



Labour
Force
Survey

User Guide

VOLUME 6 – ANNUAL POPULATION SURVEY (LOCAL AREA DATABASE)

ANNUAL POPULATION SURVEY/LOCAL AREA DATABASE

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SECTION 1: INTRODUCTION

The Labour Force Survey (LFS) is a key source of information of labour supply – that is, on individuals who supply their labour. The LFS is a quarterly survey of approximately 37,000 responses from UK households per quarter (pre-Covid19). Each household is surveyed over five quarters, with the final (fifth) interview one year after the first. It is designed to provide robust national labour market and macroeconomic information, but its sample size is insufficient to provide reliable data at local level. Therefore, annual datasets are produced for local area analysis, originally from the quarterly datasets and then with additional boost surveys.

1.1 APS and Covid

Because of the pandemic, it was necessary for the Labour Force Survey (LFS), from which APS data are derived, to shift from face-to-face and telephone interviewing to solely telephone interviewing from March 2020. This was associated with a shift in sample composition and a drop in response rates. The ONS added changes to the weighting process to mitigate the impact of potential non-response bias caused from these operational changes (See Volume 1: Background and Methodology for more details)¹.

The APS sample consists of cases from Waves 1 and 5 of main LFS, plus waves 1- 4 of the Local Labour Force Boost (LLFS). Due to the fact that only the main Wave 1 LFS sample was topped up but not the boost sample, the achieved wave 1 sample for the overall number of economically active adults on the APS for June 2020 to July 2021 is 95,746, which is 36,904 (28%) below the target. This has continued since the the onset of the pandemic and largely remained at that level since.

However, from April 2021, a field strategy referred to as ‘Knock to Nudge’ (KtN) was introduced on the LFS/APS. This strategy involves interviewers visiting sampled addresses where no phone numbers could be obtained through either telematching or the online portal and encourage residents at the address to provide their phone number and arrange a telephone appointment. This was introduced on the LFS main wave 1 and APS boost, wave 1. Early indications are that this measure has increased the response rate.

SECTION 2: ANNUAL LOCAL AREA DATABASE (LADB)

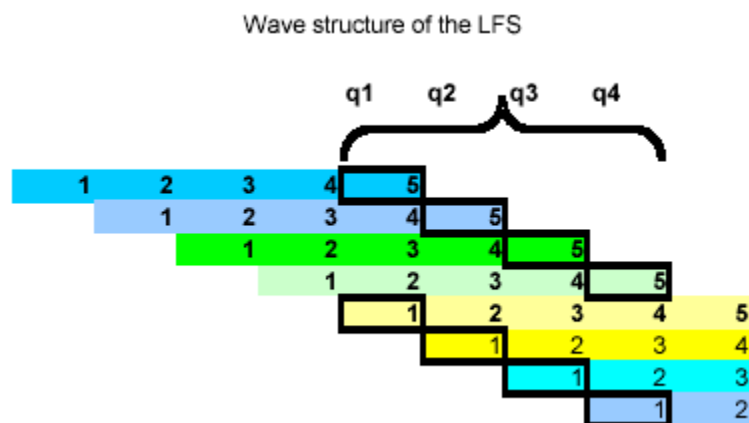
The Local Area Database (LADB) was first created in 1996, with the aim to make available more accurate data for Unitary Authority/local authority districts (UA/LADs).

The first design of the annual database consisted of responses from four quarters of the quarterly LFS.

¹ Volume 1: Background and Methodology

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/labourforcesurveyuserguidance>

Each quarter's LFS sample of households is made up of 5 waves. Each wave is interviewed in 5 successive quarters, such that in any one quarter, one wave will be receiving their first interview, one wave their second, and so on, with one receiving their fifth and last interview (see diagram below). The LADB was created by taking waves 1 and 5 from each of four consecutive quarters to obtain an annually representative sample. Over the period of four consecutive quarters, waves one and five will never contain the same households, and so this avoids the inclusion of responses from any household more than once in an annual dataset.



When the LADB was first introduced, the quarterly LFS was based on seasonal quarters: Spring (including the months March to May), Summer (June to August), Autumn (September to November), and Winter (December to February). Therefore, the LADB covered the period March to February. This changed to a calendar quarter basis (January to March, April to June, July to September, and October to December) in 2004.

Annual Local Area Labour Force Survey (ALALFS)

For the period from March 2000 to February 2001, extra respondents were included in the LADB (but not in the quarterly LFS data). This first sample boost covered only respondents in England, and was called the English Local LFS (ELLFS) boost. In March 2002 a similar boost was introduced in Wales (the WLFS boost), and in 2003/04 the SLFS boost was introduced in Scotland. The combined surveys were called the Annual Local Area LFS (ALALFS).

The ELLFS was designed in such a way to give an expected minimum sample size of 875 economically active adults in each Local Education Authority (LEA) (450 in London Boroughs and 300 in Rutland). The WLFS is designed to have an expected minimum sample size of 875 economically active adults in each Unitary Authority (UA) (700 for Anglesey and Ceredigion, 575 for Blaenau Gwent, and 500 in Merthyr Tydfil). The sample size in each UA in Scotland is boosted to produce an expected minimum of 875 economically active adults. However, to avoid saturation sampling, this figure is reduced to

300 in Clackmannanshire, 600 in Stirling, 700 in Inverclyde and Midlothian, and 800 in East Lothian and East Renfrewshire.

Each household in the boost samples is interviewed annually for four years. To build up the sample, in 2000/01 for England (and 2001/02 for Wales and 2003/4 in Scotland), the sample was divided into four groups or waves. Over the following three years they dropped out one by one, so that only one of the original four waves was actually in the survey for all four years. A new wave is then sampled every year.

More information on the methodology behind the ELLFS is available in articles on the ONS website and in the May 2000 issue of *Labour Market Trends*, pp195-199 and the January 2002 issue of *Labour Market Trends*, pp33-41.

The Annual Population Survey (APS)

Although the quarterly LFS started using a calendar quarter basis in 2006, the LADB moved to a calendar quarter basis in 2004. In January 2004, a sample boost was introduced in England only. The aim of the boost was to provide an expected minimum sample size of 875 economically active adults in each UALAD in England instead of in each LEA. This allowed more accurate precision for the newly launched ONS Neighbourhood Statistics.

The boost was called the Annual Population Survey boost (APSB), and combined with the Annual Local Area LFS (which included the ELLFS, WLFS, and SLFS) was called the Annual Population Survey. To avoid confusion between the whole dataset and the new boost, the whole dataset was called the Annual Population Survey (APS), and the new boost was called the APS(B).

The respondents included in the APS(B) boost did not answer all the questions included in the main LFS and other sample boosts (ELLFS, WLFS and SLFS). Therefore, some estimates from the APS – such as those relating to qualifications - are based on a subset of the database excluding the APS(B) cases.

With the introduction of the APS, it was decided that the annual data should be published four times a year rather than just once, as had been the case with the ALALFS. Data are now published quarterly for overlapping annual periods (January to December; April to March; July to June; and October to September).

In 2006, funding for the APS(B) was withdrawn, and so the structure of the Annual Population Survey reverted to the same as the ALALFS (that is, waves 1 and 5 of the quarterly LFS plus the Local Labour Force Survey (LLFS) for England, Wales and Scotland). However, the name 'Annual Population Survey' has been retained, and the data continue to be published four times a year (and all questions are now based on the complete database).

The figure below shows the current structure of the APS, with highlighted waves forming part of the APS January – December 2022 dataset.

	APS Dataset: January – December 2022			
	Jan – March 2022	April – June 2022	July – Sept 2022	Oct – Dec 2022
LFS cohort 1 <i>(first sampled January – March 2021)</i>	Wave 5			
LFS cohort 2 <i>(first sampled April – June 2021)</i>	Wave 4	Wave5		
LFS cohort 3 <i>(first sampled July – Sept 2021)</i>	Wave 3	Wave 4	Wave 5	
LFS cohort 4 <i>(First sampled Oct – Dec 2021)</i>	Wave 2	Wave 3	Wave 4	Wave 5
LFS cohort 5 <i>(First sampled Jan – March 2022)</i>	Wave 1	Wave 2	Wave 3	Wave 4
LFS cohort 6 <i>(first sampled April – June 2022)</i>		Wave 1	Wave 2	Wave 3
LFS cohort 7 <i>(first sampled July – Sept 2022)</i>			Wave 1	Wave 2
LFS cohort 8 <i>(First sampled Oct – Dec 2022)</i>				Wave 1
LLFS cohort 1 <i>(first sampled Jan– Dec 2019)</i>	Wave 4			
LLFS cohort 2 <i>(first sampled Jan– Dec 2020)</i>	Wave 3			
LLFS cohort 3 <i>(first sampled Jan– Dec 2021)</i>	Wave 2			
LLFS cohort 4 <i>(first sampled Jan– Dec 2022)</i>	Wave 1			

Weighting and Structure of the Local Area Annual Datasets

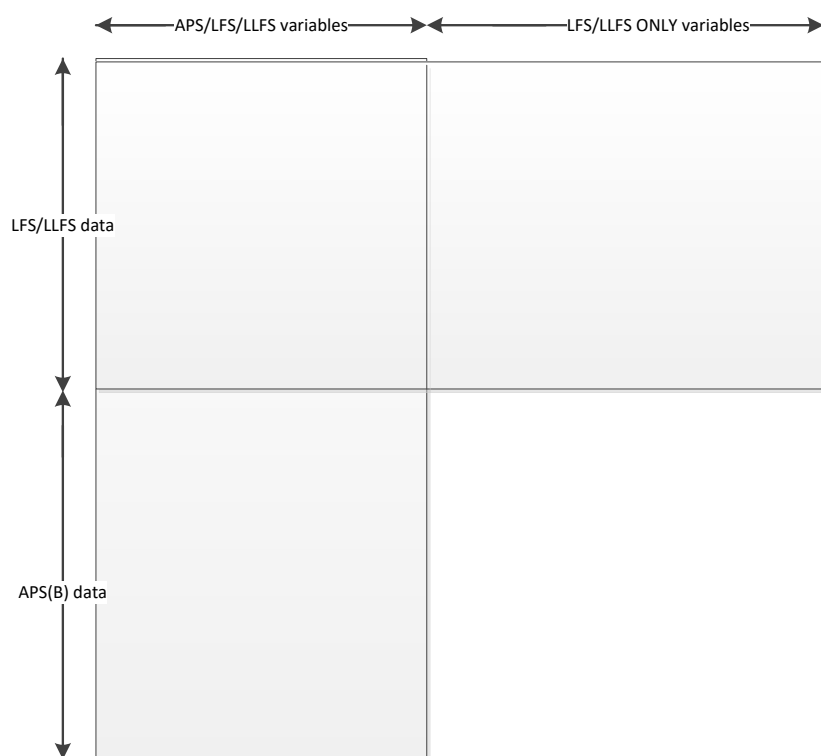
Weighting of the data is done in order to allow the sample to provide estimates relating to the total population and to minimise non-response bias. Each record's weight is the number of people in the population represented by that one sample member. The weights are based on the age and sex structures of the sample and of the population. More information on the weighting procedure can be found in Volume 1 of the User Guide.

For the LADB, it is desirable to improve the 'weighted totals' at the local area level. This is done by using mid-year population estimates for local authorities and taking account of local authority populations as well as the age and sex structures of the sample and population.

The basic methodology which is used for weighting the datasets is the same as the method used for the quarterly LFS datasets, where the weights are calibrated to the population totals using a Generalised Estimation System (GES).

For the periods January-December 2004 (JD04) to January-December 2005 (JD05), there are two weighting variables on the datasets (PWAPS14 and PWLFS14). This is due to the different data sources which make up the final dataset, as illustrated in the diagram below:

The structure of the APS dataset



The LFS/LLFS comprises of the main LFS data (waves 1 and 5 from each quarter in the year) and all the data from the English, Scottish and Welsh enhancements (ELLFS/SLFS/WLFS).

The APS boost (APS(B)) only covers a subset of topics covered in the LFS and the Local Labour Force Survey (LLFS), however all of the variables appear on the dataset. The variables that are covered in both the APS (B) core and the LFS/LLFS questionnaire are known as the CORE variables. NON CORE variables are those that are solely on the LFS/LLFS. A list of CORE variables from JD04 to JD05 can be found in Annex A.

The LFSSAMP variable can be used to identify these cases-

- LFSSAMP=1=LFS cases
- LFSSAMP=2=LLFS cases
- LFSSAMP=6=APS Boost

The two weights on the APS person datasets for the periods from JD04 to JD05 are:

- PWAPS14 – there is a weight for all cases on the dataset, which can be used when looking only at the CORE variables (e.g. age, sex, ethnic group).
- PWLFS14 – there is only a weight for the LFS/LLFS cases. The APS boost cases have a 0 value for this weight. This weight should be used only when looking at NON-CORE variables, or when looking at a combination of CORE and NON-CORE.

From April 05-May06 (A05M) the APS boost was removed, with the structure of the APS dataset comprising of LFS and LLFS data. As these data were asked both the CORE and NON CORE questions, a single weight (PWTA14) was present on subsequent APS dataset.

The 2011 census resulted in revisions to the population estimates and in 2014/15 a reweighted exercise was carried out to reweight the APS historical datasets from JD04 to update the population totals. Datasets from this exercise will have a weight with a 14 as the last two digits. The most recent reweighting exercise was undertaken in 2022 going back to A19M, the last two digits on the weight for these datasets is 22.

From JD12 there is also an income weight included on the JD datasets, more information can be found in the section APS income weight below.

Sampling variability of the Local Area Annual Datasets

As the LFS is a sample survey, all estimates from it are subject to sampling variability. Sampling variability is dependent on several factors, including the size of the sample, the size of the estimate as a proportion of the population, and the effect of the design of the sample on the variable of interest. Standard errors calculated from simple random samples will, typically, differ from those calculated from more complicated sample designs, such as clustered or stratified samples. In the case of the LFS sample design, there is a clustering effect. This reflects the fact that addresses are sampled, but results are estimated for individuals. For example, ethnic group is particularly clustered, since it is likely that all members of a household living at a particular address will share the same ethnic group.

The sampling fraction is also important in determining sampling variability. A sampling fraction is the proportion of households in an area that are interviewed. For example, if there are 10,000 households and 50 of these are interviewed, then the sampling fraction would be $50/10,000$ or $1/200$. The greater the sampling fraction, the larger the sample size and hence the more reliable are the estimates.

The sampling fraction of the main LFS is consistent across Great Britain. However, the design of the local area annual samples means that sampling fractions may vary by area; English, Scottish and Welsh UALAs (or LEAs / UALADs prior to 2012) receiving a larger boost will have a higher sampling fraction. Northern Ireland will see no change. The sampling fraction varies so that a pre-determined target of economically active adults is achieved across UALAs.

Where the sampling fraction is consistent over all areas, the standard error of an estimate of a level is proportional to the size of the estimate. It is not possible to provide a table of

size of estimate against standard error for the later, boosted, annual LFS datasets because of the different sampling fractions in different areas; however, there is a simple conservative formula that can be used to derive the standard errors of estimates of levels.

A useful benchmark to assess the relative magnitude of a standard error is to calculate the ratio of the standard error derived from a particular (complex) sample design with the standard error that would have arisen from a simple random sample of the same size. This ratio (of the standard errors) is the design factor. It indicates the relative gain (or loss) in the estimate of standard error which results from the use of a particular complex sample design compared to a corresponding simple random sample. A design factor (or DEFT) of, say, 1.20 indicates that the standard error of the estimate in question is 20% greater than would have been the case for a simple random sample of the same size. The design factor (DEFT) should not be confused with the design effect (DEFF); the design effect is the design factor squared and is calculated by the ratio of variances instead of standard errors.

SE estimates for levels

An approximation to the standard error for an estimate of M thousand (MT) from the annual data can be given by:

$$\sqrt{(MT * W_i/1000)} \quad (1)$$

where W_i is the average grossing factor (mean of the weights) for cases in a specific area i .

Average grossing factors, from the 2022 APS, are given in Annex B. If the area of interest spans several UA/LADs then the average grossing factor for several areas W can be given by:

$$W = \frac{\sum_i w_i s_i}{\sum_i s_i}$$

where w_i is the average grossing factor for area i and s_i is the 16+ sample size in area i .

The 95 per cent confidence interval for an estimate of M thousand (MT) is given by:

$$MT \pm 1.96 * s.e.$$

SE estimates for rates

A simple formula for producing standard errors for proportions (assuming a simple weighted random sample) is:

$$\sqrt{(p(1 - p)/n)}$$

For instance, in the January to December 2022 APS dataset, the estimate of the total number of people aged 16 and over who are in employment is 32,680,946. This is 60.7% of all people in the UK who are aged 16 and over. The number of people aged 16 and over in the UK sample is 162,456. The standard error of 0.1% is calculated as:

$$\sqrt{((0.61 * 0.39) / 162,456)}$$

ONS methodologists have produced more precise standard errors allowing for the design of the LFS including the different sampling fractions. However, this involves much more complex calculations than those described here for the approximate standard errors. Annex C shows the estimate, standard error and design factor (based on the precise standard errors) for the employment and ILO unemployment (of persons aged 16+) for UA/LADs using the 2022 APS data.

The standard error of the level of the estimate is simply the standard error of the proportion (or rate) multiplied by the population aged 16 and over:

$$0.1\% * 53,873,799 = 53,874 \text{ (2)}$$

The formulae (1) in the section above is an approximation of (2).

Thresholds

It is the nature of sampling variability that the smaller the group whose size is being estimated, or from which an estimate is being derived, the less precise that estimate is. Put another way, the size of the standard error increases with the level of the estimate, so that the larger the estimate the larger the standard error. But the larger the sample estimate, the smaller will be the standard error in percentage terms (relative standard error being the standard error as a percentage of the estimate). Thus, larger sample estimates will be relatively more reliable than smaller estimates: an estimate of 500,000, while having a standard error of 13,800, will have a relative standard error of 3%, whereas an estimate of 25,000 which has a standard error of 3,100 has a relative standard error of 12%.

Before 2005, publication thresholds were applied to quarterly and annual LFS estimates; any estimate smaller than the threshold was considered unreliable and hence not published. Since 2005, no estimates are suppressed due to lack of statistical reliability. All estimates are published along with 95% corresponding confidence intervals.

These thresholds are no longer applied by ONS in the dissemination of LFS and APS estimates, but this section is retained as thresholds can be used as a simple way of identifying cells with high sampling variability.

These thresholds were calculated to be approximately equivalent to publishing estimates which had a relative standard error of 20% or less. The threshold for quarterly LFS estimates was 10,000, and the thresholds for the annual LFS, before the sample boosts were introduced in 2000/01, was 6,000.

However, since 2000/01, the nature of LFS enhancement has meant that some areas have seen a very large increase in sample size, and others very small increase or none at all. This means that a single threshold for all areas is no longer appropriate.

For England, each area was allocated to one of three threshold bands - 2,000, 4,000 or 6,000. For Wales from 2001/02, each UA was given its own threshold. These ranged from 1,000 to 4,000. From 2003/04, each UA in Scotland was given its own threshold ranging from 1,000 to 5,000. Annex D shows how the thresholds were calculated for the local authorities in each of the three countries.

These thresholds can also be applied to the APS.

Thresholds for data on ethnicity

It has long been known that the effect on the LFS of clustering within households (or 'design effects') for ethnic group and for totals segregated by ethnic group can be substantial. For the annual LFS-based surveys it is appropriate to take account of the design effects in the thresholds for estimates of variables by ethnic groups. The local design effects may be different from the regional and national design effects because of local variations in household size and because of variations in the proportions of households in multi-occupied dwellings in different areas.

It is recommended for the ALALFS datasets in England that a single multiplier of 2.5 is applied to the general thresholds for most ethnic estimates¹. A separate analysis of the WLFS recommended a multiplier of 4.0 in Cardiff and 2.5 in the rest of Wales. The SLFS uses the same multipliers of the standard thresholds as in England, and hence a multiplier of 2.5 is applied to the existing threshold.

These thresholds can also be applied to the APS.

Thresholds for earnings data

For estimates of the number of people in a small group, which is a count, for example employed people in a small ethnic group, we can use an approximation of the variance to derive the minimum number of cases that is required in a group to achieve a relative standard error of less than 20%. However, Earnings cannot be regarded as a count, it is a continuous variable, and hence the method for counts does not apply. There is no approximation method that can be used to derive a reliability threshold of variables that are not counts. Instead, we propose a threshold based on values of relative standard errors of small groups that were computed using recent APS earnings data.

Relative standard errors were obtained for estimates of mean gross earnings for groups defined by UALAD and age (grouped) and by UALAD and ethnicity (grouped). In both sets of groups, all groups with 25 or more cases had a relative standard error less than 20%. On the other hand, in groups with fewer than 25 cases, a proportion of the groups had a relative

standard error higher than 20%. Estimates of counts also have a reliability threshold of 25 cases per group.

The threshold depends on the variation of earnings, the sample design and weighting method, and hence may need to be revised in the future. We, therefore, recommend using a reliability threshold of 25 cases for estimates of earnings and monitor its value regularly, every two years, for example.

APS Income weight (PIWTA)**

From 2012 an income weight (PIWTA**) is included on the JD period datasets. From JD18 it will be included on every quarter.

The income weight is calculated in a similar way to the LFS income weight. More information on this can be found in the volume 1 user guide. The main differences are there are six calibration groups used to calculate the APS income weight, whereas for the LFS income weight there are four.

It is worth remembering that the primary source of data for earnings analysis in the UK is still the Annual Survey of Hours and Earnings. This business survey collects detailed information on the composition and distribution of earnings among employees, however as a business survey, ASHE collects only a limited range of personal characteristics regarding individual employees. This limits its usefulness in analysing earnings for instance by education and/or by different protected characteristics.

As a result, the Labour Force Survey is still heavily used as a source of data on earnings. Though it is accepted that the accuracy and detail of earnings information captured by the LFS falls short of that obtained by ASHE, the greater range of personal and household characteristics broaden its potential uses. However, one drawback of earnings analysis on the LFS is that the achieved sample is relatively small. This is because earnings questions are asked only to employees and only in forty percent of the interviews carried out in each quarter. Furthermore, earnings questions on the LFS are known to have particularly poor response rates. The achieved sample for the LFS earnings questions is usually around 9,000, compared with approximately 150,000 respondents on ASHE. This limited sample size then restricts the extent to which you can perform multivariate analysis of earnings on the LFS, particularly where the variables of interest have many categories. It is this desire to have a sample size sufficient for more detailed analysis, alongside information on a wider range of personal characteristics which drives the user need for earnings weights on the APS.

Wave 1 variables

From JD08, various wave 1 LFS variables have been added to the JD APS person datasets (on the Government cuts). A list of the wave 1 variables can be found in Annex E.

It is worth noting that several of these variables have only recently (in quarters in 2014) been asked in wave 1 only. However, in order to do some analysis with other years, they have been included in earlier periods of the APS dataset where they may have been asked in Wave 1 and Wave 5 of the LFS.

When analysis is carried out based on these variables the Wave 1 weight should be used: EWEIGH** (this used to be known as the Eurostat one, as it was used for the variables in the ad hoc modules. Further information on this can be found in Annex G).

There may be a discrepancy between the unweighted and weighted results, as the Wave 5 cases will be included in the unweighted counts but not in the weighted counts (This is because only Wave 1 cases have weights).

Personal Well-Being variables

From April 2011 the mainstream APS person datasets now contains Personal Well-Being questions (SATIS, WORTH, HAPPY, ANXIOUS), along with the Well-Being non-proxy weight (NPWT**), which should be used when analysing these variables. Previously (from 2011) a specific 'APS Well-Being micro dataset' was created, however the production of this separate dataset ceased from A14M. The APS person datasets (from A11M12 onwards) are now the official source for the Well-Being variables previously released as part of the 'APS Well-Being micro dataset'.

It is important to note that the size of the achieved sample for the Well-being questions within the APS dataset is approximately half that of the full APS file. This reduction is due to the Well-Being questions being only asked of persons aged 16 and over, who gave a personal interview; proxy answers are not accepted. As a result some caution should be used when analysing responses to Well-Being questions at detailed geography areas, or other variables, where unweighted respondent numbers are relatively small. It is recommended that for lower level geography analysis the variable 'UACNTY09' is used.

It is not possible to combine other single year APS/Personal Well-Being datasets together to carry out longitudinal analysis. The Personal Well-being datasets are not designed for longitudinal analysis, e.g. they are not designed to track individuals over time.

The ONS produce a Statistical Bulletin on Personal Well-Being in the UK, which is available from the ONS website. It provides an overview and analysis of UK personal well-being data and also includes information on how personal well-being data can be used:

<https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing>

Sexual Identity/Orientation variables

From January 2011 the APS person datasets now also contains a Sexual Identity variable (SIDV), along with the Sexual Identity weight (SIDWT**), which should be used when

analysing this variable. Previously Sexual Identity variables were released as part of the Integrated Household Survey (IHS).

Again like the Personal Well-Being questions it is important to note that the size of the achieved sample for the Sexual Identity is much smaller than the full APS file. This reduction is due to the Sexual Identity questions being only asked of persons aged 16 and over, who gave a personal interview; proxy answers are not accepted. As a result any analysis by geographical area below regional level is not recommended, and that caution should be used for analysing Sexual Identity responses by other variables where unweighted respondent numbers are relatively small.

The ONS produce an experimental Statistical Bulletin on Sexual Orientation in the UK, which is available from the ONS website. It provides an overview and analysis of UK Sexual Identity data and also includes information on how Sexual Identity data can be used

<https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/sexuality>

Other Integrated Household Survey (IHS) variables

Other variables previously released via the IHS now been included in the APS person datasets. Use the APS person weight (PWTA**) for analysing these:

Smoking Variables

- **CIGEVER** (Ever Smoked) from JM16, previously **SMOKEVER**
- **CIGNOW** (Smoke at all nowadays) from April 2009
- **CIGSMK16** (Smoking Status) from JM16, previously **CIGSMK1**

The ONS produce a Statistical Bulletin on Smoking Prevalence in the UK, largely based on source information from the APS

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/bulletins/adultsmokinghabitsingreatbritain/2021>

Health Variable

- **QHEALTH1** (How is the respondent's health) from July 2009

APS Household datasets

Household level APS datasets are also available for the January-December periods (which allow labour market analysis to be carried out on families and households, at local area levels and for small sub-groups of the population across the UK). Additional information can be found in user guides volume 1 (background and methodology) and 8 (household and family data)

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/labourforcesurveyuserguidance>

The main points to remember between the person and household datasets are:

- For the household data set, non-responders are included, as they are necessary to identify relationships between household members, assign them to complete family units within the household, and derive family and household variables.
- Unlike in the person data sets, weights for each person in the same household are equal. This ensures that weighted estimates at the household level are consistent

The APS household level weight is PHHWTA14 (from JD 2006 to JD11) and PHHWTA18 (from JD12). Similar weighting methodology is used to the household-level LFS dataset, but with a more detailed set of calibration groups.

Note due to changes from JD11, there are some additional cases included in the dataset (compared to JD06-JD10). These cases are:

- 1) households where everyone has an IOUTCOME of 6 (data brought forward from previous quarter) and THISWV=2,3 or 4,
- 2) households where everyone has an IOUTCOME of 3 (non-response)
- 3) households where everyone has an IOUTCOME of either 6 or 3 and THISWV=2,3 or 4. This won't have any impact on weighted analysis, since these cases have a zero weight, but it could have an impact if looking at the unweighted data.

Geography variables

From January 2023 there are some additional geography variables to take into account the 2021 census. For now, both the 2011 and 2021 geography information will be on the datasets. The difference between these variables will be seen in areas in England and Wales, for Scotland and Northern Ireland there will be information in the census 2021 variables, but this will be related to the 2011 census.

The new geography variables can be seen in the table below:

Variable name	Description
OA21	2021 Census Output Area (9 Digit)
LSOA21	2021 Census Lower layer super output area (9 Digit)
MSOA21	2021 Census Middle layer super output area (9 Digit)

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CTYcensus2021	Countycensus2021
LAUAcensus2021	Local Authoritycensus2021
WARDcensus2021	Wardcensus2021
CEDcensus2021	County Electoral Divisioncensus2021
GOR9dcensus2021	Regioncensus2021
PCON9dcensus2021	Westminster parliamentary consituencycensus2021
LAU1census2021	Local Administrative Unit_Level 1census2021
CCGcensus2021	Clinical Commissioning Groups_Sub ICB Locationscensus2021
LEP1census2021	Local Enterprise Partnership (1st instance)census2021
LEP2census2021	Local Enterprise Partnership (2nd instance)census2021
ITL321census2021	International Territorial Level (3 Digit)census2021
ITL221census2021	International Territorial Level (2 Digit)census2021
On the APS 3 year pooled dataset	
METCTYcensus2021	Metropolitan Countiescensus2021
UTLAcensus2021	English Upper Tier Local Authoritiescensus2021
WIMD2019quintilecensus2021	2019 quintile within the Welsh UAcensus2021
decile2019census2021	2019 English IMD2019 decilecensus2021
CombinedAuthoritiescensus2021	Combined Authorities in Englandcensus2021

The reweighted historical LFS and APS government datasets (pre-2023) do not contain any of these geographies. If you require these geographies pre-2023 a lookup can be provided on request to allow you to merge these onto historical datasets.

Below are the geographies that were introduced on the datasets in 2014 and are still included. The change in 2014 was due to ONS Geography moving to using a nine-digit coding structure in 2011, and the availability of new geographies following the 2011 Census

Variable name	Description
PARK	National Parks
LEA	Local Education Authority
CTRY9D	Country
TTWA9D	Travel to work area
RU11IND	2011 Census rural-urban classification

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OA11	2011 Census output area
GOR9D	Region
PCON9D	Westminster parliamentary constituency (UK)
LAUA	Local Authority District
TECLEC	Local Learning and Skills Council (England) Enterprise Region (Scotland) DCELLS (Wales)
LSOA11	2011 Census Lower layer super output area
MSOA11	2011 Census Middle layer super output area
WARD	Electoral Ward
CCG	Clinical Commissioning Groups
CTY	Counties
LEP	Local Enterprise Partnerships (DV not supported by ONS Geography)
ITL221/NUTS162/NUTS13 2	International Territorial Levels (2 digit) / NUTS 2 areas (2016/13)
ITL321/NUTS163/NUTS13 3	International Territorial Level (3 digit) / NUTS 3 areas (2016/13)

ONS unsupported geographies (listed in Annex F) are no longer provided on APS datasets from A15M16 onwards.

APS 3 Year Pooled datasets

The APS 3 year pooled dataset is designed to allow more robust analysis at lower level geographies, that isn't always possible using the single year APS dataset, especially for certain topics whose achieved sample size is smaller.

This 3 year dataset will contain a sample size of around 430,000 respondents and will largely only include variables that appear in all of the 3 years it covers.

When combining multiple single year APS datasets together it is important to account for the rotational design of the APS, and ensure that no person appears more than once in the multiple-year dataset.

For this reason, the three-year dataset has been designed to include only a selection of the cases from the individual-year APS datasets, chosen in such a way that no individuals are included more than once and the cases included are approximately equally spread across the three years. This is done by selecting wave 5 LFS from year 1, wave 1 and 5 LFS from year 2, wave 1 LFS from year 3, and waves 1 and 4 APS boost from all waves.

This is illustrated in the diagram below, where the cases selected are those in bold/in a green background:

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LFS/APS dataset structure																										
		Jan year1 - Dec year 1				Jan year2 - Dec year2				Jan year3 - Dec year 3																
Time		y1q1	y1q2	y1q3	y1q4	y2q1	y2q2	y2q3	y2q4	y3q1	y3q2	y3q3	y3q4	y4q1	y4q2	y4q3	y4q4									
LFS cases	cohort 1	wave 5																								
	cohort 2	wave 4	wave 5																							
	cohort 3	wave 3	wave 4	wave 5																						
	cohort 4	wave 2	wave 3	wave 4	wave 5																					
	cohort 5	wave 1	wave 2	wave 3	wave 4	wave 5																				
	cohort 6		wave 1	wave 2	wave 3	wave 4	wave 5																			
	cohort 7			wave 1	wave 2	wave 3	wave 4	wave 5																		
	cohort 8				wave 1	wave 2	wave 3	wave 4	wave 5																	
	cohort 9					wave 1	wave 2	wave 3	wave 4	wave 5																
	cohort 10						wave 1	wave 2	wave 3	wave 4	wave 5															
	cohort 11							wave 1	wave 2	wave 3	wave 4	wave 5														
	cohort 12								wave 1	wave 2	wave 3	wave 4	wave 5													
	cohort 13									wave 1	wave 2	wave 3	wave 4	wave 5												
	cohort 14										wave 1	wave 2	wave 3	wave 4	wave 5											
	cohort 15											wave 1	wave 2	wave 3	wave 4	wave 5										
	cohort 16												wave 1	wave 2	wave 3	wave 4	wave 5									
	cohort 17													wave 1	wave 2	wave 3	wave 4	wave 5								
	cohort 18														wave 1	wave 2	wave 3									
	cohort 19															wave 1	wave 2									
	cohort 20																wave 1									
APS (boost) cases	cohort a1	wave 4																								
	cohort a2	wave 3				wave 4																				
	cohort a3	wave 2				wave 3				wave 4																
	cohort a4	wave 1				wave 2				wave 3				wave 4												
	cohort a5					wave 1				wave 2				wave 3												
	cohort a6									wave 1				wave 2												
	cohort a7													wave 1												

Any analysis produced from the pooled dataset should be treated solely as point-in-time estimates. The use of the pooled datasets is not recommended for any time series analysis. This is due to consecutive pooled datasets will contain two years of data from the same year (e.g. J18D20 estimates and J19D21 will both contain 2019 and 2020). Therefore any estimates of change will effectively be between 2018 and 2021, which is hard to interpret.

The APS pooled dataset is weighted to UK population totals just like the single year APS dataset (the same calibration groups and design weights are also used). The population totals used are the average of the 6th month of each of the three years (e.g. for J19D21 the mean of the population totals for June 2019, June 2020 and June 2021 is used).

There are several different weights on the dataset:

- **PWTA**C**: Person Weight for 3 year pooled APS dataset
- **SIDWT**C**: Sexual Identity weight for 3 year APS pooled dataset
- **NPWT**C**: Non-proxy weight for 3 year APS pooled dataset

Where ** denotes the year that the weight was published, for example the 2022 weight is pwta22C.

The APS pooled datasets are available via the Secure Research Service (SRS) and the UKDS.

SECTION 3: ACCESSING LOCAL AREA DATA

Local area LFS data are available via four routes:

(i) ONS website

The 'Local labour markets: statistical indicators' publication can be found at:
<http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Local+Labour+Market+Indicators>

This publication gives an overview of labour markets indicators for local areas, and the APS is used for estimates of labour supply. The publication includes some summary tables and analysis, plus downloadable Excel spreadsheets containing data for all local authorities and parliamentary constituencies.

ONS's on-line guide to labour market statistics <http://www.ons.gov.uk/ons/rel/lms/labour-market-guidance/guide-to-labour-market-statistics/guide-to-lm-statistics.html> also contains information on local area data, including information on the annual LFS and APS.

The Guide to Regional and Local Labour Market Statistics can be found at:
http://webarchive.nationalarchives.gov.uk/20110218135832/http://statistics.gov.uk/downloads/theme_labour/Guide_regional_local_lms.pdf

(ii) Nomis

Nomis contains tables of both annual LFS and APS data for a wide range of geographies. To access these data visit www.nomisweb.co.uk. Regular users are encouraged to register and obtain a user account, but the data can be accessed without registering. The most recent annual data on Nomis allows some additional functionality, such as allowing user defined areas and variables. Estimates from the 2003/04 annual LFS and all APS datasets are output, along with corresponding 95% confidence intervals.

Annual LFS/APS data are available for the following geographies:

- Countries
- Government Office Regions
- Counties
- Unitary authorities
- Local authority districts
- Parliamentary constituencies
- NUTS areas
- Learning and policy geographies (eg ELWAs and local learning and skills councils)

(iii) ONS local area LFS Dataservice

The estimates from the annual LFS/APS available from the ONS web site and from Nomis are pre-defined aggregates. For users who want to specify their own analyses and tabulations, ONS runs a service to provide these. There is a charge for this service. To request a table from this service or obtain more information about the service e-mail socialsurveys@ons.gov.uk

(iv) Access to APS micro-data

The UK Data Service (UKDS) manages access to the APS microdata, offering a Secure Data Service (SDS) and an End-User Licence (EUL) procedure which allow users access to microdata files containing various levels of APS variables. Information on accessing APS data from the UKDS can be found here:

<https://www.ukdataservice.ac.uk/get-data/how-to-access>

The more detailed versions of the APS microdata are also available via the Secure Research Service (SRS). Information on how to access the SRS files can be found here:

<https://www.ons.gov.uk/aboutus/whatwedo/statistics/requestingstatistics/secureresearchservice/accessthe数据安全>

Further Information

For general information about LFS local area data please telephone the Labour Market Statistics Helpline on 020 7533 6094, e-mail labour.market@ons.gov.uk.

For further information about the ONS tabulation services contact socialsurveys@ons.gov.uk or Tel: 01633 455678.

For more information on Nomis contact info@nomisweb.co.uk or Tel: 0191 334 2680.

ANNEX A – Core variables for JD04 to JD05 periods

Aage	Dteofbth	gorwk2r	lktima	numhhld	quals401	Samelad	typhst4	xr12
Add	Durum	Govtof	lktimb	numol4	quals402	sc2kmmj	typhst5	xr13
Addjob	durun2	Govtor	lkyt4	numol5	quals403	sc2kmmn	Uacnty	xr14
Advhst	Edage	Hallres	look4	numol5f	quals404	schm04	Uala	xr15
Age	Emplen	hdpch19	manager	numolfo	quals405	Scotpca	Ualdgb	ystart
Agedfe	Empmon	Hhld	mardy	numsce	quals406	sctvec	Ualdwk	Ytetjb
Ages	Enrol	Higho	marsex	nuts2	quals407	sector	Ukpca	ytetmp
Amarstt	eth01	hitqua05y	marstt	nuts3	quals408	sectro03	Undabl	
aofl16	Ethas	hitqua4	mpnr02	nuts4	quals409	self1	Undnst	
aofl19	Ethbl	hitqua5	natidb	nvqlev	quals410	self2	undskhr	
aohl16	ethcen15	Hohid	natide	nvqsvq	quals411	self3	Undst	
aohl19	ethcen6	Home	natidi	nvqun	quals601	self4	Uresmc	
appr4	Ethmx	Hout	natido	nvqun2	quals602	sex	Urind	
Attend	Ethwh	Hrp	natids	oacode	quals603	smsxfu	w1yr	
ayfl19	Everwk	Hrpid	natidw	oneten	quals604	soa1	Wait	
ayhl19	Extfu	Hst	nation	ownbus	quals605	soa2	ward03	
Before	Famunit	llodefr	nato	pca	quals606	soc2km	ward05	
Beforf	fdpch15	ilodefr05	natox	pcode	quals607	solo2	ward98	
Btec	fdpch16	ilodefr05y	ndtype4	pdwage	quals608	solor	Wavfnd	
caind	fdpch19	indd92m	newdea4	persno	quals609	start	Week	
cameyr	fdpch2	indg92m	nolook	prxrel	quals610	stat2	Wnleft	
candg	fdpch4	indm92m	nolowa01	publicr	quals611	statr	wnleft2	
caseno	fdpch9	inds92m	nolowa02	pwaps05a	Quota	stucur	workage	
casward	Fmplus	Indsect	nolowa03	qgcse41	Recno	supvis	worst30	
conmon	Ftpt	inecac05	nolowa04	qgcse42	Refdte	supvis2	worst30n	
conmpy	Ftptwk	inecac05y	nolowa05	qgcse43	Refwkd	teach41	Wrkage	
consey	Furn	Inecacr	nolowa06	qgcse44	Refwkm	teach42	Wrking	
country	gcse41	loutcome	nolowa07	qgcse45	Refwky	teach43	xr00	
course	gcse42	Jbaway	nolowa08	qgnvq	Regwkr	teach44	xr01	
cry01	gcse43	Jobbeg	nolowa09	qrtr	Relbus	teach45	xr02	
cryo	gcse44	land96	nolowa10	qualch41	Relhfu	teach46	xr03	
cryox	gcse45	Lea	nolwm	qualch42	Relhrp	teclec4	xr04	
cured	gcseful1	Leftm	nolwmy	qualch43	Relig	ten96	xr05	
degcls	gcseful2	Leftw	nowant	qualch44	rent96	thiswv	xr06	
degree4	gcseful3	Leftyr	nsecm	qualch51	Resbby	tlec98	xr07	
difjob	gcseful4	Leiscl	nsecmmj	qualch52	Resmth	ttwa	xr08	
dobd	gcseful5	Lfssamp	num5up	qualch53	Respno	typhst1	xr09	
dobm	gnvq4	Likewk	numal	qualch54	Restme	typhst2	xr10	
doby	Gorwkr	Livtog	numas	qualch55	Rsa	typhst3	xr11	
Weight to use:		PWAPS – Core Only			PWLFS – Non Core or Non Core & Core			

2005 Only
llodef05y
Inecac05y
hitqual05y
hiqual05y
levqual05y

ANNEX B – Average grossing factors (mean weights) for Unitary Authorities/ Local Authority District areas from the January-December 2022 APS data

Note: The Local Authority AA City of London hasn't been included in this table due to the small sample size (number of respondents).

Local Authority Area	Average Grossing Factor	AGF / 1000
England	403.9	0.40
AB Barking and Dagenham	670.6	0.67
AC Barnet	794.9	0.79
AD Bexley	536.7	0.54
AE Brent	1389.7	1.39
AF Bromley	654.1	0.65
AG Camden	779.5	0.78
AH Croydon	737.1	0.74
AJ Ealing	1122.6	1.12
AK Enfield	890.3	0.89
AL Greenwich	678.1	0.68
AM Hackney	1171.9	1.17
AN Hammersmith and Fulham	514.4	0.51
AP Haringey	621.1	0.62
AQ Harrow	606.7	0.61
AR Havering	439.5	0.44
AS Hillingdon	788.2	0.79
AT Hounslow	657.5	0.66
AU Islington	701.3	0.70
AW Kensington and Chelsea	459.5	0.46
AX Kingston upon Thames	347.8	0.35
AY Lambeth	1052.7	1.05
AZ Lewisham	777.1	0.78
BA Merton	488.3	0.49
BB Newham	1146.7	1.15
BC Redbridge	633.1	0.63
BD Richmond upon Thames	312.6	0.31
BE Southwark	920.0	0.92
BF Sutton	383.2	0.38
BG Tower Hamlets	1011.1	1.01
BH Waltham Forest	613.4	0.61
BJ Wandsworth	682.6	0.68
BK Westminster	693.3	0.69
BL Bolton	350.3	0.35
BM Bury	218.8	0.22
BN Manchester	731.5	0.73
BP Oldham	308.7	0.31
BQ Rochdale	247.6	0.25
BR Salford	419.1	0.42
BS Stockport	346.7	0.35
BT Tameside	231.5	0.23

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Local Authority Area	Average Grossing Factor	AGF / 1000
BU Trafford	268.1	0.27
BW Wigan	387.9	0.39
BX Knowsley	236.4	0.24
BY Liverpool	642.8	0.64
BZ St. Helens	273.0	0.27
CA Sefton	330.9	0.33
CB Wirral	432.8	0.43
CC Barnsley	254.3	0.25
CE Doncaster	367.3	0.37
CF Rotherham	318.4	0.32
CG Sheffield	508.7	0.51
CH Gateshead	227.2	0.23
CJ Newcastle upon Tyne	304.8	0.30
CK North Tyneside	212.0	0.21
CL South Tyneside	168.9	0.17
CM Sunderland	261.0	0.26
CN Birmingham	684.8	0.68
CQ Coventry	283.0	0.28
CR Dudley	496.1	0.50
CS Sandwell	515.1	0.52
CT Solihull	184.6	0.18
CU Walsall	403.4	0.40
CW Wolverhampton	418.3	0.42
CX Bradford	573.8	0.57
CY Calderdale	237.4	0.24
CZ Kirklees	440.4	0.44
DA Leeds	587.9	0.59
DB Wakefield	313.8	0.31
EB Hartlepool	90.7	0.09
EC Middlesbrough	140.5	0.14
EE Redcar and Cleveland	127.6	0.13
EF Stockton-on-Tees	203.1	0.20
EH Darlington	101.3	0.10
ET Halton	186.7	0.19
EU Warrington	296.1	0.30
EX Blackburn with Darwen	224.0	0.22
EY Blackpool	140.1	0.14
FA Kingston upon Hull, City of	335.6	0.34
FB East Riding of Yorkshire	256.7	0.26
FC North East Lincolnshire	163.6	0.16
FD North Lincolnshire	202.6	0.20
FF York	209.4	0.21
FK Derby	291.3	0.29
FN Leicester	377.1	0.38
FP Rutland	117.6	0.12
FY Nottingham	320.4	0.32

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Local Authority Area	Average Grossing Factor	AGF / 1000
GA Herefordshire, County of	187.4	0.19
GF Telford and Wrekin	270.5	0.27
GL Stoke-on-Trent	313.1	0.31
HA Bath and North East Somerset	207.6	0.21
HB Bristol, City of	396.1	0.40
HC North Somerset	203.6	0.20
HD South Gloucestershire	246.4	0.25
HG Plymouth	328.6	0.33
HH Torbay	114.3	0.11
HN Bournemouth	247.9	0.25
HP Poole	179.6	0.18
HX Swindon	250.4	0.25
JA Peterborough	271.2	0.27
KA Luton	270.9	0.27
KF Southend-on-Sea	203.8	0.20
KG Thurrock	192.5	0.19
LC Medway	433.5	0.43
MA Bracknell Forest	124.5	0.12
MB West Berkshire	211.2	0.21
MC Reading	266.7	0.27
MD Slough	288.2	0.29
ME Windsor and Maidenhead	134.4	0.13
MF Wokingham	169.2	0.17
MG Milton Keynes	254.1	0.25
ML Brighton and Hove	361.1	0.36
MR Portsmouth	221.3	0.22
MS Southampton	306.9	0.31
MW Isle of Wight	133.3	0.13
09UC Mid Bedfordshire	421.3	0.42
09UD Bedford	375.5	0.38
09UE South Bedfordshire	483.0	0.48
11UB Aylesbury Vale	428.3	0.43
11UC Chiltern	356.8	0.36
11UE South Bucks	361.1	0.36
11UF Wycombe	449.1	0.45
12UB Cambridge	430.6	0.43
12UC East Cambridgeshire	625.4	0.63
12UD Fenland	690.1	0.69
12UE Huntingdonshire	450.5	0.45
12UG South Cambridgeshire	334.7	0.33
13UB Chester	512.4	0.51
13UC Congleton	464.0	0.46
13UD Crewe and Nantwich	603.4	0.60
13UE Ellesmere Port and Neston	623.2	0.62
13UG Macclesfield	543.8	0.54
13UH Vale Royal	566.3	0.57

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Local Authority Area	Average Grossing Factor	AGF / 1000
15UB Caradon	396.0	0.40
15UC Carrick	420.6	0.42
15UD Kerrier	542.3	0.54
15UE North Cornwall	494.6	0.49
15UF Penwith	660.0	0.66
15UG Restormel	505.1	0.51
16UB Allerdale	336.9	0.34
16UC Barrow-in-Furness	281.0	0.28
16UD Carlisle	454.8	0.45
16UE Copeland	289.4	0.29
16UF Eden	345.3	0.35
16UG South Lakeland	279.7	0.28
17UB Amber Valley	422.3	0.42
17UC Bolsover	1,005.9	1.01
17UD Chesterfield	520.8	0.52
17UF Derbyshire Dales	552.0	0.55
17UG Erewash	500.3	0.50
17UH High Peak	453.2	0.45
17UJ North East Derbyshire	554.2	0.55
17UK South Derbyshire	451.2	0.45
18UB East Devon	382.7	0.38
18UC Exeter	459.0	0.46
18UD Mid Devon	282.1	0.28
18UE North Devon	388.7	0.39
18UG South Hams	493.9	0.49
18UH Teignbridge	388.6	0.39
18UK Torridge	592.2	0.59
18UL West Devon	529.3	0.53
19UC Christchurch	430.4	0.43
19UD East Dorset	332.7	0.33
19UE North Dorset	384.8	0.38
19UG Purbeck	483.2	0.48
19UH West Dorset	439.6	0.44
19UJ Weymouth and Portland	371.3	0.37
20UB Chester-le-Street	497.1	0.50
20UD Derwentside	346.2	0.35
20UE Durham	364.3	0.36
20UF Easington	506.0	0.51
20UG Sedgefield	357.2	0.36
20UH Teesdale	354.8	0.35
20UJ Wear Valley	333.4	0.33
21UC Eastbourne	525.5	0.53
21UD Hastings	499.2	0.50
21UF Lewes	468.0	0.47
21UG Rother	473.0	0.47
21UH Wealden	447.0	0.45

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Local Authority Area	Average Grossing Factor	AGF / 1000
22UB Basildon	582.5	0.58
22UC Braintree	546.7	0.55
22UD Brentwood	565.9	0.57
22UE Castle Point	705.6	0.71
22UF Chelmsford	606.0	0.61
22UG Colchester	743.5	0.74
22UH Epping Forest	551.6	0.55
22UJ Harlow	797.5	0.80
22UK Maldon	747.4	0.75
22UL Rochford	735.2	0.74
22UN Tendring	519.2	0.52
22UQ Uttlesford	446.1	0.45
23UB Cheltenham	426.1	0.43
23UC Cotswold	346.4	0.35
23UD Forest of Dean	374.4	0.37
23UE Gloucester	423.4	0.42
23UF Stroud	344.9	0.34
23UG Tewkesbury	396.1	0.40
24UB Basingstoke and Deane	502.6	0.50
24UC East Hampshire	498.3	0.50
24UD Eastleigh	479.7	0.48
24UE Fareham	421.2	0.42
24UF Gosport	575.4	0.58
24UG Hart	396.6	0.40
24UH Havant	643.3	0.64
24UJ New Forest	404.9	0.40
24UL Rushmoor	622.7	0.62
24UN Test Valley	555.1	0.56
24UP Winchester	552.4	0.55
26UB Broxbourne	828.3	0.83
26UC Dacorum	616.4	0.62
26UD East Hertfordshire	537.1	0.54
26UE Hertsmere	510.6	0.51
26UF North Hertfordshire	577.3	0.58
26UG St. Albans	407.2	0.41
26UH Stevenage	758.5	0.76
26UJ Three Rivers	558.0	0.56
26UK Watford	553.8	0.55
26UL Welwyn Hatfield	703.1	0.70
29UB Ashford	584.2	0.58
29UC Canterbury	503.1	0.50
29UD Dartford	874.6	0.87
29UE Dover	518.6	0.52
29UG Gravesham	749.3	0.75
29UH Maidstone	716.9	0.72
29UK Sevenoaks	630.4	0.63

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Local Authority Area	Average Grossing Factor	AGF / 1000
29UL Shepway	692.4	0.69
29UM Swale	658.6	0.66
29UN Thanet	611.1	0.61
29UP Tonbridge and Malling	638.9	0.64
29UQ Tunbridge Wells	771.5	0.77
30UD Burnley	754.2	0.75
30UE Chorley	473.3	0.47
30UF Fylde	541.6	0.54
30UG Hyndburn	732.9	0.73
30UH Lancaster	500.1	0.50
30UJ Pendle	700.0	0.70
30UK Preston	588.6	0.59
30UL Ribble Valley	608.6	0.61
30UM Rossendale	450.9	0.45
30UN South Ribble	470.5	0.47
30UP West Lancashire	639.4	0.64
30UQ Wyre	431.4	0.43
31UB Blaby	470.9	0.47
31UC Charnwood	522.8	0.52
31UD Harborough	381.0	0.38
31UE Hinckley and Bosworth	448.9	0.45
31UG Melton	369.3	0.37
31UH North West Leicestershire	498.9	0.50
31UJ Oadby and Wigston	395.7	0.40
32UB Boston	754.6	0.75
32UC East Lindsey	533.4	0.53
32UD Lincoln	589.8	0.59
32UE North Kesteven	546.7	0.55
32UF South Holland	474.5	0.47
32UG South Kesteven	628.0	0.63
32UH West Lindsey	431.1	0.43
33UB Breckland	574.3	0.57
33UC Broadland	462.5	0.46
33UD Great Yarmouth	762.4	0.76
33UE Kings Lynn and West Norfolk	499.1	0.50
33UF North Norfolk	525.4	0.53
33UG Norwich	724.4	0.72
33UH South Norfolk	410.6	0.41
34UB Corby	527.2	0.53
34UC Daventry	391.5	0.39
34UD East Northamptonshire	444.7	0.44
34UE Kettering	480.5	0.48
34UF Northampton	579.1	0.58
34UG South Northamptonshire	425.3	0.43
34UH Wellingborough	584.4	0.58
35UB Alnwick	249.0	0.25
35UC Berwick-upon-Tweed	281.6	0.28

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Local Authority Area	Average Grossing Factor	AGF / 1000
35UD Blyth Valley	251.2	0.25
35UE Castle Morpeth	212.2	0.21
35UF Tynedale	372.9	0.37
35UG Wansbeck	302.3	0.30
36UB Craven	401.4	0.40
36UC Hambleton	499.2	0.50
36UD Harrogate	456.5	0.46
36UE Richmondshire	528.7	0.53
36UF Ryedale	339.3	0.34
36UG Scarborough	368.5	0.37
36UH Selby	544.1	0.54
37UB Ashfield	578.1	0.58
37UC Bassetlaw	651.9	0.65
37UD Broxtowe	462.0	0.46
37UE Gedling	376.1	0.38
37UF Mansfield	681.4	0.68
37UG Newark and Sherwood	550.0	0.55
37UJ Rushcliffe	447.4	0.45
38UB Cherwell	593.0	0.59
38UC Oxford	778.4	0.78
38UD South Oxfordshire	599.8	0.60
38UE Vale of White Horse	576.6	0.58
38UF West Oxfordshire	493.4	0.49
39UB Bridgnorth	424.1	0.42
39UC North Shropshire	392.8	0.39
39UD Oswestry	372.7	0.37
39UE Shrewsbury and Atcham	333.0	0.33
39UF South Shropshire	309.3	0.31
40UB Mendip	512.8	0.51
40UC Sedgemoor	357.0	0.36
40UD South Somerset	547.1	0.55
40UE Taunton Deane	321.8	0.32
40UF West Somerset	357.5	0.36
41UB Cannock Chase	549.3	0.55
41UC East Staffordshire	571.1	0.57
41UD Lichfield	659.2	0.66
41UE Newcastle-under-Lyme	698.6	0.70
41UF South Staffordshire	744.6	0.74
41UG Stafford	710.7	0.71
41UH Staffordshire Moorlands	557.3	0.56
41UK Tamworth	537.5	0.54
42UB Babergh	500.1	0.50
42UC Forest Heath	546.3	0.55
42UD Ipswich	623.7	0.62
42UE Mid Suffolk	546.2	0.55
42UF St. Edmundsbury	557.4	0.56
42UG Suffolk Coastal	448.7	0.45

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Local Authority Area	Average Grossing Factor	AGF / 1000
42UH Waveney	635.8	0.64
43UB Elmbridge	547.9	0.55
43UC Epsom and Ewell	830.6	0.83
43UD Guildford	877.9	0.88
43UE Mole Valley	685.4	0.69
43UF Reigate and Banstead	741.8	0.74
43UG Runnymede	810.0	0.81
43UH Spelthorne	464.7	0.46
43UJ Surrey Heath	612.3	0.61
43UK Tandridge	590.5	0.59
43UL Waverley	626.6	0.63
43UM Woking	610.6	0.61
44UB North Warwickshire	423.1	0.42
44UC Nuneaton and Bedworth	438.1	0.44
44UD Rugby	396.6	0.40
44UE Stratford-on-Avon	296.6	0.30
44UF Warwick	333.1	0.33
45UB Adur	718.5	0.72
45UC Arun	585.6	0.59
45UD Chichester	667.1	0.67
45UE Crawley	621.1	0.62
45UF Horsham	708.6	0.71
45UG Mid Sussex	734.6	0.73
45UH Worthing	637.9	0.64
46UB Kennet	448.0	0.45
46UC North Wiltshire	391.5	0.39
46UD Salisbury	405.3	0.41
46UF West Wiltshire	334.0	0.33
47UB Bromsgrove	418.8	0.42
47UC Malvern Hills	411.9	0.41
47UD Redditch	408.4	0.41
47UE Worcester	604.6	0.60
47UF Wychavon	457.6	0.46
47UG Wyre Forest	584.4	0.58

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Local Authority Area	Average Grossing Factor	AGF / 1000
Wales	155.3	0.16
NA Anglesey, Isle of	67.3	0.07
NC Gwynedd	131.6	0.13
NE Conwy	120.2	0.12
NG Denbighshire	94.8	0.09
NJ Flintshire	201.3	0.20
NL Wrexham	165.5	0.17
NN Powys	175.5	0.18
NQ Ceredigion	101.0	0.10
NS Pembrokeshire	99.3	0.10
NU Carmarthenshire	140.1	0.14
NX Swansea	206.7	0.21
NZ Neath Port Talbot	148.5	0.15
PB Bridgend	181.7	0.18
PD Vale of Glamorgan, The	147.4	0.15
PF Rhondda, Cynon, Taff	266.7	0.27
PH Merthyr Tydfil	105.7	0.11
PK Caerphilly	170.2	0.17
PL Blaenau Gwent	123.5	0.12
PM Torfaen	109.7	0.11
PP Monmouthshire	104.9	0.10
PR Newport	143.0	0.14
PT Cardiff	413.9	0.41

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Local Authority Area	Average Grossing Factor	AGF / 1000
Scotland	251.0	0.25
QA Aberdeen City	350.1	0.35
QB Aberdeenshire	357.3	0.36
QC Angus	142.3	0.14
QD Argyll & Bute	118.7	0.12
QE Scottish Borders, The	147.2	0.15
QF Clackmannanshire	106.6	0.11
QG West Dunbartonshire	116.7	0.12
QH Dumfries and Galloway	189.9	0.19
QJ Dundee City	200.2	0.20
QK East Ayrshire	157.9	0.16
QL East Dunbartonshire	102.7	0.10
QM East Lothian	174.7	0.17
QN East Renfrewshire	160.8	0.16
QP Edinburgh, City of	621.9	0.62
QQ Falkirk	244.0	0.24
QR Fife	398.4	0.40
QS Glasgow City	684.0	0.68
QT Highland	462.9	0.46
QU Inverclyde	130.3	0.13
QW Midlothian	188.2	0.19
QX Moray	138.0	0.14
QY North Ayrshire	170.6	0.17
QZ North Lanarkshire	493.6	0.49
RA Orkney Islands	351.2	0.35
RB Perth and Kinross	178.7	0.18
RC Renfrewshire	287.3	0.29
RD Shetland Islands	292.6	0.29
RE South Ayrshire	144.4	0.14
RF South Lanarkshire	387.2	0.39
RG Stirling	110.2	0.11
RH West Lothian	270.9	0.27
RJ Eilean Siar (Western Isles)	79.7	0.08
Northern Ireland	170.5	0.17

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**ANNEX C – Sampling Variability for employment and ILO unemployment
(of persons aged 16+) for Unitary Authorities/Local Authority District
areas from the January-December 2022 APS data**

Note: The Local authority AA City of London hasn't been included in this table due to the small sample size (number of respondents).

Some of the figures may differ slightly from publication due to seasonal adjustment

¹ The total estimate and standard error have been divided by 1000.

	Employment							ILO Unemployment						
	Total			Rate				Total			Rate			
	Sample Size	Estimate ¹	Standard Error ¹	Design Factor	Estimate	Standard Error	Design Factor	Sample Size	Estimate ¹	Standard Error ¹	Design Factor	Estimate	Standard Error	Design Factor
England	61,973	27,701	72.1	0.95	61.1	0.2	1.09	1,951	1,040	29.4	1.44	2.3	0.1	1.44
AB Barking and Dagenham	148	104	5.0	0.82	62.6	3.0	0.98	7	5	1.9	1.07	2.8	1.1	1.07
AC Barnet	222	190	9.2	1.02	62.6	3.0	1.22	13	13	4.2	1.31	4.3	1.4	1.32
AD Bexley	215	135	4.0	0.68	67.7	2.0	0.83	6	3	1.4	1.05	1.7	0.7	1.05
AE Brent	101	154	9.1	0.84	55.4	3.3	0.93	9	17	6.3	1.33	6.0	2.3	1.34
AF Bromley	253	183	5.1	0.68	65.8	1.8	0.79	6	5	2.1	1.17	1.8	0.8	1.17
AG Camden	169	139	7.9	1.10	63.3	3.6	1.26	8	8	3.0	1.22	3.7	1.4	1.22
AH Croydon	265	207	7.4	0.86	65.5	2.3	1.01	11	6	2.2	1.03	2.0	0.7	1.03
AJ Ealing	146	174	7.7	0.78	64.3	2.9	0.92	9	11	3.6	1.04	4.0	1.3	1.05
AK Enfield	161	160	8.0	0.90	61.0	3.1	1.06	11	11	3.7	1.17	4.4	1.4	1.18
AL Greenwich	215	157	5.6	0.79	69.5	2.5	0.98	9	6	2.1	1.07	2.6	0.9	1.07
AM Hackney	145	157	8.8	0.95	63.5	3.6	1.07	9	17	7.2	1.65	6.9	2.9	1.66
AN Hammersmith and Fulham	172	99	3.8	0.79	70.6	2.7	0.98	10	3	1.0	0.84	2.0	0.7	0.84
AP Haringey	243	160	5.5	0.84	72.7	2.5	1.06	9	6	2.0	1.06	2.6	0.9	1.06
AQ Harrow	176	122	5.1	0.81	61.2	2.5	0.94	7	7	3.2	1.59	3.4	1.6	1.60
AR Havering	306	146	3.1	0.56	71.1	1.5	0.70	6	2	1.0	0.95	1.1	0.5	0.95
AS Hillingdon	184	151	6.1	0.77	60.3	2.5	0.88	11	10	3.0	1.08	3.9	1.2	1.09
AT Hounslow	208	138	5.1	0.75	66.6	2.5	0.92	6	6	2.4	1.24	2.8	1.2	1.24
AU Islington	181	148	6.0	0.94	73.5	3.0	1.15	7	6	2.3	1.15	2.8	1.1	1.16
AW Kensington and Chelsea	146	75	4.7	1.11	56.1	3.5	1.20	4	2	1.2	1.29	1.5	0.9	1.29
AX Kingston upon Thames	259	102	3.1	0.79	71.1	2.2	0.99	4	2	1.0	1.25	1.4	0.7	1.25
AY Lambeth	204	216	7.1	0.79	77.0	2.5	0.98	5	9	4.1	1.37	3.0	1.4	1.37
AZ Lewisham	224	190	5.8	0.75	73.1	2.2	0.90	5	5	2.2	1.13	1.9	0.9	1.13
BA Merton	227	120	2.9	0.58	71.8	1.8	0.73	*	*	*	*	*	*	*
BB Newham	155	195	8.7	0.85	69.2	3.1	1.05	7	11	4.2	1.21	3.9	1.5	1.21
BC Redbridge	226	154	6.2	0.87	62.0	2.5	1.02	12	8	2.6	1.16	3.4	1.1	1.16
BD Richmond upon Thames	292	98	3.2	0.81	64.8	2.1	0.98	10	4	1.3	1.24	2.5	0.9	1.25
BE Southwark	193	182	6.4	0.74	69.9	2.5	0.91	7	9	4.0	1.37	3.6	1.5	1.38
BF Sutton	240	106	3.9	0.87	66.2	2.4	1.05	10	5	1.7	1.23	3.3	1.1	1.23
BG Tower Hamlets	183	181	7.4	0.81	67.0	2.7	0.95	9	9	3.4	1.13	3.5	1.3	1.13
BH Waltham Forest	232	139	6.1	0.92	63.4	2.8	1.09	13	10	3.3	1.39	4.4	1.5	1.40
BJ Wandsworth	272	213	4.3	0.60	83.8	1.7	0.89	6	4	1.9	1.11	1.7	0.8	1.11
BK Westminster	167	120	4.7	0.73	59.0	2.3	0.80	6	4	1.6	0.96	1.9	0.8	0.96
BL Bolton	338	128	4.8	0.95	55.5	2.1	1.06	16	8	2.5	1.52	3.4	1.1	1.52
BM Bury	390	96	2.5	0.78	63.2	1.7	0.91	9	3	0.9	1.21	1.8	0.6	1.22
BN Manchester	331	271	9.8	0.96	61.8	2.2	1.12	19	17	4.5	1.27	4.0	1.0	1.27
BP Oldham	330	111	3.6	0.83	58.1	1.9	0.94	8	3	1.2	1.18	1.8	0.6	1.18
BQ Rochdale	337	93	3.8	1.05	54.2	2.2	1.17	9	3	1.0	1.19	1.7	0.6	1.19
BR Salford	256	120	4.5	0.86	58.5	2.2	0.97	15	9	2.2	1.13	4.3	1.0	1.13
BS Stockport	381	144	4.5	0.90	62.5	2.0	1.05	17	8	2.1	1.26	3.4	0.9	1.27
BT Tameside	413	107	3.0	0.82	60.3	1.7	0.94	15	4	1.2	1.18	2.5	0.7	1.19

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	Employment							ILO Unemployment						
	Total				Rate			Total				Rate		
	Sample Size	Estimate ¹	Standard Error ¹	Design Factor	Estimate	Standard Error	Design Factor	Sample Size	Estimate ¹	Standard Error ¹	Design Factor	Estimate	Standard Error	Design Factor
BU Trafford	384	111	3.5	0.88	59.2	1.9	1.02	13	5	1.8	1.54	2.8	1.0	1.55
BW Wigan	353	156	4.7	0.84	60.3	1.8	0.96	16	9	2.5	1.32	3.7	1.0	1.33
BX Knowsley	263	71	2.5	0.85	59.4	2.1	0.96	9	2	0.8	1.13	2.0	0.7	1.13
BY Liverpool	327	237	8.5	0.95	59.4	2.1	1.08	8	6	2.3	1.12	1.6	0.6	1.12
BZ St. Helens	264	82	3.2	0.91	56.0	2.2	1.01	8	3	1.1	1.22	1.9	0.7	1.23
CA Sefton	292	125	4.4	0.92	55.2	1.9	1.01	12	5	1.7	1.29	2.4	0.8	1.29
CB Wirral	315	155	5.0	0.84	58.8	1.9	0.94	9	5	1.6	1.12	1.8	0.6	1.12
CC Barnsley	433	117	3.4	0.85	57.1	1.6	0.94	6	3	1.4	1.53	1.6	0.7	1.53
CE Doncaster	344	141	4.7	0.89	57.2	1.9	1.00	9	5	1.6	1.22	1.9	0.7	1.23
CF Rotherham	342	121	3.9	0.84	57.5	1.8	0.95	10	3	1.2	1.13	1.5	0.5	1.13
CG Sheffield	537	291	8.6	0.99	61.2	1.8	1.12	28	21	4.4	1.34	4.5	0.9	1.34
CH Gateshead	371	94	3.1	0.93	54.5	1.8	1.01	13	4	1.3	1.39	2.2	0.7	1.39
CJ Newcastle upon Tyne	393	138	5.0	1.06	56.7	2.1	1.18	14	6	1.6	1.21	2.4	0.7	1.21
CK North Tyneside	415	97	2.9	0.89	60.1	1.8	1.02	19	5	1.4	1.37	3.2	0.9	1.38
CL South Tyneside	314	58	2.5	1.03	46.7	2.0	1.11	26	7	1.3	1.26	5.4	1.1	1.26
CM Sunderland	424	125	4.0	0.94	55.7	1.8	1.04	11	5	1.6	1.43	2.1	0.7	1.43
CN Birmingham	763	511	14.5	1.03	60.1	1.7	1.22	49	38	6.2	1.22	4.5	0.7	1.23
CQ Coventry	562	184	5.3	1.02	62.7	1.8	1.20	26	9	2.1	1.32	3.2	0.7	1.33
CR Dudley	260	152	4.8	0.75	55.4	1.7	0.81	10	7	2.3	1.25	2.4	0.8	1.25
CS Sandwell	247	139	6.5	1.00	52.6	2.5	1.11	15	9	2.4	1.11	3.4	0.9	1.12
CT Solihull	482	103	2.7	0.86	57.6	1.5	0.96	17	5	1.4	1.43	2.8	0.8	1.43
CU Walsall	294	127	5.7	1.06	55.3	2.5	1.19	19	11	2.8	1.33	5.0	1.2	1.34
CW Wolverhampton	238	110	5.1	0.97	50.4	2.3	1.05	16	9	2.5	1.30	4.1	1.1	1.31
CX Bradford	371	235	7.7	0.88	57.0	1.9	1.00	17	14	4.0	1.42	3.4	1.0	1.43
CY Calderdale	381	99	3.0	0.85	58.0	1.8	0.95	15	4	1.2	1.14	2.6	0.7	1.15
CZ Kirklees	430	198	6.2	0.89	56.3	1.8	1.00	11	8	2.8	1.48	2.4	0.8	1.48
DA Leeds	651	408	10.1	0.92	64.3	1.6	1.08	12	10	3.5	1.41	1.6	0.5	1.41
DB Wakefield	474	156	4.9	0.94	57.0	1.8	1.07	9	3	1.2	1.17	1.2	0.4	1.17
EB Hartlepool	402	40	1.3	0.93	54.4	1.8	1.04	20	3	0.6	1.29	3.6	0.8	1.30
EC Middlesbrough	364	59	2.3	1.05	54.8	2.1	1.19	18	4	1.1	1.49	3.9	1.1	1.50
EE Redcar and Cleveland	387	57	2.1	1.00	51.7	1.9	1.09	8	1	0.5	1.26	1.2	0.5	1.27
EF Stockton-on-Tees	389	90	2.7	0.84	56.7	1.7	0.94	12	3	0.9	1.17	2.0	0.6	1.17
EH Darlington	462	51	1.4	0.86	57.6	1.6	0.95	14	2	0.5	1.16	1.8	0.5	1.16
ET Halton	290	62	2.0	0.80	57.7	1.8	0.88	7	2	0.6	1.15	1.6	0.6	1.15
EU Warrington	320	106	2.9	0.74	59.7	1.7	0.82	6	2	1.0	1.23	1.4	0.6	1.23
EX Blackburn with Darwen	256	66	2.5	0.89	54.3	2.1	0.97	10	3	1.0	1.26	2.6	0.9	1.26
EY Blackpool	389	61	2.1	0.97	53.1	1.8	1.04	21	4	1.1	1.41	3.5	0.9	1.41
FA Kingston upon Hull, City of	355	125	4.1	0.88	58.4	1.9	0.98	16	8	1.9	1.20	3.6	0.9	1.21
FB East Riding of Yorkshire	521	155	4.4	0.95	58.5	1.7	1.09	14	4	1.1	1.12	1.6	0.4	1.12
FC North East Lincolnshire	370	70	2.8	1.09	53.7	2.1	1.19	9	2	0.8	1.27	1.7	0.6	1.27
FD North Lincolnshire	347	83	2.5	0.84	58.1	1.7	0.93	10	2	0.7	1.10	1.4	0.5	1.11
FF York	491	120	2.3	0.70	69.5	1.3	0.83	5	1	0.7	1.30	0.8	0.4	1.30
FK Derby	392	123	4.6	1.05	59.1	2.2	1.19	13	4	1.2	1.16	1.8	0.6	1.16
FN Leicester	433	170	5.6	0.96	62.0	2.1	1.14	23	9	2.2	1.25	3.1	0.8	1.25
FP Rutland	133	17	1.2	1.17	52.4	3.7	1.23	*	*	*	*	*	*	*
FY Nottingham	443	148	8.9	1.74	55.7	3.4	1.94	19	10	3.5	2.01	3.6	1.3	2.01

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	Employment							ILO Unemployment						
	Total				Rate			Total				Rate		
	Sample Size	Estimate ¹	Standard Error ¹	Design Factor	Estimate	Standard Error	Design Factor	Sample Size	Estimate ¹	Standard Error ¹	Design Factor	Estimate	Standard Error	Design Factor
GA Herefordshire, County of	414	92	2.8	0.94	53.6	1.6	0.99	6	2	0.8	1.42	1.0	0.5	1.42
GF Telford and Wrekin	281	86	3.0	0.87	59.2	2.1	0.98	14	5	1.4	1.25	3.1	0.9	1.26
GL Stoke-on-Trent	337	116	4.1	0.93	54.1	1.9	1.01	13	6	2.0	1.42	2.9	0.9	1.43
HA Bath and North East Somerset	370	92	3.1	0.97	55.3	1.8	1.04	12	4	1.3	1.38	2.4	0.8	1.38
HB Bristol, City of	587	258	5.8	0.84	69.3	1.6	1.03	14	7	2.1	1.20	2.0	0.6	1.20
HC North Somerset	496	108	2.8	0.83	59.1	1.5	0.92	12	3	0.9	1.23	1.6	0.5	1.24
HD South Gloucestershire	544	156	2.9	0.68	66.2	1.2	0.79	9	2	0.8	1.06	1.0	0.3	1.06
HG Plymouth	309	126	4.6	0.98	55.6	2.0	1.07	10	4	1.6	1.37	2.0	0.7	1.37
HH Torbay	450	60	1.6	0.82	52.3	1.4	0.89	10	1	0.5	1.28	1.3	0.5	1.28
HN Bournemouth	348	102	3.2	0.91	61.8	1.9	1.03	9	4	1.3	1.35	2.2	0.8	1.36
HP Poole	360	75	1.9	0.72	60.1	1.5	0.81	5	1	0.6	1.28	1.0	0.5	1.28
HX Swindon	419	111	3.9	1.03	60.0	2.1	1.16	16	6	1.7	1.36	3.4	0.9	1.37
JA Peterborough	332	103	3.9	1.04	61.8	2.3	1.19	20	5	1.6	1.37	3.2	1.0	1.38
KA Luton	330	98	3.8	0.97	56.8	2.2	1.11	14	7	2.7	1.98	4.0	1.5	1.99
KF Southend-on-Sea	389	90	3.7	1.19	57.0	2.3	1.30	7	1	0.8	1.39	0.9	0.5	1.39
KG Thurrock	431	89	3.1	1.06	64.8	2.3	1.26	18	8	2.5	2.07	5.8	1.8	2.09
LC Medway	305	150	4.8	0.85	63.9	2.0	0.98	13	7	2.2	1.28	3.0	0.9	1.28
MA Bracknell Forest	474	62	1.8	0.90	65.4	1.8	1.07	15	3	1.0	1.62	3.1	1.0	1.62
MB West Berkshire	366	82	2.3	0.81	65.2	1.9	0.95	9	2	0.9	1.26	1.8	0.7	1.27
MC Reading	303	90	2.8	0.83	67.0	2.1	0.98	9	3	1.0	1.19	2.0	0.8	1.19
MD Slough	224	73	2.5	0.75	63.8	2.2	0.91	14	5	1.5	1.28	4.4	1.3	1.28
ME Windsor and Maidenhead	553	79	1.7	0.78	67.4	1.5	0.93	11	2	0.7	1.37	1.7	0.6	1.37
MF Wokingham	450	86	1.9	0.71	66.6	1.5	0.86	10	2	0.6	1.16	1.4	0.5	1.16
MG Milton Keynes	539	150	3.6	0.85	67.8	1.6	1.02	8	3	1.2	1.45	1.2	0.5	1.45
ML Brighton and Hove	389	164	5.0	0.98	67.1	2.0	1.13	14	7	2.0	1.29	2.7	0.8	1.29
MR Portsmouth	431	109	3.3	0.95	60.8	1.8	1.07	10	3	1.4	1.75	1.6	0.8	1.75
MS Southampton	402	136	4.6	1.03	60.9	2.1	1.14	12	6	2.1	1.54	2.7	0.9	1.55
MW Isle of Wight	348	55	2.5	1.20	46.3	2.1	1.27	19	3	0.7	1.14	2.3	0.6	1.14
09UC Mid Bedfordshire	169	81	3.2	0.79	63.2	2.5	0.90	7	2	0.9	0.99	1.6	0.7	0.99
09UD Bedford	218	86	3.1	0.76	64.2	2.3	0.91	3	1	0.7	1.12	0.9	0.6	1.13
09UE South Bedfordshire	134	73	3.0	0.74	67.5	2.8	0.89	5	2	1.3	1.23	2.1	1.2	1.23
11UB Aylesbury Vale	257	116	3.7	0.79	70.4	2.2	0.95	5	3	2.2	1.92	1.9	1.4	1.93
11UC Chiltern	128	47	2.2	0.75	61.9	2.9	0.87	*	*	*	*	*	*	*
11UE South Bucks	95	32	4.6	1.82	58.5	8.4	2.09	*	*	*	*	*	*	*
11UF Wycombe	158	89	3.8	0.86	59.5	2.6	0.95	7	4	1.6	1.17	2.9	1.1	1.17
12UB Cambridge	148	66	3.0	0.84	70.8	3.3	1.05	4	2	1.2	1.25	2.1	1.2	1.25
12UC East Cambridgeshire	79	50	2.6	0.68	68.7	3.6	0.83	4	2	1.1	0.94	3.2	1.5	0.95
12UD Fenland	67	51	3.3	0.78	57.4	3.8	0.85	*	*	*	*	*	*	*
12UE Huntingdonshire	200	95	3.3	0.74	65.2	2.3	0.86	4	2	0.9	1.01	1.3	0.6	1.01
12UG South Cambridgeshire	239	79	2.3	0.62	67.3	1.9	0.77	4	2	0.9	1.18	1.3	0.7	1.18
13UB Chester	99	58	2.5	0.61	62.3	2.7	0.73	*	*	*	*	*	*	*
13UC Congleton	97	46	2.2	0.66	64.5	3.1	0.79	5	2	1.1	1.01	3.3	1.5	1.02
13UD Crewe and Nantwich	90	59	3.4	0.77	61.5	3.5	0.90	3	3	1.5	1.17	2.9	1.6	1.17
13UE Ellesmere Port and Neston	63	36	2.9	0.81	49.8	4.1	0.86	*	*	*	*	*	*	*
13UG Macclesfield	139	81	3.5	0.75	60.0	2.6	0.84	4	3	1.4	1.12	2.0	1.0	1.12
13UH Vale Royal	100	57	3.9	0.91	54.8	3.7	1.01	*	*	*	*	*	*	*

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15UB Caradon	95	38	2.4	0.81	56.8	3.6	0.93	*	*	*	*	*	*	*
15UC Carrick	87	45	2.7	0.84	56.4	3.5	0.95	3	1	0.7	1.01	1.6	0.9	1.01
15UD Kerrier	89	54	2.3	0.60	58.8	2.6	0.68	*	*	*	*	*	*	*
15UE North Cornwall	82	46	2.6	0.77	55.3	3.2	0.82	*	*	*	*	*	*	*
15UF Penwith	44	31	3.5	1.03	53.8	6.1	1.13	*	*	*	*	*	*	*
15UG Restormel	91	55	2.8	0.73	58.7	3.1	0.82	*	*	*	*	*	*	*
16UB Allerdale	133	45	2.3	0.81	57.4	3.0	0.91	6	3	1.2	1.28	3.4	1.5	1.28
16UC Barrow-in-Furness	89	27	2.1	1.01	53.1	4.3	1.14	*	*	*	*	*	*	*
16UD Carlisle	107	55	2.5	0.70	59.6	2.7	0.79	*	*	*	*	*	*	*
16UE Copeland	97	30	2.0	0.91	56.8	3.8	1.03	4	2	1.2	1.42	4.7	2.3	1.43
16UF Eden	61	25	2.3	1.10	51.7	4.8	1.13	3	2	1.1	1.34	3.8	2.2	1.34
16UG South Lakeland	155	50	2.6	0.98	60.6	3.2	1.10	*	*	*	*	*	*	*
17UB Amber Valley	143	61	3.0	0.82	59.5	3.0	0.93	4	2	1.2	1.22	2.3	1.2	1.23
17UC Bolsover	40	39	4.0	0.88	55.0	5.6	0.94	*	*	*	*	*	*	*
17UD Chesterfield	102	54	3.1	0.84	64.9	3.8	0.99	*	*	*	*	*	*	*
17UF Derbyshire Dales	61	32	2.4	0.77	51.6	3.9	0.82	*	*	*	*	*	*	*
17UG Erewash	102	56	3.1	0.82	61.4	3.5	0.95	5	3	1.4	1.15	3.5	1.6	1.15
17UH High Peak	98	49	1.9	0.59	64.0	2.6	0.70	*	*	*	*	*	*	*
17UJ North East Derbyshire	74	47	3.3	0.89	56.0	4.0	0.98	*	*	*	*	*	*	*
17UK South Derbyshire	103	51	3.0	0.86	63.2	3.6	1.00	5	3	1.3	1.11	4.1	1.7	1.12
18UB East Devon	150	64	3.0	0.79	52.3	2.4	0.86	3	1	0.7	0.98	1.0	0.6	0.99
18UC Exeter	125	63	6.0	1.53	64.8	6.1	1.86	5	3	1.4	1.31	2.7	1.5	1.31
18UD Mid Devon	144	37	2.1	0.86	67.1	3.8	1.11	4	2	1.0	1.28	3.5	1.7	1.29
18UE North Devon	110	47	2.8	0.91	63.0	3.7	1.05	*	*	*	*	*	*	*
18UG South Hams	80	42	2.6	0.78	57.0	3.6	0.86	*	*	*	*	*	*	*
18UH Teignbridge	165	65	3.0	0.83	59.7	2.8	0.94	*	*	*	*	*	*	*
18UJ Torridge	55	39	2.9	0.89	62.6	4.6	0.96	*	*	*	*	*	*	*
18UL West Devon	39	25	1.6	0.59	55.7	3.6	0.66	*	*	*	*	*	*	*
19UC Christchurch	48	21	1.7	0.74	49.2	4.1	0.80	6	3	1.3	1.08	8.3	3.1	1.09
19UD East Dorset	119	43	2.0	0.72	58.7	2.7	0.81	*	*	*	*	*	*	*
19UE North Dorset	69	31	2.0	0.78	57.8	3.7	0.88	*	*	*	*	*	*	*
19UG Purbeck	41	24	1.6	0.67	57.7	4.0	0.72	*	*	*	*	*	*	*
19UH West Dorset	91	46	2.4	0.73	52.0	2.8	0.78	3	1	1.0	1.32	1.4	1.1	1.32
19UJ Weymouth and Portland	68	25	3.3	1.37	47.8	6.3	1.48	*	*	*	*	*	*	*
20UB Chester-le-Street	39	25	2.0	0.78	50.1	4.2	0.83	*	*	*	*	*	*	*
20UD Derwentside	131	49	2.2	0.76	70.5	3.2	0.97	5	2	1.1	1.31	3.2	1.7	1.32
20UE Durham	112	46	2.7	0.92	57.3	3.4	1.02	3	2	1.2	1.47	2.4	1.5	1.47
20UF Easington	82	45	3.2	0.90	53.2	3.8	0.96	3	2	1.0	1.03	2.2	1.2	1.03
20UG Sedgfield	100	38	3.0	1.07	54.7	4.4	1.21	5	2	1.1	1.25	3.0	1.6	1.26
20UH Teesdale	38	13	1.8	1.16	52.0	7.1	1.17	*	*	*	*	*	*	*
20UJ Wear Valley	88	29	2.3	0.99	55.3	4.5	1.12	*	*	*	*	*	*	*
21UC Eastbourne	75	52	7.1	1.88	57.9	7.7	2.00	3	1	1.1	1.62	0.9	1.2	1.63
21UD Hastings	81	45	3.8	1.11	61.3	5.2	1.29	4	3	1.6	1.39	3.7	2.2	1.40
21UF Lewes	84	45	3.5	1.00	50.4	3.9	1.07	4	2	1.2	1.18	2.4	1.3	1.18
21UG Rother	71	43	3.5	1.01	50.5	4.0	1.07	3	2	1.1	1.21	1.9	1.3	1.21
21UH Wealden	160	74	3.5	0.81	57.8	2.7	0.92	13	7	2.1	1.18	5.4	1.6	1.19

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22UB Basildon	164	106	3.8	0.72	72.1	2.6	0.91	4	2	1.1	0.99	1.3	0.7	1.00
22UC Braintree	144	82	3.5	0.77	65.7	2.8	0.89	4	3	1.5	1.17	2.2	1.2	1.18
22UD Brentwood	62	39	2.1	0.60	67.8	3.6	0.76	*	*	*	*	*	*	*
22UE Castle Point	60	45	2.8	0.68	53.6	3.3	0.72	4	3	1.2	0.93	3.0	1.5	0.93
22UF Chelmsford	137	89	4.4	0.84	61.3	3.1	0.96	4	3	1.4	1.07	2.0	1.0	1.08
22UG Colchester	122	98	5.5	0.90	60.4	3.4	1.01	*	*	*	*	*	*	*
22UH Epping Forest	111	64	3.3	0.75	59.8	3.1	0.86	4	2	1.2	1.05	2.3	1.2	1.05
22UJ Harlow	47	43	2.6	0.62	66.9	4.1	0.78	*	*	*	*	*	*	*
22UK Maldon	35	29	3.1	0.88	49.8	5.4	0.93	*	*	*	*	*	*	*
22UL Rochford	65	48	2.6	0.65	70.0	3.8	0.80	*	*	*	*	*	*	*
22UN Tendring	81	50	4.7	1.11	44.2	4.2	1.21	4	4	2.2	1.56	3.2	1.9	1.56
22UQ Uttlesford	99	45	2.3	0.71	67.2	3.4	0.88	*	*	*	*	*	*	*
23UB Cheltenham	139	65	2.3	0.66	68.2	2.5	0.79	*	*	*	*	*	*	*
23UC Cotswold	125	47	2.2	0.78	61.5	2.9	0.87	4	1	0.7	1.01	1.8	0.9	1.01
23UD Forest of Dean	91	37	2.2	0.78	52.9	3.2	0.86	5	2	0.9	1.04	2.7	1.2	1.04
23UE Gloucester	157	67	3.7	0.99	62.0	3.5	1.13	5	3	1.2	1.16	2.3	1.1	1.16
23UF Stroud	169	64	2.1	0.64	66.6	2.2	0.77	3	1	0.7	1.21	1.1	0.8	1.21
23UG Tewkesbury	112	46	2.1	0.67	61.8	2.8	0.78	*	*	*	*	*	*	*
24UB Basingstoke and Deane	183	92	3.5	0.74	67.0	2.6	0.91	3	2	1.0	1.14	1.2	0.8	1.15
24UC East Hampshire	104	58	3.5	0.88	58.2	3.4	0.98	4	3	1.5	1.27	2.7	1.5	1.27
24UD Eastleigh	137	74	2.7	0.66	69.1	2.5	0.80	*	*	*	*	*	*	*
24UE Fareham	126	61	2.6	0.72	63.3	2.7	0.84	3	1	0.7	1.04	1.1	0.7	1.05
24UF Gosport	64	37	3.4	0.97	55.6	5.2	1.10	*	*	*	*	*	*	*
24UG Hart	115	47	2.1	0.69	68.5	3.1	0.88	4	2	1.2	1.23	3.4	1.7	1.23
24UH Havant	81	55	4.8	1.06	52.3	4.5	1.15	*	*	*	*	*	*	*
24UJ New Forest	199	83	3.3	0.76	58.9	2.3	0.87	5	3	1.6	1.34	2.4	1.1	1.35
24UL Rushmoor	82	48	3.2	0.82	62.8	4.1	0.95	*	*	*	*	*	*	*
24UN Test Valley	112	61	3.1	0.71	58.1	3.0	0.80	6	4	1.6	1.06	3.8	1.5	1.06
24UP Winchester	105	57	2.9	0.71	58.7	3.0	0.81	*	*	*	*	*	*	*
26UB Broxbourne	61	49	3.6	0.79	64.7	4.8	0.95	*	*	*	*	*	*	*
26UC Dacorum	124	81	3.9	0.79	61.7	3.0	0.89	*	*	*	*	*	*	*
26UD East Hertfordshire	126	79	3.1	0.67	64.7	2.5	0.78	3	2	0.9	0.98	1.3	0.7	0.99
26UE Hertsmere	94	48	3.1	0.83	59.0	3.8	0.96	4	3	1.3	1.14	3.2	1.6	1.15
26UF North Hertfordshire	108	71	3.1	0.69	67.3	2.9	0.84	*	*	*	*	*	*	*
26UG St. Albans	179	78	2.8	0.72	70.7	2.5	0.92	*	*	*	*	*	*	*
26UH Stevenage	56	48	3.1	0.74	66.5	4.3	0.88	3	3	1.5	1.09	3.7	2.2	1.09
26UJ Three Rivers	85	48	2.2	0.60	63.7	3.0	0.71	4	2	1.1	1.06	2.7	1.5	1.07
26UK Watford	97	51	2.9	0.76	65.3	3.7	0.92	*	*	*	*	*	*	*
26UL Welwyn Hatfield	93	68	4.3	0.90	65.1	4.1	1.03	*	*	*	*	*	*	*
29UB Ashford	92	59	3.2	0.72	59.7	3.3	0.85	3	2	1.2	1.08	2.0	1.2	1.08
29UC Canterbury	141	73	5.3	1.16	59.7	4.4	1.37	*	*	*	*	*	*	*
29UD Dartford	64	60	3.2	0.63	64.8	3.5	0.74	*	*	*	*	*	*	*
29UE Dover	93	55	3.0	0.77	53.5	3.0	0.83	*	*	*	*	*	*	*
29UG Gravesham	68	58	3.8	0.83	68.1	4.5	1.01	*	*	*	*	*	*	*
29UH Maidstone	124	90	3.6	0.64	63.1	2.5	0.73	5	4	2.0	1.11	3.0	1.4	1.11
29UK Sevenoaks	82	54	3.8	0.86	58.6	4.1	1.00	*	*	*	*	*	*	*

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29UL Shepway	73	55	3.7	0.84	58.0	4.0	0.93	*	*	*	*	*	*	*
29UM Swale	121	77	3.9	0.78	69.7	3.5	0.99	3	2	1.4	1.09	2.2	1.2	1.10
29UN Thanet	102	65	3.4	0.72	57.8	3.1	0.83	7	6	2.6	1.35	5.6	2.4	1.36
29UP Tonbridge and Malling	91	65	3.1	0.67	60.9	2.9	0.76	*	*	*	*	*	*	*
29UQ Tunbridge Wells	68	55	4.3	0.91	55.2	4.4	0.99	7	5	2.0	0.97	5.5	2.0	0.98
30UD Burnley	42	37	3.1	0.77	58.4	4.9	0.90	*	*	*	*	*	*	*
30UE Chorley	98	52	3.5	0.93	59.8	4.0	1.09	*	*	*	*	*	*	*
30UF Fylde	70	39	2.5	0.76	54.7	3.5	0.80	*	*	*	*	*	*	*
30UG Hyndburn	56	41	3.7	0.98	59.4	5.4	1.06	*	*	*	*	*	*	*
30UH Lancaster	119	67	3.9	0.92	60.0	3.5	1.05	4	3	1.5	1.21	2.6	1.3	1.22
30UJ Pendle	58	39	2.8	0.69	55.2	3.9	0.78	*	*	*	*	*	*	*
30UK Preston	103	64	5.1	1.13	56.6	4.6	1.27	5	*	*	*	*	*	*
30UL Ribble Valley	46	29	2.4	0.80	61.6	5.1	0.91	*	*	*	*	*	*	*
30UM Rossendale	68	34	2	0.72	61.5	3.7	0.83	4	3	1.3	1.21	4.7	2.3	1.22
30UN South Ribble	112	56	2.3	0.62	67.0	2.7	0.76	3	2	1.1	1.09	2.4	1.3	1.10
30UP West Lancashire	72	49	4.2	0.98	51.4	4.4	1.05	3	3	1.8	1.27	3.3	1.9	1.27
30UQ Wyre	105	46	3.1	0.91	54.0	3.7	1.03	5	2	1.1	1.13	2.8	1.4	1.14
31UB Blaby	103	56	2.5	0.72	72.2	3.3	0.91	3	2	1.0	1.08	2.2	1.3	1.08
31UC Charnwood	184	98	3.5	0.71	64.2	2.3	0.82	4	3	1.4	1.14	2.0	0.9	1.14
31UD Harborough	119	46	2.6	0.86	63.1	3.5	1.00	*	*	*	*	*	*	*
31UE Hinckley and Bosworth	120	56	3.1	0.86	61.8	3.5	1.00	*	*	*	*	*	*	*
31UG Melton	61	26	1.7	0.77	62.5	4.2	0.90	*	*	*	*	*	*	*
31UH North West Leicestershire	93	49	3.2	0.89	57.2	3.8	0.99	3	1	0.8	1.01	1.5	0.9	1.01
31UJ Oadby and Wigston	60	26	1.2	0.52	59.5	2.8	0.58	4	2	0.7	0.85	4.0	1.6	0.86
32UB Boston	39	33	3	0.81	57.8	5.4	0.92	*	*	*	*	*	*	*
32UC East Lindsey	86	54	4.3	1.02	44.5	3.6	1.06	*	*	*	*	*	*	*
32UD Lincoln	78	50	2.8	0.72	68.7	3.9	0.91	*	*	*	*	*	*	*
32UE North Kesteven	103	57	2.9	0.72	58.4	2.9	0.79	*	*	*	*	*	*	*
32UF South Holland	93	49	2.7	0.79	64.7	3.6	0.93	*	*	*	*	*	*	*
32UG South Kesteven	88	68	4.3	0.89	54.7	3.5	0.97	*	*	*	*	*	*	*
32UH West Lindsey	98	47	2.3	0.69	64.3	3.1	0.84	3	1	0.4	0.81	0.8	0.6	0.81
33UB Breckland	106	67	3.5	0.78	57.3	3.0	0.86	*	*	*	*	*	*	*
33UC Broadland	117	64	3.1	0.78	61.0	2.9	0.87	*	*	*	*	*	*	*
33UD Great Yarmouth	45	39	4.2	0.99	45.8	4.9	1.04	*	*	*	*	*	*	*
33UE Kings Lynn and West Norfolk	135	69	3.4	0.78	55.5	2.8	0.87	7	4	1.6	1.10	3.6	1.3	1.10
33UF North Norfolk	78	47	2.7	0.72	54.4	3.2	0.80	*	*	*	*	*	*	*
33UG Norwich	108	82	3.9	0.77	68.8	3.3	0.90	*	*	*	*	*	*	*
33UH South Norfolk	139	62	2.7	0.71	57.4	2.5	0.81	*	*	*	*	*	*	*
34UB Corby	65	32	3.1	0.98	52.2	4.9	1.06	4	3	1.4	1.13	4.6	2.2	1.13
34UC Daventry	110	43	1.9	0.69	63.1	2.9	0.77	*	*	*	*	*	*	*
34UD East Northamptonshire	97	47	2.2	0.67	60.1	2.8	0.76	*	*	*	*	*	*	*
34UE Kettering	100	48	3.3	0.94	61.0	4.3	1.10	6	3	1.3	1.06	4.1	1.7	1.07
34UF Northampton	186	120	4.3	0.73	66.8	2.4	0.88	3	2	1.1	1.06	1.1	0.6	1.06
34UG South Northamptonshire	104	48	2.2	0.69	62.1	2.9	0.78	*	*	*	*	*	*	*
34UH Wellingborough	66	40	2.4	0.69	58.7	3.6	0.77	*	*	*	*	*	*	*
35UB Alnwick	38	13	1.4	0.95	45.5	4.6	0.99	3	1	0.7	1.27	4.6	2.5	1.28
35UC Berwick-upon-Tweed	42	13	1.3	0.94	52.7	5.2	0.98	*	*	*	*	*	*	*

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	Employment							ILO Unemployment						
	Total				Rate			Total				Rate		
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35UD Blyth Valley	118	34	1.9	0.85	56.7	3.2	0.99	4	2	0.8	1.36	2.6	1.4	1.37
35UE Castle Morpeth	80	22	1.5	0.93	53.8	3.7	1.02	*	*	*	*	*	*	*
35UF Tynedale	59	29	2.2	0.91	52.5	3.9	0.95	*	*	*	*	*	*	*
35UG Wansbeck	79	26	1.9	0.86	52.0	3.7	0.94	9	3	1.1	1.20	5.3	2.1	1.21
36UB Craven	58	25	1.8	0.74	54.4	3.9	0.82	*	*	*	*	*	*	*
36UC Hambleton	86	46	2.5	0.75	59.4	3.3	0.83	3	2	1.2	1.15	2.6	1.5	1.16
36UD Harrogate	170	82	3.4	0.79	62.6	2.6	0.90	*	*	*	*	*	*	*
36UE Richmondshire	43	24	1.9	0.72	56.9	4.5	0.80	*	*	*	*	*	*	*
36UF Ryedale	65	26	1.4	0.64	58.9	3.2	0.72	*	*	*	*	*	*	*
36UG Scarborough	126	48	2.8	0.88	54.7	3.2	0.97	4	2	1.0	1.23	2.1	1.2	1.23
36UH Selby	69	44	2.8	0.78	59.6	3.8	0.88	*	*	*	*	*	*	*
37UB Ashfield	110	62	4.2	0.96	57.7	3.9	1.07	*	*	*	*	*	*	*
37UC Bassetlaw	81	57	3.1	0.72	58.9	3.2	0.80	3	2	1.2	1.04	2.2	1.2	1.04
37UD Broxtowe	107	51	5.2	1.42	53.6	5.5	1.55	4	2	1.4	1.32	2.5	1.5	1.32
37UE Gedling	154	55	2.6	0.78	63.9	3.1	0.95	5	2	1.1	1.26	2.4	1.3	1.26
37UF Mansfield	70	51	3.8	0.87	55.6	4.1	0.96	*	*	*	*	*	*	*
37UG Newark and Sherwood	117	61	3.3	0.80	59.8	3.3	0.91	*	*	*	*	*	*	*
37UJ Rushcliffe	118	59	2.5	0.67	64.2	2.7	0.80	*	*	*	*	*	*	*
38UB Cherwell	117	68	3.9	0.83	65.3	3.7	1.04	*	*	*	*	*	*	*
38UC Oxford	104	86	4.4	0.80	70.7	3.6	0.97	*	*	*	*	*	*	*
38UD South Oxfordshire	109	68	3.0	0.64	59.5	2.6	0.73	4	2	1.0	0.90	1.7	0.9	0.90
38UE Vale of White Horse	109	69	3.1	0.70	69.9	3.2	0.90	*	*	*	*	*	*	*
38UF West Oxfordshire	124	62	2.7	0.74	70.6	3.2	0.91	*	*	*	*	*	*	*
39UB Bridgnorth	60	30	1.4	0.55	60.5	2.8	0.61	*	*	*	*	*	*	*
39UC North Shropshire	72	30	2.3	0.90	55.2	4.3	0.99	*	*	*	*	*	*	*
39UD Oswestry	40	19	1.9	0.94	60.1	6.0	1.10	*	*	*	*	*	*	*
39UE Shrewsbury and Atcham	122	52	2.9	0.96	59.7	3.3	1.07	4	2	0.9	1.21	1.8	1.0	1.21
39UF South Shropshire	49	21	1.6	0.82	60.1	4.4	0.95	*	*	*	*	*	*	*
40UB Mendip	104	60	2.6	0.66	63.7	2.8	0.76	*	*	*	*	*	*	*
40UC Sedgemoor	145	56	3.3	0.99	57.8	3.4	1.13	4	3	1.6	1.52	3.1	1.6	1.52
40UD South Somerset	137	79	3.7	0.77	55.8	2.6	0.85	4	2	1.1	1.02	1.5	0.8	1.02
40UE Taunton Deane	169	56	2.4	0.77	63.6	2.7	0.94	3	1	0.6	1.11	1.2	0.7	1.11
40UF West Somerset	37	15	1.6	0.89	55.1	6.0	1.00	*	*	*	*	*	*	*
41UB Cannock Chase	90	53	1.9	0.51	74.2	2.7	0.69	3	2	1.8	1.65	3.1	2.5	1.66
41UC East Staffordshire	94	59	3.5	0.85	66.3	4.0	1.03	3	2	1.3	1.24	2.2	1.5	1.24
41UD Lichfield	76	54	2.6	0.63	65.6	3.2	0.74	*	*	*	*	*	*	*
41UE Newcastle-under-Lyme	75	62	4.3	0.90	59.1	4.2	1.02	*	*	*	*	*	*	*
41UF South Staffordshire	71	62	2.4	0.53	58.6	2.4	0.57	*	*	*	*	*	*	*
41UG Stafford	80	67	3.8	0.79	58.0	3.3	0.86	*	*	*	*	*	*	*
41UH Staffordshire Moorlands	101	51	2.5	0.67	65.2	3.1	0.76	3	2	0.9	0.97	2.0	1.2	0.97
41UK Tamworth	68	40	1.7	0.53	72.5	3.1	0.70	*	*	*	*	*	*	*
42UB Babergh	78	43	2.4	0.72	58.3	3.4	0.81	*	*	*	*	*	*	*
42UC Forest Heath	54	33	2.4	0.79	56.3	4.1	0.85	*	*	*	*	*	*	*
42UD Ipswich	99	77	3.0	0.64	71.4	2.8	0.81	*	*	*	*	*	*	*
42UE Mid Suffolk	80	50	2.5	0.66	61.9	3.2	0.77	*	*	*	*	*	*	*
42UF St. Edmundsbury	90	54	3.2	0.80	57.0	3.4	0.88	*	*	*	*	*	*	*
42UG Suffolk Coastal	117	61	2.5	0.65	57.6	2.4	0.75	*	*	*	*	*	*	*

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42UH Waveney	77	55	3.0	0.69	57.0	3.2	0.78	*	*	*	*	*	*	*
43UB Elmbridge	112	64	3.2	0.73	64.4	3.3	0.90	4	2	1.2	1.05	2.5	1.2	1.06
43UC Epsom and Ewell	49	40	2.5	0.60	59.6	3.8	0.68	3	3	1.9	1.12	5.0	2.8	1.13
43UD Guildford	90	83	3.8	0.65	68.6	3.1	0.78	*	*	*	*	*	*	*
43UE Mole Valley	53	41	3.4	0.86	57.8	4.8	0.96	*	*	*	*	*	*	*
43UF Reigate and Banstead	103	80	3.5	0.66	71.5	3.1	0.85	*	*	*	*	*	*	*
43UG Runnymede	55	49	3.3	0.78	65.3	4.5	0.90	*	*	*	*	*	*	*
43UH Spelthorne	113	53	2.7	0.77	67.3	3.4	0.93	*	*	*	*	*	*	*
43UJ Surrey Heath	69	43	3.5	0.96	59.7	4.9	1.09	3	2	1.5	1.32	3.0	2.1	1.32
43UK Tandridge	69	41	2.8	0.76	56.6	3.8	0.84	3	2	1.4	1.20	3.1	1.9	1.20
43UL Waverley	92	61	3.1	0.69	57.3	2.9	0.74	*	*	*	*	*	*	*
43UM Woking	89	54	2.5	0.62	69.1	3.2	0.77	3	1	0.8	0.84	1.8	1.0	0.85
44UB North Warwickshire	68	30	1.8	0.67	58.3	3.4	0.77	5	2	1.3	1.34	4.5	2.5	1.35
44UC Nuneaton and Bedworth	133	61	2.6	0.68	60.0	2.6	0.79	3	1	0.8	1.00	1.3	0.8	1.00
44UD Rugby	149	58	2.7	0.82	67.5	3.2	1.00	3	1	0.8	1.04	1.6	0.9	1.04
44UE Stratford-on-Avon	217	63	2.4	0.78	65.0	2.5	0.93	4	2	0.9	1.22	1.6	0.9	1.22
44UF Warwick	218	77	2.7	0.79	66.2	2.3	0.91	5	2	0.8	1.06	1.5	0.7	1.06
45UB Adur	41	34	2.1	0.61	59.1	3.6	0.65	*	*	*	*	*	*	*
45UC Arun	134	79	3.1	0.63	62.3	2.5	0.74	6	4	1.6	1.09	2.9	1.3	1.10
45UD Chichester	68	49	5.4	1.20	44.9	4.9	1.24	*	*	*	*	*	*	*
45UE Crawley	98	60	3.1	0.74	70.8	3.7	0.95	*	*	*	*	*	*	*
45UF Horsham	104	78	2.8	0.56	70.3	2.5	0.69	*	*	*	*	*	*	*
45UG Mid Sussex	96	76	3.5	0.65	60.9	2.8	0.74	*	*	*	*	*	*	*
45UH Worthing	68	53	4.2	0.99	57.8	4.6	1.10	*	*	*	*	*	*	*
46UB Kennet	97	46	2.3	0.72	61.9	3.1	0.82	*	*	*	*	*	*	*
46UC North Wiltshire	189	76	2.8	0.74	64.5	2.4	0.87	3	1	0.8	1.11	1.2	0.7	1.11
46UD Salisbury	140	63	2.4	0.67	61.8	2.4	0.78	3	2	1.4	1.51	2.1	1.4	1.51
46UF West Wiltshire	192	70	2.4	0.71	68.5	2.4	0.88	*	*	*	*	*	*	*
47UB Bromsgrove	108	49	2.7	0.86	63.2	3.6	1.00	*	*	*	*	*	*	*
47UC Malvern Hills	73	34	2.3	0.83	53.6	3.7	0.91	*	*	*	*	*	*	*
47UD Redditch	97	41	2.5	0.85	64.2	4.0	1.03	*	*	*	*	*	*	*
47UE Worcester	82	53	3.3	0.81	62.2	3.8	0.92	4	2	1.3	1.06	2.8	1.5	1.06
47UF Wychavon	131	65	2.7	0.69	62.0	2.5	0.78	6	4	1.5	1.15	3.5	1.4	1.15
47UG Wyre Forest	75	45	3.2	0.82	54.6	3.9	0.91	*	*	*	*	*	*	*

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	Total			Rate				Total			Rate			
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Wales	8,036	1,456	11.2	1.02	56.7	0.4	1.13	219	45	3.8	1.44	1.8	0.1	1.44
NA Anglesey, Isle of	398	32	0.9	0.86	54.8	1.6	0.94	9	1	0.3	1.23	1.3	0.5	1.24
NC Gwynedd	405	60	1.8	0.90	59.1	1.8	1.01	3	1	0.4	1.40	0.5	0.4	1.40
NE Conwy	364	52	1.5	0.82	52.8	1.6	0.89	6	1	0.4	1.19	1.0	0.4	1.19
NG Denbighshire	372	41	1.4	0.92	54.7	1.8	1.03	12	2	0.6	1.43	2.5	0.8	1.43
NJ Flintshire	329	75	2.3	0.81	58.5	1.8	0.91	9	2	0.7	1.14	1.6	0.6	1.14
NL Wrexham	349	64	2.0	0.83	56.8	1.8	0.93	12	3	0.9	1.30	2.6	0.8	1.30
NN Powys	284	59	2.1	0.88	54.2	1.9	0.96	9	3	1.1	1.64	2.5	1.0	1.64
NQ Ceredigion	283	37	1.5	1.05	54.3	2.1	1.11	7	1	0.4	1.31	1.6	0.6	1.31
NS Pembrokeshire	443	53	1.5	0.85	52.4	1.4	0.92	17	2	0.6	1.22	2.3	0.6	1.22
NU Carmarthenshire	549	82	2.5	0.96	54.5	1.6	1.07	10	2	0.6	1.24	1.2	0.4	1.24
NX Swansea	529	123	3.3	0.92	60.2	1.6	1.03	19	7	2.1	1.73	3.5	1.0	1.73
NZ Neath Port Talbot	365	62	2.1	0.93	54.6	1.9	1.04	16	3	0.8	1.24	2.4	0.7	1.24
PB Bridgend	311	65	2.2	0.86	53.8	1.8	0.94	6	1	0.5	1.12	1.1	0.5	1.12
PD Vale of Glamorgan, The	340	62	2.0	0.91	59.2	1.9	1.02	4	1	0.3	1.05	0.6	0.3	1.05
PF Rhondda, Cynon, Taff	344	107	3.6	0.90	55.1	1.8	1.00	7	3	1.0	1.21	1.4	0.5	1.21
PH Merthyr Tydfil	213	27	1.2	0.98	55.4	2.6	1.09	6	1	0.4	1.28	2.2	0.9	1.28
PK Caerphilly	443	82	2.3	0.83	56.4	1.6	0.93	16	3	0.9	1.34	2.0	0.6	1.34
PL Blaenau Gwent	219	33	1.2	0.83	56.1	2.1	0.91	4	1	0.3	1.18	1.2	0.6	1.18
PM Torfaen	310	42	1.5	0.97	56.4	2.1	1.09	13	2	0.6	1.47	2.2	0.8	1.47
PP Monmouthshire	334	44	1.2	0.75	54.1	1.4	0.80	4	1	0.3	1.13	0.6	0.3	1.13
PR Newport	430	70	1.9	0.83	60.1	1.7	0.96	22	4	0.9	1.21	3.2	0.8	1.21
PT Cardiff	422	184	6.4	1.02	60.8	2.1	1.17	8	3	1.2	1.05	1.1	0.4	1.05

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Scotland	8,980	2,644	18.6	1.01	58.7	0.4	1.12	271	94	6.9	1.43	2.1	0.2	1.44
QA Aberdeen City	281	116	4.2	0.94	60.5	2.2	1.04	13	7	1.9	1.26	3.4	1.0	1.26
QB Aberdeenshire	331	137	4.4	0.89	62.2	2.0	1.01	13	7	2.3	1.41	3.3	1.0	1.42
QC Angus	321	53	1.6	0.80	53.5	1.6	0.87	7	1	0.5	1.24	1.4	0.5	1.24
QD Argyll & Bute	261	40	1.4	0.88	52.5	1.8	0.93	3	1	0.3	1.37	0.7	0.5	1.37
QE Scottish Borders, The	335	56	1.6	0.78	61.1	1.8	0.89	14	4	1.0	1.40	3.9	1.1	1.41
QF Clackmannanshire	177	22	1.1	0.95	56.1	2.9	1.09	5	1	0.4	1.46	2.2	1.1	1.47
QG West Dunbartonshire	322	44	1.4	0.85	55.7	1.7	0.90	10	1	0.5	1.17	1.7	0.6	1.17
QH Dumfries and Galloway	274	60	2.3	0.89	47.7	1.8	0.94	11	3	0.9	1.19	2.3	0.7	1.19
QJ Dundee City	301	67	2.8	1.05	55.7	2.3	1.15	19	6	1.6	1.53	4.9	1.4	1.54
QK East Ayrshire	296	54	2.3	1.04	54.9	2.3	1.15	7	2	0.7	1.33	1.6	0.7	1.33
QL East Dunbartonshire	403	51	1.4	0.86	55.3	1.6	0.95	8	1	0.5	1.31	1.3	0.5	1.31
QM East Lothian	266	52	2.0	0.94	59.8	2.3	1.06	4	1	0.4	1.12	1.0	0.5	1.12
QN East Renfrewshire	250	45	1.7	0.85	58.5	2.2	0.96	7	1	0.6	1.19	1.9	0.8	1.19
QP Edinburgh, City of	402	289	6.8	0.76	68.7	1.6	0.91	6	4	1.6	1.06	0.9	0.4	1.06
QQ Falkirk	300	79	2.4	0.78	59.9	1.9	0.88	14	5	1.6	1.46	3.6	1.2	1.46
QR Fife	410	174	5.2	0.86	58.5	1.8	0.97	13	7	2.3	1.37	2.5	0.8	1.37
QS Glasgow City	442	317	8.9	0.86	61.9	1.7	0.97	18	11	3.0	1.06	2.2	0.6	1.06
QT Highland	184	108	4.4	0.84	48.9	2.0	0.86	5	4	1.6	1.20	1.8	0.7	1.20
QU Inverclyde	243	37	1.5	0.92	55.7	2.2	1.00	5	1	0.4	1.27	1.4	0.7	1.27
QW Midlothian	210	47	1.7	0.79	61.4	2.2	0.90	3	1	0.5	1.18	1.1	0.6	1.18
QX Moray	289	47	1.4	0.76	58.2	1.7	0.84	13	2	0.7	1.22	2.9	0.9	1.23
QY North Ayrshire	314	60	2.0	0.83	54.4	1.8	0.91	6	1	0.4	0.97	0.9	0.4	0.97
QZ North Lanarkshire	268	152	6.0	0.92	55.1	2.2	1.02	7	5	1.7	1.12	1.6	0.6	1.13
RA Orkney Islands	31	11	0.9	0.60	56.0	4.2	0.63	*	*	*	*	*	*	*
RB Perth and Kinross	332	70	2.2	0.85	56.8	1.8	0.95	7	2	1.0	1.51	1.9	0.8	1.52
RC Renfrewshire	261	84	3.5	0.99	55.8	2.3	1.07	10	3	1.1	1.11	2.3	0.7	1.11
RD Shetland Islands	35	13	1.1	0.84	60.3	5.2	0.89	*	*	*	*	*	*	*
RE South Ayrshire	259	45	1.9	0.96	48.6	2.0	1.02	14	3	0.9	1.28	3.5	0.9	1.28
RF South Lanarkshire	367	161	4.1	0.74	62.9	1.6	0.85	11	5	1.8	1.31	2.0	0.7	1.31
RG Stirling	369	46	1.5	0.92	62.8	2.0	1.06	11	2	0.6	1.28	2.3	0.8	1.28
RH West Lothian	311	91	2.6	0.73	62.8	1.8	0.86	7	2	0.8	1.14	1.4	0.6	1.14
RJ Eilean Siar (Western Isles)	135	14	0.5	0.72	58.0	2.2	0.76	*	*	*	*	*	*	*
Northern Ireland	5,063	879	7.7	0.86	59.2	0.5	0.99	104	20	2.2	1.17	1.4	0.1	1.17

ANNEX D - Calculating thresholds for England, Wales & Scotland

This Annex explains how the publication thresholds were calculated for different areas for annual LFS data in GB. ONS does not use these thresholds now, but they can still be used as a simple way of identifying cells with high sampling variability.

It is the nature of sampling variability that the smaller the group whose size is being estimated, or from which an estimate is being derived, the less precise that estimate is relative to its size. Put another way, the size of the standard error increases with the level of the estimate, so that the larger the estimate the larger is the standard error. But the larger the estimate, the smaller is the standard error in relative terms. The standard error as a proportion of the estimate is known as the relative standard error or coefficient of variation (c.v.).

When thresholds were applied (such that estimates with a lower value than the threshold were not published), estimates below 10,000 from the quarterly survey and below 6,000 for annual data prior to 2000/1 were not published, as they were considered to be unreliable. These thresholds equate to a sample size of about 30 and a relative standard error of about 20 per cent.

The boosted sample, which combines with data from Wave 1 and Wave 5 from the main LFS to make up the annual LFS data for England, Wales and Scotland in 2003/04, is not spread evenly across the country. This means that for each local authority in England and for each unitary authority in Wales and Scotland, there may be a different sampling fraction. This in turn means that the relative standard errors for the same estimate may vary across local authorities, resulting in a requirement for individual thresholds for each area.

Approximate thresholds may be calculated for each local authority with the aim of providing a threshold value that ensures that the relative standard error is at most 20 per cent.

For a small subgroup from a large simple random sample, the subgroup sample size, n_i , is approximately distributed as a Poisson variable. For such a variable, the mean and the variance are equal and are estimated by n_i .

If W_i is the average grossing factor (mean weight) for cases in subgroup i , the value of the grossed estimate is $W_i * n_i$.

Then ignoring the variable weights and the clustered design (approximately):

$$\text{Var}(E_i = W_i * n_i) = W_i^2 * n_i \quad (1)$$

The effect of both the grossing and the clustered design is reflected in the design effect, and this has been calculated for the quarterly survey for a range of different estimates. These combined design effects vary substantially for different variables - for estimates of employment and economic activity they are substantially below 1, whereas for unemployment they are greater than 1.

So (1) should be modified to:

$$\text{Var}(E_i) = W_i^2 * n_i * \text{deff}_i \quad (2)$$

Thus:

$$\text{Cv}(E_i) = \text{Square root}(\text{deff}_i/n_i) \quad (3)$$

For the threshold for this variable, we must have:

$$\text{cv}(E_i) < 0.2 \quad (4)$$

So from (3) and (4) we obtain:

$$n_i > 25 * \text{deff}_i$$

Or in terms of the grossed estimate:

$$E_i > 25 * W_i * \text{deff}_i \quad (5)$$

The values of the right hand side of (5) provide the required thresholds.

W_i for a particular local authority is the average grossing factor taken directly from the annual LFS data.

One result of including the design effect in the calculation is to lead to different thresholds for different variables. However, variables are often used in combination - e.g. a tabulation of employment by ethnic group.

The design effect for employment is low, but the design effects for some ethnic groups are very high. This makes it very difficult to come up with design effects for every eventuality. For the quarterly LFS, a design effect of 1 is assumed for all estimates except those for characteristics of minority ethnic groups, where a design effect of 2.5 is assumed.

As noted above, this calculation leads to an individual threshold for each local authority. ONS recognises that this would be very complex to implement, and recommend the use of one of three threshold bands. The table below shows how the approximate thresholds have been used to assign areas to these bands.

Approximate threshold	Threshold band
5000+	6000
3000 – 4999	4000
0 – 2999	2000

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For Wales, the theoretical threshold for each unitary authority was not banded as above but simply rounded to the nearest thousand. This resulted in thresholds for the 23 UAs in Wales ranging from 1,000 to 4,000.

For the 32 Scottish UAs, the ideal thresholds were rounded for the total employed and unemployed. Thresholds thus range from 1,000 to 5,000.

ANNEX E – Wave 1 variables

These are based on the JD20 dataset. These variables may have only been asked in wave 1 (in previous quarters they could have been asked in multiple waves).

Wave 1 variables only	
Variable	Variable Name
ATFROM	Type of business if working from home
DAYSPZ	Number of different days per week worked
EVDAY	Work during day
EVENG	Work in evening in past 4 weeks
EVEVE	Work during evening
EVHM98	Ever do any paid or unpaid work at home
EVNGHT	Work during night
EVSAT	Work on Saturdays
EVSUN	Work on Sundays
HOMED(1-3)	Locations of work in refwk (main job)
LSSOTH	Time off flexi or annual
NIGHT	Night work in the last 4 weeks
NOLWF	Main reason (family) for not looking for work
NWNCRE(1 -2)	Reason (care services) for not looking for work
OYCIRC	Employment situation 12 months ago
OYCRY	Country of residence 12 months ago
OYCRYO	Country of residence 12 months ago
OYCTY	County or Borough living at different address
OYEQM3	Whether living at same address 12 months ago
OYINDD	What the firm or organisation worked at 12 months ago mainly made or did.
OYINDT	Industry title of firm or organisation worked at 12 months ago
OYMNGE	Managerial duties 1 year ago
OYMPE02	Number of employees where worked 1 year ago
OYMPS02	Number of people employed 1 year ago
OYOCDD	What did respondent mainly do in their job 12 months ago?
OYOCCT	What was (main) job 12 months ago?
OYSIND	Work for same firm in refweek as 12 months ago
OYSOCC	Main occupation in refweek same as 12 months ago
OYSOLO	On own or with employees 1 year ago

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OYSTAT	Employee or self-employed 1 year ago
OYSUPVI	Supervisory responsibilities 1 year ago.
PTNCRE7(1-2)	Reason (care services) for part time work
SATDY	How many Saturdays worked in past 4 weeks
SMESIT	Reason working from home
SUNDY	How many Sundays worked in past 4 weeks
TSUBJ4WK	Main subject received during nonformal tuition
T4PURP	Main purpose of training
T4WORK	Whether training during work hours
TAUTHRS	Total hours of instruction or tuition received
YNOTFT	Reason for not wanting a full-time job
YPTCIA	Reason for part time job

More information about these variables can be found in the user guide volume 2 and volume 3 (details of LFS variables):

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/labourforcesurveyuserguidance>

ANNEX F – Geographies removed from A15M16

A list of the unsupported geographies that are no longer included on APS datasets from A15M16 onwards:

Variable name	Description and (new 9 digit replacement variable)
TLEC99	Training and Enterprise Council (None)
ELWA	Education and Learning Wales (None)
SCOTER	Scottish Enterprise Regions (TECLEC9D)
WALESPCA	Welsh Parliamentary Constituency Areas (None)
WARD03	Ward codes 2003 (WARD)
SCOTPCA	Scottish Parliamentary Constituency Areas (None)
URINDSC	Rural-urban classification Scotland (RU11IND)
UKPCA	UK Parliamentary constituency (PCON9D)
TTWA07	Travel to work 2007 (TTWA9D)
URINDEW	Rural-urban classification Eng & Wales (RU11IND)
PCA	UK Parliamentary Constituency Areas (PCON9D)
PCA2010	UK Parliamentary Constituency Areas 2010 (PCON9D)
TTWA08	Travel to work 2008 (TTWA9D)
NUTS	NUTS level (NUTS10)
NUTS2	NUTS level 2 (NUTS102)
NUTS3	NUTS level 3 (NUTS103)
NUTS4	NUTS level 4 (NUTS104)

ANNEX G-Information about previous Eurostat AHM and Veterans variables

Eurostat Ad-hoc module variables and weight.

The EuroStat Ad-hoc module ceased being collected after the UK's withdrawal from the European Union in 2020. Eurostat module was collected for three quarters in 2020, however, this was not published

From 2009 until 2020, the JD APS person datasets have had additional variables added to the government cuts; these are known as the Eurostat Ad Hoc Modules (AHM) and the Eurostat wave 1 weight (EWEIGH**), where ** denotes the year that the weight was published.

Under Regulation (EC) No 577/98, Eurostat includes a number of variables each year which provide information on aspects of the labour market that do not form part of the standard questionnaire. These set of variables constitute an "ad hoc module". The different themes since 2009 are:

Year	Theme
2009	Transition from school to work life
2010	Reconciliation between work and family life
2011	Employment of disabled people
2012	Transition from work into retirement
2013	Accidents at work and other work-related health problems
2014	Labour market situation of migrants and their descendants
2015	An ad-hoc module didn't run this year ²
2016	Young people on the labour market
2017	Self-employment
2018	Reconciliation between work and family life
2019	Work organisation and working time arrangements
2020	Accidents at work and other work-related health problems

A brief description of the ad hoc module variables can be found in the volume 9a user guide. More information about the Eurostat aspect of the survey (including the background, the regular variables and ISCO country classification) can be found in user guide volume 9.,Both of these user guides can be found here:

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/labourforcesurveyuserguidance>

² The wave 1 weight and variables are still included on the JD15 dataset

The Eurostat variables are collected in the first wave only on the LFS, and this means a separate weight is required (EWEIGH**) to use along with the AHM variables.

The calculation of the Eurostat weight is similar to the method used for the calibration of the LFS and APS weights (GES). However, with the Eurostat weight the bounded option in GES is included, so the calibration weights cannot exceed the value 9999, a constraint set by Eurostat; this affects some multiple occupancy households from Q3 2010 due to changes to the LFS at that time. Since the Eurostat variables are based on wave 1 data only, the 75+ adjustment which is applied to wave 1 LFS data (as households where all residents are aged 75 and over are no longer interviewed in subsequent waves) is removed.

Veteran variables

Between 2014 and 2018 the questions listed below have been asked on the APS to try and measure the UK Armed Forces Veterans residing in Great Britain.

- **VETCURR** (Currently serving in the armed forces)
- **VETSERV** (Ever served in armed forces)
- **VETYEARLFT** (Year left armed forces)
- **VTYRLFT2** (Age left the UK Regular Armed Forces or the UK Reserve Armed Forces)
- **VTYRLFT3** (Year left the UK Regular Armed Forces or the UK Reserve Armed Forces).
- **VETERAN** (Final Veterans derived variable to be used)

Due to the sensitive nature of these variables the Veteran questions are currently only released on APS Government level datasets.