all headline breakdowns please see the tables below:

2008/09 Figures first published December 2010	Thousands		
Contributions & Qualifying Years	2010	2011	2012
People contributing	29,390	29,607	29,649
% change from first publication	~	0.73%	0.88%
People with Class 1 contributions	27,005	27,170	27,193
% change from first publication	~	0.61%	0.69%
People with Class 2 contributions	3,012	3,052	3,065
% change from first publication	~	1.33%	1.76%
People with Class 3 contributions	55	98	108
% change from first publication	~	78.18%	96.36%
People with a qualifying year (Post)	33,319	33,515	33,597
% change from first publication	~	0.59%	0.83%
Women with reduced rate contributions	15	15	15
% change from first publication	~	0.00%	0.00%
Second Tier Pension Provision	2010	2011	2012
People with provision during the year	27,258	27,060	26,821
% change from first publication	~	-0.73%	-1.60%
Contracted out schemes commencing in the year	792	807	810
% change from first publication	~	1.89%	2.27%
Contracted out schemes open at the end of the year	10,535	10,100	9,772

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% change from first publication	~	-4.13%	-7.24%
Contracted out schemes open during the year	11,249	10,932	10,964
% change from first publication	~	-2.81%	-2.53%
Contracted out schemes terminating in the year	713	833	1,193
% change from first publication	~	16.83%	67.32%

Statistics sourced from the 1% HMRC NIRS data are published once a year around 13 months after the period to which they relate, with about 9 months of this due to retrospection and the rest due to processing time.

HMRC have plans to change the method of data capture to collect information in real time. DWP are examining the impacts of this new collection system and the expected effect on retrospection issues.

Source Data

The majority of data used within HMRC for statistical production is derived from the Department's own administrative systems. These systems contain wide ranging information on the various taxes that are collected and administered by the Department, in addition to the benefits and credits that are paid out.

The full range of administrative data that HMRC use to produce official statistics is given in the spreadsheet below. For each of the administrative sources there is a brief description of the data, its main uses for statistical purposes and the publication(s) that the data is ultimately used to produce.

<http://www.hmrc.gov.uk/stats/cop-admin-sources.xls>

DWP's National Statistics are sourced from one of these extracts but as NIRS is an administrative system and not designed for the purposes of our National Statistics, complex programs are needed to analyse the data and create a longitudinal database which reflects our most up to date knowledge. The complexity of the analysis programmes and the time frame given for National Insurance Contributions to be added to NIRS leads us to class any output for the last two years as being provisional.

Most of the source data for the L2 publications is taken from the P14 form. When there are substantial changes to the form or updates to the source system (NIRS2), DWP will work with HMRC and the NIRS2 data experts to ensure that changes to the databases and underlying code are updated in line with those changes.

Quality Assurance

Quality assurance begins as soon as the extracts are received and continues right through to publication. The initial quality focus is on the volume of cases in each file. Subsequent assurance examines individual fields in detail to ensure that any unexpected changes are understood and represent genuine changes.

Further information on the methods and processes we follow for each release can be found in the Methodology link from:

<https://www.gov.uk/government/organisations/department-for-work-pensions/series/national-insurance-contributions-statistics>

Rounding/Disclosure control

The accuracy of statistics may be slightly effected by rounding and/or disclosure control. Even when data does not contain NINO or name and address it may still be possible to identify someone. For the L2 publications there are no geographic breakdowns and it is based on a 1% sample, hence disclosure risk is small. However as an additional protective measure, details of the disclosure control methodology are not published. Details of where rounding is applied can be found in the metadata/footnotes of any statistics. For further information see the DWP Confidentiality Statement:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/203653/dwp-statistics-Confidentiality_Statement_final.pdf

Fraud

Tax and National Insurance fraud can affect the underlying data in the L2 database. This type of fraud can cause employees and self-employed people to lose entitlement to certain benefits, including State Pension. In the event of fraud, the L2 database will report the amount of contributions actually paid; however, the level of contributions will not be reflective of the employment status of those individuals.

Unmatched Contributions

In some cases, employers will supply P14s to HMRC which cannot be matched to individuals on NIRS2. In this instance, such cases are placed in a suspense account and HMRC will attempt to manually intervene to match the records. This will usually involve contacting the employer and having them correct the mistake.

Individuals affected by this issue can resolve the problems at a later date and should not miss out on benefit or State Pension. However, it does affect the completeness of data within the L2 database and hence the related publications.

Revisions Policy

Although we do perform extensive quality assurance on raw data and statistical tables prior to publication, occasionally an error slips through. In the rare case when an error occurs, we thoroughly investigate how it occurred and strengthen our processes where necessary. Any erroneous statistics are removed and revised as soon as possible. Great care is taken to ensure all users are informed and are fully aware of the error and any implications. For further information see the DWP Policy Statement on Revisions:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/203655/dwp-statistics-DWP_Revisions_Policy_final.pdf

Timeliness and Punctuality

Timeliness relates to the time elapsed from the period to which the statistics relate to the date of release of the statistics. Punctuality relates to the elapsed time between the planned and actual (published) time and date of release.

Timeliness

In some circumstances, contribution postings have a lengthy timeframe in which they can be paid and input onto the system. In previous years, in order to capture the vast majority of postings, HMRC extracted the data from NIRS 14 months after the tax year has closed. To determine the amount of retrospection used, we look at providing an acceptable trade-off between quality and timeliness. In 2012 we are moving to using an extract nine months after the tax year has closed. The published numbers capture the vast majority of these retrospective entries to the computer systems and are classed as provisional for the most recent years.

Statistics sourced from the 1% HMRC NIRS data are published once a year around 13 months after the period to which they relate, with about nine months of this due to retrospection and the rest due to processing time.

HMRC have plans to change the method of data capture to collect information in real time. DWP are examining the impacts of this new collection system and the expected effect on retrospection issues.

For further information on retrospection see [accuracy](#) for further details.

Punctuality

DWP pre-announce the month of release of the L2 publications on the Office of National Statistics (ONS) publication hub at least 12 months in advance. Every care is taken to ensure that the L2 publications are released on schedule and where this deadline can't be met there are procedures for ensuring all users are aware of this and informed as soon as possible. The delay of publication is a rare event.

A mailing list exists as a first line of informing users of any issues. If you would like to receive occasional e-mails from DWP to directly inform you of any issues with the L2 publications, please email general.statistics@dwp.gsi.gov.uk giving details of the DWP publications you use.

Accessibility and Clarity

Accessibility is the ease with which users are able to access the data, also relating to the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the metadata, illustrations and accompanying advice.

Accessibility

The L2 publications' First Release containing headline figures and background information is available in PDF format. You can download Portable Document Format (PDF) documents using Adobe Reader, which is available for download free of charge (<http://get.adobe.com/uk/reader/>).

For data protection reasons, the underlying L2 database is not available outside DWP / HMRC/ GAD. However, the Tabulation Tool provides a huge amount of flexibility for users in terms of statistical output and is available using a standard web browser (designed for Internet Explorer 6). There is also a version of the Tabulation Tool which is more accessible to screen readers by not using JavaScript, accessible by clicking the "Accessible Tabulation Tool (Non-JavaScript)" link on the relevant Tabulation Tool front page. The Tabulation Tool contains metadata for the statistics, which consists of background information, a basic explanation of each breakdown and notes on any important breaks in series. In some cases additional tables are available and can either be viewed or downloaded as Excel files. If you don't have Microsoft Excel installed and you wish to view Excel files you can download Microsoft's Excel viewer free of charge here:

<http://www.microsoft.com/downloads/en/details.aspx?familyid=1CD6ACF9-CE06-4E1C-8DCF-F33F669DBC3A&displaylang=en>.

Within DWP, the datasets used to create the National Statistics will be released to analysts across the Department at the same time as the publications. The datasets are only accessible to analysts who have business case approval (gained by submitting a business case for access to where the datasets are stored and demonstrating that you have a valid business reason for doing so). This enables substantial re-use of the underlying data for Parliamentary Questions (PQs), Freedom of Information (FOI) requests and internal analysis/ modelling.

Clarity

The First Release aims to give users a structured overview of National Insurance contributions and qualifying years as well as Second Tier Pension Provision. Statistics are grouped by each component area of NPS, along with relevant statistical commentary and links for users to access more detailed information. At the start of the L2 First Release there are helpful Key Messages included, enabling the user to

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quickly identify any significant changes during the year. All statistics presented in the L2 First Release are subject to a Style Guide, ensuring all Statistics are presented in a clear and consistent manner. The "Notes" section in the First Release is to notify users of any changes planned in future publications and to describe the detail of the issues, changes and revisions which form part of the current release.

The latest L2 publications and accompanying tables can be found here:

<https://www.gov.uk/government/organisations/department-for-work-pensions/series/national-insurance-contributions-statistics>

Coherence and Comparability

Comparability is the degree to which data can be compared over time and domain. Coherence relates to the degree to which data derived from different sources or methods but which refer to the same phenomenon are similar.

Comparability

The L2 publications aim to give users a structured overview of National Insurance Contributions and Qualifying years as well as Second Tier Pension Provision. Due to retrospection, time series are only comparable within the latest release. Hence, historic versions of L2 publications are not archived. The tables are fully updated at each release.

DWP are included in the HMRC change control process where major changes to the administrative systems are impacted against the statistical databases. As a result, any required changes will be impacted across users and within DWP. At the very least, statistical staff are aware of forthcoming changes and are in a position to understand the consequences for the statistics based upon them. Similarly, statistical officials are consulted about the data content of new systems when they are produced. See the Statement of Administrative Sources for more details on the complete change control process.

<https://www.gov.uk/government/organisations/department-for-work-pensions/series/dwp-statistics-policies-and-procedures>

Coherence

The statistics in the L2 publications cover the United Kingdom, and those living abroad who have paid Tax or National Insurance in the UK. Comparable statistics for other countries are not available due to the differences in their tax and pension systems. National Insurance is not collected in the same way or for the same purpose as it is in the UK and where a form of national insurance is collected it generally relates to healthcare provision and is not used to define levels of contributory based benefits or pension as it is in the UK. The second tier pension system in the UK is incredibly complex as there are so many types and combinations of second tier pension cover available, these complexities make comparison very difficult.

Output quality trade-offs

The process of ensuring proper analysis of the trade-offs between the different aspects of quality forms part of any periodic review of existing or new statistics, whilst always explaining any compromises to quality in full.

As mentioned in the Timeliness and punctuality section above, in some circumstances, contribution postings have a lengthy timeframe in which they can be paid and input onto the system. DWP wait for nine months to ensure the statistics capture nearly all of these changes. To wait longer for the remainder would make the delay unacceptable. DWP classify statistics for the last two tax years as provisional.

User needs and perceptions

The processes of finding out about users and uses, and their views on the statistical products.

DWP are always glad to hear the comments and view of customers on the L2 publications. DWP already use a number of routes to seek user views.

For example:

- National Statistics consultations are run for large proposed changes
- DWP publish experimental statistics for new series, whilst seeking user views to inform a full National Statistics release
- Hold six monthly meetings with a selection of users
- New statistics are developed in conjunction with groups of stakeholders to help understand and quality assure output
- Monitor the usage of the DWP website and Tabulation Tool
- Monitor ad hoc analysis requests

Although not all of these processes are currently used for L2 customers, we have plans in place to set up a user group with the intention of using their knowledge and analysis requirements to increase our understanding of user requirements.

Further information on known uses, valid uses and areas of unmet need (and how we address these) is available in the Uses and Users link from:

<https://www.gov.uk/government/organisations/department-for-work-pensions/series/national-insurance-contributions-statistics>

An ongoing questionnaire, enabling DWP to target future consultations at interested users; shaping the future direction of statistics development to address user needs; and helping ensure value for money, whilst giving users a structured way of expressing their views is available from:

<https://www.gov.uk/government/organisations/department-for-work-pensions/series/national-insurance-contributions-statistics>

Ad hoc comments are also welcome. Please provide such comments to: stats-consultation@dwp.gsi.gov.uk

For all other enquiries please contact the appropriate person using the list at:

<https://www.gov.uk/government/organisations/department-for-work-pensions/about/statistics#contacts-for-statistics>

Performance, cost and respondent burden

The effectiveness, efficiency and economy of the statistical output.

The L2 statistics are produced from administrative data which are collected by HMRC for administrative purposes, for example, calculating National Insurance contributions and paying rebates etc. HMRC produce regular scans from NPS for DWP to produce L2. Once set up, the cost of each extract for the L2 publications should be considered negligible. However, when changes are requested to the scan make up, the costs can be considerable. This costing ignores the cost of changes as they are dependent on the type and extent of the changes requested.

However, the following staff costs can be applied directly to the production of the statistics and yearly publication. These full time equivalents include a mixture of junior and more senior staff. The total DWP cost for production of these statistics is two staff (full time equivalent):

- Data preparation and table production
- Routine maintenance, quality assurance and publication

There is also a small amount of IT expenditure on web hosting and data storage.

Data produced by DWP for the L2 publications is used and re-used across central government for analysis, pension forecasting and National Accounts.

Confidentiality, transparency and security

The degree to which the statistical product meets Government and Departmental standards regarding security and confidentiality, whilst also ensuring transparent monitoring and reporting of the statistical quality of its statistical releases and outputs.

Confidentiality and security

Within DWP, access to the underlying datasets is controlled by a system of passwords and strict business need access control. The standard DWP data security and confidentiality policies have been applied. More information can be found at: http://research.dwp.gov.uk/asd/policy/Confidentiality_Statement_final.pdf

Within DWP, the datasets used to create the National Statistics are released to analysts (with a valid business case) across the Department at the same time as the Summary. This enables substantial re-use of the underlying data for Parliamentary Questions (PQs), Freedom of Information (FOI) requests and internal analysis.

Transparency

DWP aims to avoid the need for unplanned revisions to publications unless they are absolutely necessary, and have systems and processes in place to minimise the number of unplanned revisions that need to be made. The Department has a detailed revisions policy which explains how we will make revisions and inform users of our statistics when they occur, giving us confidence that all types of revision will be handled in a transparent manner. The revision policy can be found at: http://research.dwp.gov.uk/asd/policy/DWP_Revisions_Policy_final.pdf