User Guide

VOLUME 6 – ANNUAL POPULATION SURVEY (LOCAL AREA DATABASE)

Version 1: August 2018

ANNUAL POPULATION SURVEY/LOCAL AREA DATABASE

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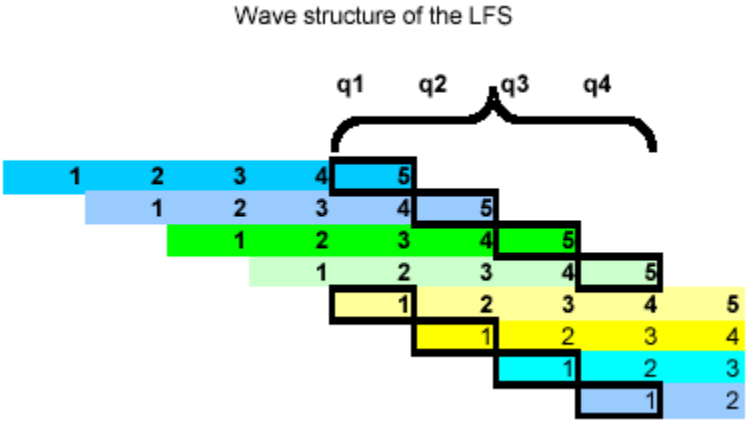
SECTION 1: INTRODUCTION

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 38,000 UK households per quarter. 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.

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.
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 2017 dataset.

	APS Dataset: January – December 2017			
	Jan – March 2017	**April – June 2017**	**July – Sept 2017**	**Oct – Dec 2017**
LFS cohort 1 *(first sampled January – March 2016)*	**Wave 5**			
LFS cohort 2 *(first sampled April – June 2016)*	**Wave 4**	**Wave5**		
LFS cohort 3 *(first sampled July – Sept 2016)*	**Wave 3**	**Wave 4**	**Wave 5**	
LFS cohort 4 *(First sampled Oct – Dec 2016)*	**Wave 2**	**Wave 3**	**Wave 4**	**Wave 5**
LFS cohort 5 *(First sampled Jan – March 2017)*	**Wave 1**	**Wave 2**	**Wave 3**	**Wave 4**
LFS cohort 6 *(first sampled April – June 2017)*		**Wave 1**	**Wave 2**	**Wave 3**
LFS cohort 7 *(first sampled July – Sept 2017)*			**Wave 1**	**Wave 2**
LFS cohort 8 *(First sampled Oct – Dec 2017)*				**Wave 1**
LLFS cohort 1 *(first sampled Jan– Dec 2014)*	**Wave 4**			
LLFS cohort 2 *(first sampled Jan– Dec 2015)*	**Wave 3**			
LLFS cohort 3 *(first sampled Jan– Dec 2016)*	**Wave 2**			
LLFS cohort 4 *(first sampled Jan– Dec 2017)*	**Wave 1**			

Weighting and Structure of the Local Area Annual Datasets

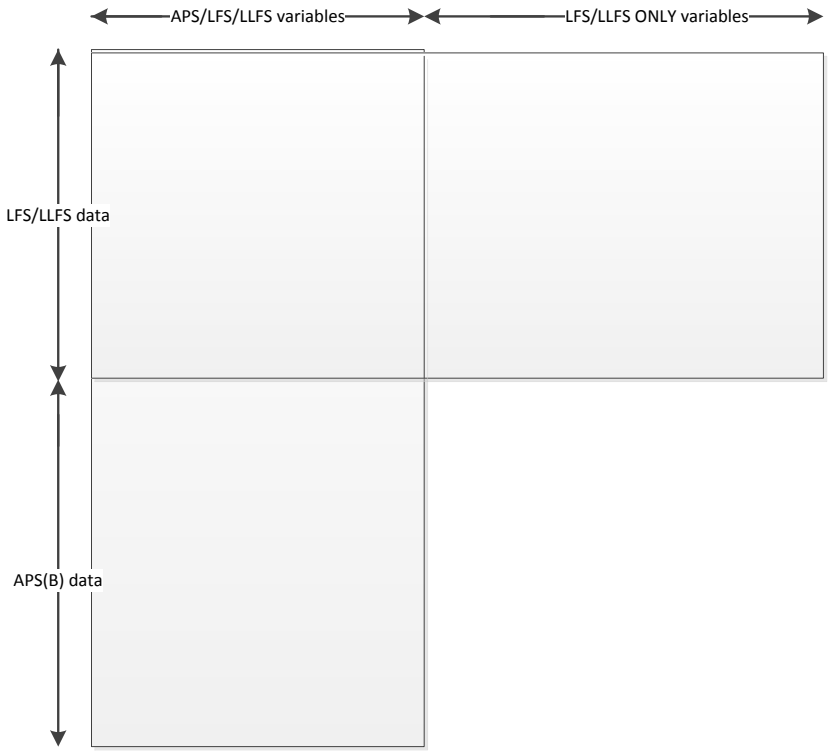
Weighting of the data is done in order to allow the sample to provide estimates relating to the total population and to minimise non-response bias. Each record's weight is the number of people in the population represented by that one sample member. The weights are based on the age and sex structures 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:

<u>The structure of the APS dataset</u>



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. Another reweighting exercise was undertaken in 2016 going back to A12M, the last two digits on the weight for these datasets is 16.

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:

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

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

Average grossing factors, from the 2017 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 wi is the average grossing factor for area i and si 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 ± 1.96 * s.e.

SE estimates for rates

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

√ (p(1 - p)/n)

For instance, in the January to December 2017 APS dataset, the estimate of the total number of people aged 16 and over who are in employment is 31,936,670. This is 60.5% 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 232,407. The standard error of 0.1% is calculated as:

√ ((0.61 * 0.39)/232,407)

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 2017 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% * 52,766,721 = 52,767 (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.

Eurostat Ad-hoc module variables and weight.

From 2009, 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 [1]
2016	Young people on the labour market
2017	Self-employment
2018	Reconciliation between work and family life

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

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.

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

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** (the Eurostat one that can also be used for the ad hoc modules).

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 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 Identity 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

Veteran variables

Since 2014 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.

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/2015

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). 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

There have been changes to the geography variables, which has involved some existing variables being removed and new ones added. This will affect the APS government datasets (both person and household level) from JD14. The change is due to ONS Geography moving to using a nine-digit coding structure in 2011, and the availability of new geographies following the 2011 Census

The new geography variables (mostly nine-digit) can be seen in the table below:

Variable name	Description
PARK	National Parks
LEA	Local Education Authority
CTRY9D	Country
NUTS162/NUTS132	NUTS 2 areas (2016/13)
NUTS163/NUTS133	NUTS 3 areas (2016/13)
TTWA9D	Travel to work area
RU11IND	2011 Census rural-urban classification
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)

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

The reweighted historical LFS and APS government datasets (pre-2014) do not contain any nine-digit geographies. If you require these geographies pre-2014 a lookup can be provided on request to allow you to merge these onto historical datasets.

APS 3 Year Pooled datasets

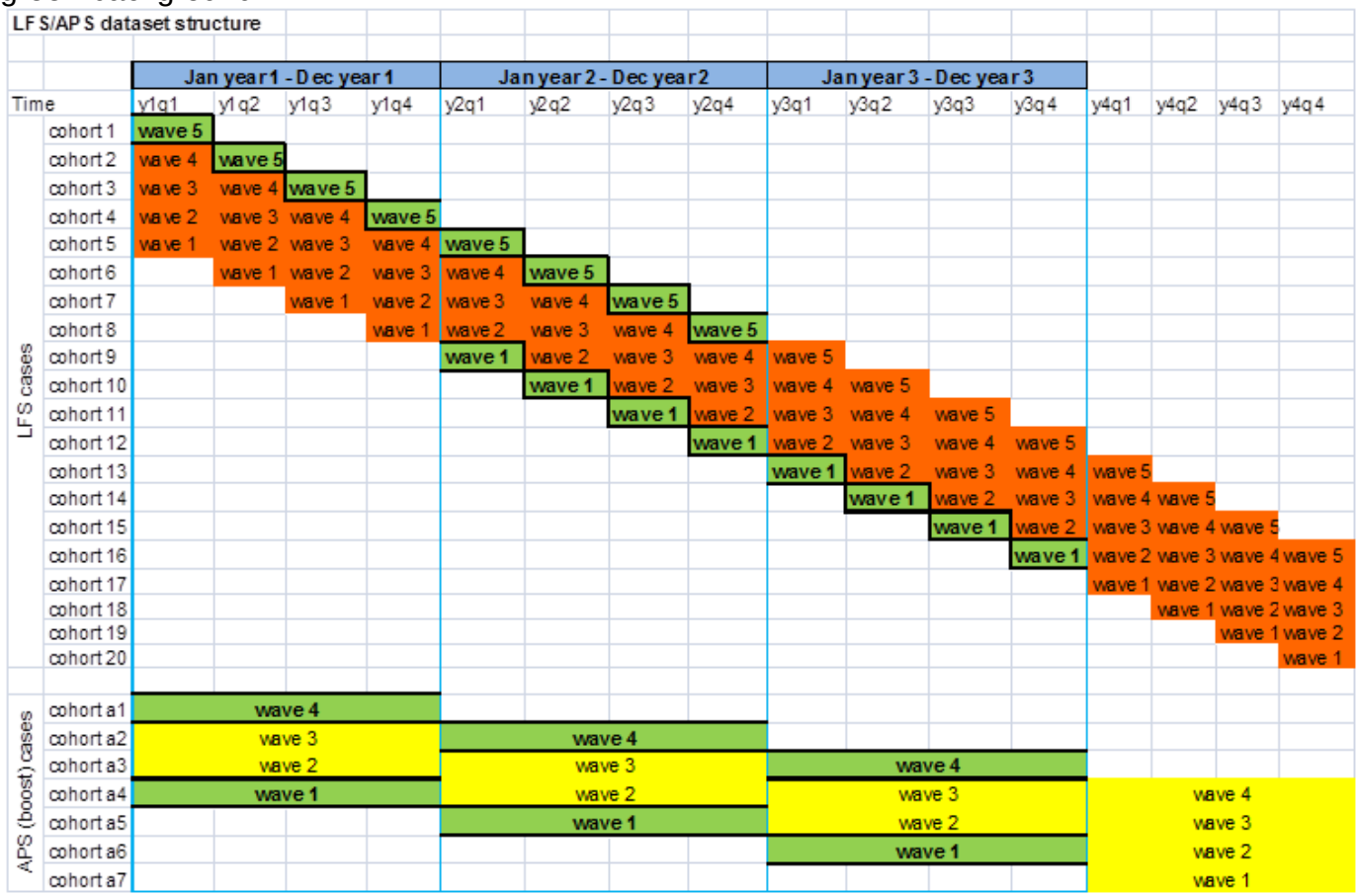
The APS 3 year pooled dataset is designed to allow more robust analysis at lower level geographies, that isn't always possible using the single year APS dataset, especially for certain topics whose achieved sample size is smaller.

This 3 year dataset will contain a sample size of around 530,000 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:



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. J14D16 estimates and J15D17 will both contain 2015 and 2016). Therefore any estimates of change will effectively be between 2014 and 2017, 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 J15D17 the mean of the population totals for June 2015, June 2016 and June 2017 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 2017 weight is pwta17.

The APS pooled datasets are available via the ONS Virtual Microdata Laboratory (VML) 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 ONS Virtual Microdata Laboratory (VML). Information on how to access the VML files can be found here:
https://www.ons.gov.uk/aboutus/whatwedo/paidservices/virtualmicrodatalaboratoryvml

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	
Befor	Famunit	Ilodefr	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	Ioutcome	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	

2005 Only
Ilodef05y
Inecac05y
hitqual05y
hiqual05y
levqual05y

Weight to use: **PWAPS – Core Only** **PWLFS – Non Core or Non Core & Core**

ANNEX B – Average grossing factors (mean weights) for Unitary Authorities/ Local Authority District areas from the January-December 2017 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	256.5	0.26
AB Barking and Dagenham	234.1	0.23
AC Barnet	455.2	0.46
AD Bexley	276.5	0.28
AE Brent	329.7	0.33
AF Bromley	395.7	0.40
AG Camden	337.1	0.34
AH Croydon	428.4	0.43
AJ Ealing	529.5	0.53
AK Enfield	430.3	0.43
AL Greenwich	370.7	0.37
AM Hackney	368.3	0.37
AN Hammersmith and Fulham	283.6	0.28
AP Haringey	290.1	0.29
AQ Harrow	312.1	0.31
AR Havering	313.5	0.31
AS Hillingdon	365.4	0.37
AT Hounslow	430.0	0.43
AU Islington	334.0	0.33
AW Kensington and Chelsea	203.9	0.20
AX Kingston upon Thames	234.0	0.23
AY Lambeth	634.2	0.63
AZ Lewisham	393.1	0.39
BA Merton	327.6	0.33
BB Newham	474.1	0.47
BC Redbridge	301.9	0.30
BD Richmond upon Thames	281.1	0.28
BE Southwark	419.6	0.42
BF Sutton	280.6	0.28
BG Tower Hamlets	449.4	0.45
BH Waltham Forest	389.6	0.39
BJ Wandsworth	516.8	0.52
BK Westminster	333.8	0.33
BL Bolton	207.7	0.21
BM Bury	128.3	0.13
BN Manchester	324.8	0.32
BP Oldham	149.2	0.15
BQ Rochdale	132.1	0.13
BR Salford	183.0	0.18
BS Stockport	175.6	0.18
BT Tameside	129.9	0.13

Local Authority Area	Average Grossing Factor	AGF / 1000
BU Trafford	146.5	0.15
BW Wigan	230.3	0.23
BX Knowsley	100.9	0.10
BY Liverpool	291.4	0.29
BZ St. Helens	122.9	0.12
CA Sefton	169.7	0.17
CB Wirral	228.1	0.23
CC Barnsley	165.8	0.17
CE Doncaster	189.7	0.19
CF Rotherham	169.1	0.17
CG Sheffield	394.0	0.39
CH Gateshead	135.5	0.14
CJ Newcastle upon Tyne	217.9	0.22
CK North Tyneside	149.1	0.15
CL South Tyneside	90.4	0.09
CM Sunderland	160.7	0.16
CN Birmingham	451.5	0.45
CQ Coventry	240.3	0.24
CR Dudley	240.0	0.24
CS Sandwell	202.4	0.20
CT Solihull	119.2	0.12
CU Walsall	184.6	0.18
CW Wolverhampton	146.2	0.15
CX Bradford	338.8	0.34
CY Calderdale	144.3	0.14
CZ Kirklees	296.0	0.30
DA Leeds	415.4	0.42
DB Wakefield	208.6	0.21
EB Hartlepool	54.1	0.05
EC Middlesbrough	79.1	0.08
EE Redcar and Cleveland	92.0	0.09
EF Stockton-on-Tees	136.6	0.14
EH Darlington	64.4	0.06
ET Halton	82.2	0.08
EU Warrington	144.8	0.14
EX Blackburn with Darwen	82.8	0.08
EY Blackpool	84.9	0.08
FA Kingston upon Hull, City of	190.4	0.19
FB East Riding of Yorkshire	220.1	0.22
FC North East Lincolnshire	91.4	0.09
FD North Lincolnshire	112.2	0.11
FF York	128.0	0.13
FK Derby	167.4	0.17
FN Leicester	243.8	0.24
FP Rutland	69.6	0.07
FY Nottingham	199.7	0.20

Local Authority Area	Average Grossing Factor	AGF / 1000
GA Herefordshire, County of	113.0	0.11
GF Telford and Wrekin	124.0	0.12
GL Stoke-on-Trent	167.2	0.17
HA Bath and North East Somerset	103.7	0.10
HB Bristol, City of	313.7	0.31
HC North Somerset	149.9	0.15
HD South Gloucestershire	186.0	0.19
HG Plymouth	163.2	0.16
HH Torbay	71.5	0.07
HN Bournemouth	138.4	0.14
HP Poole	105.9	0.11
HX Swindon	133.0	0.13
JA Peterborough	137.4	0.14
KA Luton	109.0	0.11
KF Southend-on-Sea	112.9	0.11
KG Thurrock	126.5	0.13
LC Medway	213.6	0.21
MA Bracknell Forest	74.3	0.07
MB West Berkshire	119.5	0.12
MC Reading	136.3	0.14
MD Slough	86.5	0.09
ME Windsor and Maidenhead	79.4	0.08
MF Wokingham	120.5	0.12
MG Milton Keynes	166.6	0.17
ML Brighton and Hove	208.3	0.21
MR Portsmouth	135.1	0.14
MS Southampton	146.9	0.15
MW Isle of Wight	66.7	0.07
09UC Mid Bedfordshire	278.2	0.28
09UD Bedford	386.6	0.39
09UE South Bedfordshire	346.1	0.35
11UB Aylesbury Vale	310.9	0.31
11UC Chiltern	293.8	0.29
11UE South Bucks	298.5	0.30
11UF Wycombe	305.2	0.31
12UB Cambridge	491.2	0.49
12UC East Cambridgeshire	412.0	0.41
12UD Fenland	452.0	0.45
12UE Huntingdonshire	385.6	0.39
12UG South Cambridgeshire	358.6	0.36
13UB Chester	394.3	0.39
13UC Congleton	416.6	0.42
13UD Crewe and Nantwich	457.7	0.46
13UE Ellesmere Port and Neston	526.9	0.53
13UG Macclesfield	473.1	0.47
13UH Vale Royal	371.5	0.37

Local Authority Area	Average Grossing Factor	AGF / 1000
15UB Caradon	270.4	0.27
15UC Carrick	401.1	0.40
15UD Kerrier	365.1	0.37
15UE North Cornwall	287.1	0.29
15UF Penwith	378.2	0.38
15UG Restormel	292.3	0.29
16UB Allerdale	351.0	0.35
16UC Barrow-in-Furness	331.2	0.33
16UD Carlisle	282.2	0.28
16UE Copeland	332.8	0.33
16UF Eden	290.7	0.29
16UG South Lakeland	256.1	0.26
17UB Amber Valley	378.6	0.38
17UC Bolsover	360.6	0.36
17UD Chesterfield	378.2	0.38
17UF Derbyshire Dales	379.6	0.38
17UG Erewash	471.2	0.47
17UH High Peak	392.3	0.39
17UJ North East Derbyshire	387.1	0.39
17UK South Derbyshire	433.4	0.43
18UB East Devon	326.8	0.33
18UC Exeter	473.0	0.47
18UD Mid Devon	405.5	0.41
18UE North Devon	404.1	0.40
18UG South Hams	476.8	0.48
18UH Teignbridge	392.5	0.39
18UK Torridge	505.2	0.51
18UL West Devon	525.0	0.53
19UC Christchurch	296.8	0.30
19UD East Dorset	267.2	0.27
19UE North Dorset	281.9	0.28
19UG Purbeck	271.8	0.27
19UH West Dorset	284.1	0.28
19UJ Weymouth and Portland	394.9	0.39
20UB Chester-le-Street	356.3	0.36
20UD Derwentside	405.4	0.41
20UE Durham	375.3	0.38
20UF Easington	350.3	0.35
20UG Sedgefield	372.4	0.37
20UH Teesdale	335.2	0.34
20UJ Wear Valley	402.9	0.40
21UC Eastbourne	381.9	0.38
21UD Hastings	437.7	0.44
21UF Lewes	322.1	0.32
21UG Rother	396.6	0.40
21UH Wealden	329.4	0.33

Local Authority Area	Average Grossing Factor	AGF / 1000
22UB Basildon	575.3	0.58
22UC Braintree	398.8	0.40
22UD Brentwood	513.2	0.51
22UE Castle Point	508.0	0.51
22UF Chelmsford	441.4	0.44
22UG Colchester	429.1	0.43
22UH Epping Forest	559.1	0.56
22UJ Harlow	455.1	0.46
22UK Maldon	397.9	0.40
22UL Rochford	675.3	0.68
22UN Tendring	388.0	0.39
22UQ Uttlesford	428.2	0.43
23UB Cheltenham	398.7	0.40
23UC Cotswold	407.8	0.41
23UD Forest of Dean	314.5	0.31
23UE Gloucester	372.6	0.37
23UF Stroud	325.8	0.33
23UG Tewkesbury	301.3	0.30
24UB Basingstoke and Deane	596.0	0.60
24UC East Hampshire	418.6	0.42
24UD Eastleigh	394.3	0.39
24UE Fareham	359.3	0.36
24UF Gosport	535.2	0.54
24UG Hart	465.7	0.47
24UH Havant	484.7	0.48
24UJ New Forest	434.8	0.43
24UL Rushmoor	551.4	0.55
24UN Test Valley	409.2	0.41
24UP Winchester	413.3	0.41
26UB Broxbourne	518.7	0.52
26UC Dacorum	441.8	0.44
26UD East Hertfordshire	409.4	0.41
26UE Hertsmere	470.5	0.47
26UF North Hertfordshire	388.1	0.39
26UG St. Albans	437.6	0.44
26UH Stevenage	517.5	0.52
26UJ Three Rivers	542.6	0.54
26UK Watford	583.6	0.58
26UL Welwyn Hatfield	463.2	0.46
29UB Ashford	444.5	0.44
29UC Canterbury	535.7	0.54
29UD Dartford	593.8	0.59
29UE Dover	427.4	0.43
29UG Gravesham	633.0	0.63
29UH Maidstone	549.6	0.55
29UK Sevenoaks	648.0	0.65

Local Authority Area	Average Grossing Factor	AGF / 1000
29UL Shepway	481.8	0.48
29UM Swale	487.6	0.49
29UN Thanet	533.8	0.53
29UP Tonbridge and Malling	473.5	0.47
29UQ Tunbridge Wells	404.1	0.40
30UD Burnley	405.2	0.41
30UE Chorley	366.7	0.37
30UF Fylde	418.3	0.42
30UG Hyndburn	538.3	0.54
30UH Lancaster	397.5	0.40
30UJ Pendle	402.0	0.40
30UK Preston	470.6	0.47
30UL Ribble Valley	493.7	0.49
30UM Rossendale	498.1	0.50
30UN South Ribble	391.7	0.39
30UP West Lancashire	456.4	0.46
30UQ Wyre	454.0	0.45
31UB Blaby	394.3	0.39
31UC Charnwood	482.5	0.48
31UD Harborough	419.6	0.42
31UE Hinckley and Bosworth	405.2	0.41
31UG Melton	328.8	0.33
31UH North West Leicestershire	464.4	0.46
31UJ Oadby and Wigston	372.6	0.37
32UB Boston	430.2	0.43
32UC East Lindsey	449.6	0.45
32UD Lincoln	445.0	0.45
32UE North Kesteven	376.9	0.38
32UF South Holland	393.3	0.39
32UG South Kesteven	389.6	0.39
32UH West Lindsey	380.5	0.38
33UB Breckland	504.6	0.50
33UC Broadland	452.9	0.45
33UD Great Yarmouth	483.2	0.48
33UE Kings Lynn and West Norfolk	491.7	0.49
33UF North Norfolk	503.8	0.50
33UG Norwich	485.4	0.49
33UH South Norfolk	426.3	0.43
34UB Corby	572.0	0.57
34UC Daventry	494.9	0.49
34UD East Northamptonshire	440.0	0.44
34UE Kettering	530.5	0.53
34UF Northampton	482.5	0.48
34UG South Northamptonshire	426.7	0.43
34UH Wellingborough	418.2	0.42
35UB Alnwick	152.9	0.15
35UC Berwick-upon-Tweed	162.2	0.16

Local Authority Area	Average Grossing Factor	AGF / 1000
35UD Blyth Valley	195.5	0.20
35UE Castle Morpeth	199.0	0.20
35UF Tynedale	185.5	0.19
35UG Wansbeck	191.3	0.19
36UB Craven	431.1	0.43
36UC Hambleton	413.6	0.41
36UD Harrogate	347.3	0.35
36UE Richmondshire	550.4	0.55
36UF Ryedale	314.8	0.31
36UG Scarborough	389.1	0.39
36UH Selby	431.8	0.43
37UB Ashfield	446.9	0.45
37UC Bassetlaw	448.5	0.45
37UD Broxtowe	485.6	0.49
37UE Gedling	475.6	0.48
37UF Mansfield	492.1	0.49
37UG Newark and Sherwood	412.1	0.41
37UJ Rushcliffe	425.4	0.43
38UB Cherwell	424.2	0.42
38UC Oxford	791.4	0.79
38UD South Oxfordshire	425.7	0.43
38UE Vale of White Horse	409.1	0.41
38UF West Oxfordshire	498.8	0.50
39UB Bridgnorth	244.7	0.24
39UC North Shropshire	228.5	0.23
39UD Oswestry	187.5	0.19
39UE Shrewsbury and Atcham	199.8	0.20
39UF South Shropshire	178.9	0.18
40UB Mendip	378.1	0.38
40UC Sedgemoor	406.0	0.41
40UD South Somerset	424.0	0.42
40UE Taunton Deane	344.3	0.34
40UF West Somerset	315.9	0.32
41UB Cannock Chase	458.3	0.46
41UC East Staffordshire	438.7	0.44
41UD Lichfield	456.3	0.46
41UE Newcastle-under-Lyme	472.7	0.47
41UF South Staffordshire	449.2	0.45
41UG Stafford	435.5	0.44
41UH Staffordshire Moorlands	439.5	0.44
41UK Tamworth	394.9	0.39
42UB Babergh	355.8	0.36
42UC Forest Heath	483.1	0.48
42UD Ipswich	318.2	0.32
42UE Mid Suffolk	364.0	0.36
42UF St. Edmundsbury	368.5	0.37
42UG Suffolk Coastal	321.1	0.32

Local Authority Area	Average Grossing Factor	AGF / 1000
42UH Waveney	476.4	0.48
43UB Elmbridge	459.8	0.46
43UC Epsom and Ewell	554.8	0.55
43UD Guildford	573.6	0.57
43UE Mole Valley	464.4	0.46
43UF Reigate and Banstead	499.1	0.50
43UG Runnymede	439.5	0.44
43UH Spelthorne	392.9	0.39
43UJ Surrey Heath	549.5	0.55
43UK Tandridge	501.8	0.50
43UL Waverley	482.6	0.48
43UM Woking	422.7	0.42
44UB North Warwickshire	344.6	0.34
44UC Nuneaton and Bedworth	459.9	0.46
44UD Rugby	372.4	0.37
44UE Stratford-on-Avon	376.4	0.38
44UF Warwick	439.3	0.44
45UB Adur	483.9	0.48
45UC Arun	483.3	0.48
45UD Chichester	501.9	0.50
45UE Crawley	588.7	0.59
45UF Horsham	422.8	0.42
45UG Mid Sussex	477.9	0.48
45UH Worthing	493.5	0.49
46UB Kennet	289.0	0.29
46UC North Wiltshire	290.1	0.29
46UD Salisbury	286.7	0.29
46UF West Wiltshire	267.9	0.27
47UB Bromsgrove	305.4	0.31
47UC Malvern Hills	311.2	0.31
47UD Redditch	324.3	0.32
47UE Worcester	346.0	0.35
47UF Wychavon	354.2	0.35
47UG Wyre Forest	350.6	0.35

Local Authority Area	Average Grossing Factor	AGF / 1000
Wales	94.4	0.09
NA Anglesey, Isle of	38.7	0.04
NC Gwynedd	97.2	0.10
NE Conwy	68.0	0.07
NG Denbighshire	59.6	0.06
NJ Flintshire	99.0	0.10
NL Wrexham	93.2	0.09
NN Powys	90.9	0.09
NQ Ceredigion	52.0	0.05
NS Pembrokeshire	76.6	0.08
NU Carmarthenshire	105.1	0.11
NX Swansea	135.6	0.14
NZ Neath Port Talbot	93.2	0.09
PB Bridgend	98.4	0.10
PD Vale of Glamorgan, The	100.8	0.10
PF Rhondda, Cynon, Taff	160.7	0.16
PH Merthyr Tydfil	55.1	0.06
PK Caerphilly	112.3	0.11
PL Blaenau Gwent	63.6	0.06
PM Torfaen	59.8	0.06
PP Monmouthshire	59.8	0.06
PR Newport	100.8	0.10
PT Cardiff	256.3	0.26

Local Authority Area	Average Grossing Factor	AGF / 1000
Scotland	144.6	0.14
QA Aberdeen City	209.3	0.21
QB Aberdeenshire	248.1	0.25
QC Angus	84.5	0.08
QD Argyll & Bute	52.9	0.05
QE Scottish Borders, The	95.9	0.10
QF Clackmannanshire	75.3	0.08
QG West Dunbartonshire	69.0	0.07
QH Dumfries and Galloway	96.4	0.10
QJ Dundee City	103.7	0.10
QK East Ayrshire	92.3	0.09
QL East Dunbartonshire	71.6	0.07
QM East Lothian	87.7	0.09
QN East Renfrewshire	85.5	0.09
QP Edinburgh, City of	520.8	0.52
QQ Falkirk	119.2	0.12
QR Fife	352.3	0.35
QS Glasgow City	467.1	0.47
QT Highland	178.5	0.18
QU Inverclyde	64.8	0.06
QW Midlothian	92.8	0.09
QX Moray	71.8	0.07
QY North Ayrshire	102.3	0.10
QZ North Lanarkshire	278.1	0.28
RA Orkney Islands	82.3	0.08
RB Perth and Kinross	124.7	0.12
RC Renfrewshire	135.4	0.14
RD Shetland Islands	99.6	0.10
RE South Ayrshire	82.8	0.08
RF South Lanarkshire	240.1	0.24
RG Stirling	73.2	0.07
RH West Lothian	155.4	0.16
RJ Eilean Siar (Western Isles)	36.5	0.04
Northern Ireland	284.7	0.28

ANNEX C – Sampling Variability for employment and ILO unemployment (of persons aged 16+) for Unitary Authorities/Local Authority District areas from the January-December 2017 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	98,075	27,054	52.8	0.89	61.0	0.1	1.02	4,453	1,242	22.2	1.26	2.8	0.1	1.26
AB Barking and Dagenham	366	92	2.8	0.80	60.7	1.8	0.96	36	10	1.7	1.15	6.4	1.1	1.16
AC Barnet	379	198	5.5	0.81	63.5	1.8	0.95	13	6	1.7	1.01	1.9	0.5	1.01
AD Bexley	422	123	3.2	0.78	62.2	1.6	0.90	18	5	1.4	1.15	2.7	0.7	1.15
AE Brent	442	161	4.2	0.81	62.7	1.7	0.95	34	12	2.1	1.07	4.8	0.8	1.08
AF Bromley	383	164	3.9	0.68	62.8	1.5	0.79	18	8	2.1	1.17	3.1	0.8	1.17
AG Camden	338	128	4.5	0.99	61.1	2.2	1.10	20	9	2.3	1.40	4.1	1.1	1.41
AH Croydon	443	193	5.1	0.78	65.1	1.7	0.94	38	16	2.7	1.04	5.5	0.9	1.05
AJ Ealing	333	186	5.1	0.74	67.4	1.9	0.90	15	9	2.5	1.19	3.2	0.9	1.19
AK Enfield	328	155	5.2	0.86	59.8	2.0	1.00	22	11	2.2	1.04	4.2	0.9	1.04
AL Greenwich	370	142	4.0	0.79	65.2	1.9	0.95	23	10	2.1	1.10	4.5	0.9	1.11
AM Hackney	360	150	3.9	0.77	67.7	1.8	0.92	12	4	1.1	0.95	1.8	0.5	0.95
AN Hammersmith and Fulham	314	105	2.9	0.82	69.2	1.9	0.96	17	4	1.0	0.93	2.7	0.7	0.93
AP Haringey	446	140	4.7	1.05	64.0	2.2	1.23	34	11	2.1	1.19	5.2	1.0	1.20
AQ Harrow	395	133	3.1	0.70	65.3	1.5	0.83	13	5	1.2	1.03	2.3	0.6	1.04
AR Havering	381	122	3.1	0.69	59.0	1.5	0.78	16	5	1.3	1.02	2.4	0.6	1.02
AS Hillingdon	383	154	4.2	0.79	64.7	1.8	0.94	22	9	1.9	1.08	3.6	0.8	1.09
AT Hounslow	294	144	5.3	0.96	66.5	2.4	1.15	21	12	4.2	1.85	5.8	1.9	1.86
AU Islington	373	140	3.5	0.81	70.5	1.8	0.95	16	5	1.3	1.00	2.6	0.7	1.01
AW Kensington and Chelsea	302	78	2.6	0.93	59.4	2.0	1.03	29	7	1.3	1.18	5.1	1.0	1.18
AX Kingston upon Thames	354	94	2.7	0.82	67.3	1.9	0.99	9	3	1.3	1.55	2.2	0.9	1.55
AY Lambeth	292	205	5.3	0.75	73.3	1.9	0.89	13	11	3.7	1.45	3.8	1.3	1.46
AZ Lewisham	387	177	4.1	0.75	74.7	1.7	0.97	17	7	1.9	1.13	3.1	0.8	1.13
BA Merton	321	117	3.4	0.83	67.3	2.0	0.95	8	3	1.0	1.03	1.6	0.6	1.03
BB Newham	325	170	5.1	0.80	63.1	1.9	0.93	22	11	2.3	1.02	4.2	0.9	1.03
BC Redbridge	456	145	3.6	0.75	61.0	1.5	0.88	33	11	2.2	1.20	4.6	0.9	1.21
BD Richmond upon Thames	358	103	2.8	0.74	64.6	1.7	0.86	11	4	1.1	1.13	2.3	0.7	1.13
BE Southwark	408	189	4.0	0.70	73.2	1.5	0.86	31	13	2.4	1.06	5.1	0.9	1.06
BF Sutton	365	108	2.6	0.70	68.0	1.7	0.85	21	6	1.7	1.30	3.9	1.1	1.31
BG Tower Hamlets	295	144	5.3	0.90	58.9	2.2	1.02	32	16	2.9	1.11	6.4	1.2	1.12
BH Waltham Forest	373	148	3.8	0.73	70.6	1.8	0.92	16	6	1.7	1.09	2.9	0.8	1.10
BJ Wandsworth	329	189	5.0	0.78	73.5	1.9	0.98	8	4	1.5	1.04	1.6	0.6	1.05
BK Westminster	321	118	3.9	0.88	59.9	2.0	0.99	24	8	1.6	1.01	3.8	0.8	1.01
BL Bolton	562	128	3.1	0.81	57.4	1.4	0.91	30	7	1.4	1.16	3.3	0.6	1.16
BM Bury	659	89	2.0	0.81	59.5	1.3	0.92	24	4	0.8	1.15	2.4	0.5	1.16
BN Manchester	730	261	6.8	1.03	60.2	1.6	1.17	44	17	2.7	1.16	4.0	0.6	1.16
BP Oldham	619	98	2.3	0.81	54.8	1.3	0.91	38	6	1.0	1.10	3.4	0.6	1.11
BQ Rochdale	646	92	2.2	0.83	54.5	1.3	0.92	42	6	1.0	1.12	3.7	0.6	1.13
BR Salford	659	126	2.9	0.86	62.9	1.4	0.99	29	6	1.0	1.01	2.8	0.5	1.02
BS Stockport	768	140	2.9	0.80	62.3	1.3	0.94	29	6	1.2	1.21	2.7	0.6	1.21
BT Tameside	738	103	2.2	0.82	58.2	1.2	0.93	36	5	0.9	1.14	3.0	0.5	1.14

	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	758	117	2.1	0.71	63.8	1.1	0.84	31	5	1.0	1.12	2.9	0.5	1.13
BW Wigan	638	158	3.1	0.71	60.9	1.2	0.81	18	5	1.1	1.05	1.8	0.4	1.06
BX Knowsley	610	67	1.6	0.84	56.8	1.4	0.94	23	3	0.6	1.15	2.3	0.5	1.15
BY Liverpool	669	222	5.4	0.91	56.6	1.4	1.01	40	14	2.2	1.12	3.5	0.6	1.12
BZ St. Helens	613	79	2.1	0.89	55.2	1.5	0.99	23	3	1.0	1.55	2.3	0.7	1.55
CA Sefton	668	117	2.8	0.83	52.2	1.2	0.90	29	6	1.2	1.19	2.7	0.5	1.20
CB Wirral	596	144	3.3	0.78	56.0	1.3	0.87	26	7	1.5	1.18	2.8	0.6	1.18
CC Barnsley	599	112	2.5	0.80	55.2	1.2	0.88	32	6	1.1	1.09	3.2	0.6	1.10
CE Doncaster	685	140	3.1	0.83	57.4	1.3	0.93	45	10	1.5	1.08	4.0	0.6	1.09
CF Rotherham	641	119	2.6	0.79	56.6	1.3	0.89	28	5	1.1	1.14	2.6	0.5	1.14
CG Sheffield	630	270	6.4	0.85	58.9	1.4	0.97	39	19	3.1	1.15	4.1	0.7	1.16
CH Gateshead	644	96	2.2	0.86	57.7	1.3	0.95	37	6	0.9	1.09	3.4	0.6	1.09
CJ Newcastle upon Tyne	603	137	3.6	0.90	56.6	1.5	0.99	38	9	1.7	1.20	3.7	0.7	1.21
CK North Tyneside	629	99	2.1	0.77	59.0	1.3	0.87	40	6	1.1	1.11	3.9	0.6	1.12
CL South Tyneside	660	65	1.5	0.84	53.9	1.3	0.93	54	6	0.9	1.20	4.9	0.7	1.21
CM Sunderland	751	127	2.7	0.82	56.3	1.2	0.92	49	8	1.2	1.06	3.8	0.5	1.06
CN Birmingham	983	468	10.4	0.93	55.6	1.2	1.07	80	42	4.9	1.14	5.0	0.6	1.15
CQ Coventry	645	168	3.7	0.81	58.6	1.3	0.91	35	9	1.6	1.09	3.3	0.6	1.09
CR Dudley	556	139	3.2	0.75	54.5	1.3	0.83	33	8	1.4	1.03	3.3	0.6	1.03
CS Sandwell	611	132	3.5	0.87	52.9	1.4	0.97	54	12	1.6	1.05	4.8	0.6	1.06
CT Solihull	794	103	1.9	0.75	59.5	1.1	0.84	23	3	0.7	1.11	1.9	0.4	1.11
CU Walsall	631	123	2.8	0.79	55.2	1.3	0.88	38	7	1.2	1.03	3.3	0.5	1.04
CW Wolverhampton	641	108	2.6	0.85	51.4	1.2	0.93	51	9	1.2	1.09	4.3	0.6	1.09
CX Bradford	633	228	5.5	0.83	56.1	1.4	0.94	39	14	2.3	1.07	3.5	0.6	1.07
CY Calderdale	681	105	2.0	0.73	58.6	1.1	0.80	19	4	0.8	1.11	2.0	0.4	1.11
CZ Kirklees	647	201	4.9	0.87	56.7	1.4	0.97	25	8	1.9	1.22	2.3	0.5	1.22
DA Leeds	906	399	7.3	0.82	65.2	1.2	0.97	37	18	3.2	1.18	3.0	0.5	1.18
DB Wakefield	740	160	3.2	0.77	59.7	1.2	0.88	44	10	1.6	1.13	3.8	0.6	1.13
EB Hartlepool	622	36	1.0	0.90	48.0	1.3	0.97	72	5	0.5	1.12	6.0	0.7	1.12
EC Middlesbrough	664	58	1.6	0.96	52.5	1.4	1.06	52	5	0.6	1.09	4.2	0.6	1.09
EE Redcar and Cleveland	551	57	1.6	0.91	50.3	1.4	0.98	39	4	0.6	1.07	3.6	0.6	1.07
EF Stockton-on-Tees	585	89	2.1	0.81	59.0	1.4	0.94	27	5	0.9	1.13	3.1	0.6	1.13
EH Darlington	715	49	1.0	0.79	55.8	1.2	0.87	41	3	0.6	1.25	3.6	0.6	1.26
ET Halton	675	61	1.3	0.79	59.0	1.2	0.89	28	3	0.6	1.25	2.7	0.6	1.26
EU Warrington	663	105	2.1	0.78	61.8	1.3	0.88	21	4	0.8	1.16	2.1	0.5	1.16
EX Blackburn with Darwen	695	60	1.5	0.86	52.2	1.3	0.95	41	4	0.6	1.07	3.4	0.5	1.08
EY Blackpool	680	61	1.5	0.88	54.0	1.3	0.96	43	4	0.7	1.11	3.9	0.6	1.12
FA Kingston upon Hull, City of	576	119	3.0	0.87	57.6	1.5	0.97	46	10	1.4	1.06	4.9	0.7	1.06
FB East Riding of Yorkshire	679	160	3.2	0.74	57.9	1.2	0.83	22	5	1.2	1.12	2.0	0.4	1.12
FC North East Lincolnshire	735	71	1.7	0.89	54.9	1.3	0.98	35	4	0.7	1.22	3.0	0.6	1.23
FD North Lincolnshire	660	80	1.6	0.74	57.2	1.2	0.83	36	5	0.8	1.10	3.3	0.6	1.10
FF York	798	105	2.0	0.77	59.0	1.1	0.85	21	3	0.7	1.07	1.7	0.4	1.08
FK Derby	651	118	2.7	0.84	57.6	1.3	0.94	28	5	1.0	1.08	2.5	0.5	1.08
FN Leicester	623	158	4.1	0.90	56.9	1.5	1.01	36	10	1.8	1.17	3.6	0.7	1.18
FP Rutland	232	18	0.8	1.08	57.9	2.7	1.13	5	-	0.2	1.04	1.3	0.6	1.04
FY Nottingham	624	129	4.0	1.03	48.0	1.5	1.10	49	11	1.7	1.17	4.1	0.6	1.17

	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	707	94	1.8	0.80	57.9	1.1	0.87	19	3	0.6	1.08	1.6	0.4	1.08
GF Telford and Wrekin	613	81	2.0	0.87	59.0	1.5	0.98	29	4	0.8	1.15	3.0	0.6	1.16
GL Stoke-on-Trent	624	112	2.8	0.88	53.9	1.4	0.97	40	7	1.1	1.06	3.3	0.5	1.06
HA Bath and North East Somerset	851	95	1.8	0.85	62.3	1.2	0.95	18	2	0.5	1.06	1.4	0.3	1.06
HB Bristol, City of	755	250	5.0	0.84	67.0	1.3	0.98	33	11	2.2	1.20	2.9	0.6	1.20
HC North Somerset	655	103	2.0	0.69	60.2	1.1	0.78	19	3	0.7	1.08	1.8	0.4	1.08
HD South Gloucestershire	741	142	2.8	0.77	63.8	1.3	0.90	35	7	1.2	1.09	3.1	0.5	1.09
HG Plymouth	756	130	2.7	0.81	60.4	1.2	0.92	39	7	1.4	1.24	3.5	0.6	1.25
HH Torbay	765	60	1.2	0.78	53.9	1.1	0.84	31	3	0.5	1.07	2.3	0.4	1.07
HN Bournemouth	682	102	2.0	0.78	60.6	1.2	0.87	28	5	1.0	1.23	2.7	0.6	1.23
HP Poole	636	73	1.6	0.78	59.1	1.3	0.87	16	2	0.5	1.04	1.5	0.4	1.04
HX Swindon	841	114	1.9	0.71	65.8	1.1	0.84	46	6	0.9	1.03	3.7	0.5	1.04
JA Peterborough	618	92	2.3	0.90	57.6	1.5	1.01	36	6	1.0	1.18	3.7	0.7	1.18
KA Luton	880	105	2.0	0.84	61.6	1.2	0.98	55	7	0.9	1.10	3.9	0.5	1.11
KF Southend-on-Sea	721	88	1.7	0.77	58.0	1.1	0.85	32	4	0.7	1.05	2.6	0.5	1.05
KG Thurrock	609	83	1.6	0.71	61.2	1.2	0.81	27	4	0.7	1.02	2.7	0.5	1.03
LC Medway	622	145	3.2	0.82	61.2	1.3	0.91	34	8	1.6	1.20	3.6	0.7	1.20
MA Bracknell Forest	842	66	0.9	0.62	70.6	1.0	0.77	30	3	0.5	1.10	2.7	0.5	1.10
MB West Berkshire	622	81	1.4	0.66	66.8	1.2	0.79	13	2	0.4	0.99	1.3	0.4	0.99
MC Reading	583	89	1.8	0.77	66.4	1.4	0.90	16	2	0.6	1.02	1.7	0.4	1.02
MD Slough	785	74	1.3	0.70	68.2	1.1	0.87	34	3	0.6	1.09	3.0	0.5	1.09
ME Windsor and Maidenhead	948	78	1.1	0.67	68.3	1.0	0.81	23	2	0.4	1.07	1.6	0.4	1.07
MF Wokingham	630	81	1.4	0.64	62.8	1.1	0.74	18	2	0.5	1.03	1.8	0.4	1.03
MG Milton Keynes	784	135	2.5	0.76	62.1	1.2	0.87	37	7	1.1	1.04	3.2	0.5	1.05
ML Brighton and Hove	678	152	4.0	1.03	63.0	1.6	1.16	38	10	2.0	1.41	4.2	0.8	1.41
MR Portsmouth	729	107	2.4	0.89	60.2	1.3	0.99	26	4	0.8	1.14	2.1	0.5	1.14
MS Southampton	827	131	2.6	0.86	63.1	1.3	0.98	30	5	0.9	1.10	2.4	0.5	1.10
MW Isle of Wight	830	59	1.2	0.82	51.1	1.1	0.88	36	3	0.5	1.16	2.6	0.4	1.16
09UC Mid Bedfordshire	284	80	2.0	0.62	69.9	1.7	0.77	10	4	1.3	1.28	3.1	1.1	1.29
09UD Bedford	218	87	2.8	0.70	64.2	2.1	0.81	6	2	0.9	0.95	1.7	0.7	0.95
09UE South Bedfordshire	195	69	2.2	0.65	65.6	2.1	0.77	4	2	0.8	1.10	1.4	0.8	1.11
11UB Aylesbury Vale	329	105	2.8	0.73	71.3	1.9	0.90	8	3	0.9	1.02	1.8	0.6	1.02
11UC Chiltern	163	46	1.6	0.60	63.8	2.2	0.71	*	*	*	*	*	*	*
11UE South Bucks	108	32	1.6	0.69	58.0	2.9	0.78	*	*	*	*	*	*	*
11UF Wycombe	294	93	2.3	0.61	67.5	1.7	0.75	6	2	0.7	0.98	1.4	0.5	0.98
12UB Cambridge	141	69	4.3	1.08	65.0	4.1	1.25	3	2	1.2	1.21	1.8	1.1	1.21
12UC East Cambridgeshire	111	48	2.3	0.75	64.0	3.1	0.86	*	*	*	*	*	*	*
12UD Fenland	99	49	2.6	0.76	60.5	3.2	0.86	*	*	*	*	*	*	*
12UE Huntingdonshire	220	88	2.9	0.69	63.8	2.1	0.82	5	2	0.8	0.97	1.2	0.6	0.97
12UG South Cambridgeshire	231	85	2.6	0.70	70.6	2.2	0.87	4	1	0.8	1.16	1.1	0.6	1.16
13UB Chester	160	61	2.6	0.73	61.4	2.5	0.82	7	3	1.0	0.98	2.5	1.0	0.98
13UC Congleton	98	42	2.2	0.71	55.7	3.0	0.80	3	1	0.9	1.26	1.6	1.2	1.26
13UD Crewe and Nantwich	121	59	2.5	0.67	60.4	2.6	0.77	*	*	*	*	*	*	*
13UE Ellesmere Port and Neston	60	37	2.1	0.64	52.3	3.0	0.69	3	2	0.9	0.98	2.4	1.3	0.98
13UG Macclesfield	150	75	3.0	0.69	57.8	2.3	0.77	*	*	*	*	*	*	*
13UH Vale Royal	153	59	2.6	0.74	58.1	2.5	0.84	13	5	1.4	1.03	5.4	1.4	1.04

	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
15UB Caradon	153	44	1.8	0.76	61.1	2.6	0.86	6	2	0.7	1.05	2.6	1.0	1.05
15UC Carrick	103	47	2.9	0.92	54.8	3.4	0.98	*	*	*	*	*	*	*
15UD Kerrier	117	48	2.1	0.67	57.2	2.5	0.76	5	2	1.1	1.31	2.4	1.3	1.32
15UE North Cornwall	146	43	2.2	0.85	59.5	3.0	0.96	6	2	0.7	0.98	2.4	0.9	0.98
15UF Penwith	91	34	2.2	0.85	56.0	3.6	0.91	*	*	*	*	*	*	*
15UG Restormel	168	52	1.9	0.66	60.0	2.2	0.76	3	1	0.5	0.94	1.1	0.6	0.94
16UB Allerdale	122	45	1.9	0.65	58.5	2.5	0.74	4	2	1.0	1.30	2.2	1.3	1.30
16UC Barrow-in-Furness	100	32	1.7	0.72	55.7	3.0	0.78	3	1	0.6	1.00	2.1	1.1	1.00
16UD Carlisle	186	54	2.2	0.80	58.4	2.4	0.87	8	2	0.8	0.97	2.6	0.9	0.98
16UE Copeland	100	32	2.4	1.00	54.7	4.0	1.08	6	2	0.6	0.83	3.0	1.1	0.83
16UF Eden	96	28	1.4	0.71	63.9	3.2	0.81	*	*	*	*	*	*	*
16UG South Lakeland	188	50	1.7	0.65	63.2	2.1	0.77	3	1	0.5	1.05	1.2	0.7	1.05
17UB Amber Valley	180	64	2.2	0.63	61.3	2.1	0.71	*	*	*	*	*	*	*
17UC Bolsover	93	36	2.0	0.76	57.5	3.3	0.86	5	2	0.7	0.95	2.8	1.2	0.95
17UD Chesterfield	111	44	2.9	0.92	51.3	3.3	1.00	10	4	1.7	1.32	5.0	1.9	1.33
17UF Derbyshire Dales	90	34	1.7	0.66	57.1	3.0	0.74	*	*	*	*	*	*	*
17UG Erewash	118	60	2.7	0.75	60.9	2.8	0.83	4	2	1.2	1.15	2.4	1.2	1.15
17UH High Peak	126	49	2.2	0.72	65.2	2.9	0.84	3	1	0.5	0.90	1.2	0.7	0.90
17UJ North East Derbyshire	116	48	2.0	0.64	61.2	2.6	0.74	*	*	*	*	*	*	*
17UK South Derbyshire	113	52	2.2	0.67	66.6	2.9	0.81	*	*	*	*	*	*	*
18UB East Devon	196	61	2.3	0.70	57.6	2.3	0.82	*	*	*	*	*	*	*
18UC Exeter	133	70	3.1	0.80	66.1	2.9	0.93	8	4	1.4	1.07	3.4	1.3	1.07
18UD Mid Devon	102	44	2.2	0.76	67.5	3.3	0.88	3	1	0.7	0.98	1.8	1.1	0.98
18UE North Devon	131	52	2.5	0.81	67.1	3.1	0.91	*	*	*	*	*	*	*
18UG South Hams	86	43	2.3	0.71	59.3	3.2	0.79	*	*	*	*	*	*	*
18UH Teignbridge	171	68	2.8	0.79	65.7	2.8	0.93	*	*	*	*	*	*	*
18UK Torridge	68	33	2.3	0.80	59.1	4.1	0.87	*	*	*	*	*	*	*
18UL West Devon	44	26	1.8	0.67	58.3	4.2	0.76	*	*	*	*	*	*	*
19UC Christchurch	86	24	1.2	0.62	61.7	3.1	0.73	*	*	*	*	*	*	*
19UD East Dorset	170	44	1.6	0.67	60.0	2.2	0.75	*	*	*	*	*	*	*
19UE North Dorset	114	32	1.2	0.53	60.6	2.2	0.62	*	*	*	*	*	*	*
19UG Purbeck	77	22	1.2	0.66	60.0	3.1	0.75	*	*	*	*	*	*	*
19UH West Dorset	166	46	2.1	0.78	54.8	2.5	0.84	5	2	0.9	1.19	2.2	1.0	1.19
19UJ Weymouth and Portland	65	28	1.9	0.75	49.3	3.3	0.78	3	1	0.9	1.13	2.6	1.5	1.13
20UB Chester-le-Street	62	23	2.1	0.94	50.0	4.5	1.02	5	2	1.1	1.32	4.6	2.5	1.33
20UD Derwentside	90	43	2.4	0.77	57.0	3.2	0.86	5	2	1.0	1.07	3.1	1.4	1.07
20UE Durham	115	48	2.8	0.92	58.4	3.4	1.00	6	3	1.0	1.05	3.2	1.3	1.05
20UF Easington	127	44	2.5	0.85	58.6	3.3	0.98	8	3	1.0	1.01	4.2	1.4	1.02
20UG Sedgefield	101	40	2.1	0.75	55.8	3.0	0.83	7	3	1.0	1.01	3.9	1.4	1.01
20UH Teesdale	39	11	0.7	0.50	56.4	3.7	0.57	*	*	*	*	*	*	*
20UJ Wear Valley	69	29	2.3	0.90	54.5	4.3	0.99	5	2	1.2	1.22	4.2	2.1	1.22
21UC Eastbourne	110	43	2.6	0.85	52.4	3.2	0.94	6	3	1.1	1.08	3.2	1.3	1.08
21UD Hastings	91	43	3.1	0.98	56.7	4.1	1.09	*	*	*	*	*	*	*
21UF Lewes	154	52	1.7	0.60	65.7	2.2	0.71	*	*	*	*	*	*	*
21UG Rother	94	41	2.7	0.88	48.6	3.2	0.92	4	2	0.9	1.08	2.3	1.1	1.08
21UH Wealden	222	73	2.4	0.68	58.6	2.0	0.77	6	2	0.9	1.03	1.7	0.7	1.03

	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
22UB Basildon	148	89	4.3	0.83	58.8	2.9	0.94	4	3	1.3	1.07	1.8	0.9	1.07
22UC Braintree	192	81	2.5	0.64	68.4	2.1	0.79	5	2	1.0	1.05	2.1	0.9	1.05
22UD Brentwood	74	37	2.4	0.76	63.1	4.1	0.90	*	*	*	*	*	*	*
22UE Castle Point	83	43	2.1	0.61	57.9	2.8	0.68	*	*	*	*	*	*	*
22UF Chelmsford	209	92	2.9	0.66	70.5	2.2	0.84	9	4	1.4	1.02	3.2	1.1	1.03
22UG Colchester	213	95	3.3	0.73	64.9	2.2	0.85	11	5	1.4	0.98	3.4	1.0	0.98
22UH Epping Forest	122	66	2.8	0.66	60.8	2.6	0.74	4	2	1.0	0.94	2.0	0.9	0.94
22UJ Harlow	90	43	2.4	0.75	65.7	3.6	0.92	4	2	1.2	1.25	3.0	1.8	1.26
22UK Maldon	73	31	2.5	0.98	55.6	4.5	1.06	5	2	1.0	0.99	4.5	1.8	0.99
22UL Rochford	64	43	2.6	0.68	60.5	3.7	0.77	*	*	*	*	*	*	*
22UN Tendring	150	54	2.8	0.77	49.5	2.6	0.85	9	4	1.2	1.00	3.5	1.1	1.00
22UQ Uttlesford	103	46	2.3	0.75	65.0	3.2	0.85	3	1	0.8	1.00	1.9	1.1	1.00
23UB Cheltenham	158	65	2.8	0.82	69.6	3.0	0.98	3	1	0.7	0.99	1.3	0.7	0.99
23UC Cotswold	110	45	2.0	0.68	61.5	2.8	0.75	*	*	*	*	*	*	*
23UD Forest of Dean	124	38	2.2	0.85	57.4	3.3	0.96	8	2	0.9	1.03	3.7	1.3	1.04
23UE Gloucester	163	65	2.6	0.76	61.7	2.5	0.87	7	3	1.2	1.09	3.1	1.1	1.10
23UF Stroud	187	61	2.1	0.69	62.7	2.2	0.78	3	1	0.6	1.02	0.9	0.6	1.02
23UG Tewkesbury	147	45	1.8	0.71	66.2	2.7	0.85	3	1	0.5	1.00	1.3	0.7	1.01
24UB Basingstoke and Deane	171	102	3.2	0.62	74.4	2.3	0.79	5	3	1.2	0.93	2.0	0.9	0.93
24UC East Hampshire	156	60	2.6	0.73	60.2	2.6	0.81	5	2	1.1	1.11	2.3	1.1	1.11
24UD Eastleigh	172	67	2.4	0.65	68.5	2.4	0.83	9	4	1.3	1.09	3.7	1.3	1.10
24UE Fareham	164	61	2.0	0.61	65.0	2.1	0.71	*	*	*	*	*	*	*
24UF Gosport	72	40	3.0	0.88	55.0	4.1	0.96	3	2	1.0	1.01	2.3	1.3	1.01
24UG Hart	116	51	2.4	0.72	70.4	3.3	0.90	*	*	*	*	*	*	*
24UH Havant	117	59	2.9	0.74	60.8	3.0	0.85	3	1	0.8	0.96	1.5	0.8	0.96
24UJ New Forest	196	86	2.9	0.66	60.3	2.1	0.76	4	2	0.8	0.96	1.1	0.6	0.96
24UL Rushmoor	97	55	2.3	0.65	68.9	3.0	0.77	*	*	*	*	*	*	*
24UN Test Valley	146	63	2.6	0.73	63.9	2.6	0.83	4	2	1.0	1.14	2.1	1.1	1.14
24UP Winchester	144	63	2.4	0.67	65.5	2.5	0.80	*	*	*	*	*	*	*
26UB Broxbourne	85	48	2.4	0.66	66.7	3.3	0.81	3	2	0.9	1.00	2.2	1.3	1.00
26UC Dacorum	177	81	2.8	0.67	68.9	2.4	0.83	6	3	1.0	0.98	2.2	0.9	0.98
26UD East Hertfordshire	177	76	2.9	0.76	64.4	2.5	0.89	*	*	*	*	*	*	*
26UE Hertsmere	115	52	2.2	0.62	63.8	2.7	0.73	5	2	1.2	1.17	3.0	1.5	1.17
26UF North Hertfordshire	160	67	2.7	0.73	62.2	2.5	0.84	3	1	0.7	0.99	1.1	0.6	1.00
26UG St. Albans	154	73	2.5	0.63	61.4	2.1	0.72	4	2	1.1	1.12	1.9	0.9	1.12
26UH Stevenage	80	44	2.1	0.61	62.1	3.0	0.70	5	3	1.2	1.00	3.8	1.7	1.00
26UJ Three Rivers	74	48	2.4	0.68	63.5	3.2	0.77	*	*	*	*	*	*	*
26UK Watford	86	52	2.6	0.69	70.2	3.5	0.87	*	*	*	*	*	*	*
26UL Welwyn Hatfield	151	67	2.3	0.61	68.7	2.3	0.71	5	2	1.0	0.96	2.4	1.0	0.96
29UB Ashford	134	61	3.2	0.84	60.8	3.2	0.97	*	*	*	*	*	*	*
29UC Canterbury	127	74	4.0	0.87	58.2	3.2	0.98	6	3	1.4	1.03	2.7	1.1	1.03
29UD Dartford	103	63	2.5	0.64	75.4	3.0	0.83	3	1	0.8	0.92	1.7	1.0	0.92
29UE Dover	126	52	2.5	0.72	58.5	2.8	0.82	3	2	1.0	1.14	1.8	1.1	1.14
29UG Gravesham	71	51	2.7	0.65	57.3	3.1	0.73	*	*	*	*	*	*	*
29UH Maidstone	142	81	3.2	0.66	60.3	2.4	0.76	5	3	1.2	0.97	1.9	0.9	0.97
29UK Sevenoaks	86	56	3.3	0.76	58.3	3.5	0.87	4	2	1.2	0.97	2.5	1.3	0.97

	Employment							ILO Unemployment						
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	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
29UL Shepway	105	52	2.7	0.74	57.6	3.0	0.83	3	2	1.3	1.21	2.4	1.4	1.21
29UM Swale	120	65	3.2	0.77	60.6	3.0	0.91	7	4	1.3	1.00	3.3	1.2	1.00
29UN Thanet	127	72	3.6	0.82	63.8	3.1	0.94	5	4	1.6	1.17	3.2	1.4	1.18
29UP Tonbridge and Malling	125	60	2.9	0.75	60.5	3.0	0.88	3	2	1.1	1.18	1.7	1.1	1.19
29UQ Tunbridge Wells	153	60	2.2	0.65	71.5	2.6	0.84	*	*	*	*	*	*	*
30UD Burnley	107	43	2.1	0.72	65.4	3.3	0.87	6	3	1.2	1.15	4.3	1.8	1.16
30UE Chorley	153	62	2.1	0.66	69.2	2.4	0.79	4	2	0.9	1.10	2.2	1.0	1.10
30UF Fylde	76	33	1.9	0.67	53.3	3.1	0.74	4	2	0.8	0.97	2.6	1.3	0.98
30UG Hyndburn	67	36	3.2	0.97	53.5	4.7	1.05	*	*	*	*	*	*	*
30UH Lancaster	167	76	3.5	0.94	64.1	3.0	1.07	6	3	1.1	1.03	2.5	0.9	1.03
30UJ Pendle	91	39	2.8	0.92	60.1	4.3	1.10	6	3	1.2	1.18	3.9	1.8	1.19
30UK Preston	150	72	3.2	0.79	66.0	3.0	0.96	4	2	1.1	1.05	2.1	1.0	1.05
30UL Ribble Valley	56	29	1.9	0.71	56.5	3.7	0.75	*	*	*	*	*	*	*
30UM Rossendale	60	34	2.4	0.80	64.5	4.6	0.97	*	*	*	*	*	*	*
30UN South Ribble	158	59	2	0.63	67.3	2.4	0.75	6	2	0.9	0.93	2.5	1.0	0.93
30UP West Lancashire	105	47	3.1	0.86	50.8	3.3	0.94	4	3	1.5	1.34	2.8	1.6	1.35
30UQ Wyre	111	50	2.6	0.73	55.5	2.9	0.81	3	1	0.8	0.99	1.5	0.9	0.99
31UB Blaby	120	48	2.1	0.69	63.1	2.8	0.81	7	2	0.9	0.91	3.2	1.1	0.91
31UC Charnwood	161	85	4.3	0.92	58.3	2.9	1.03	10	6	1.7	1.05	3.8	1.2	1.05
31UD Harborough	100	44	2.6	0.86	59.8	3.6	0.96	3	1	0.7	1.03	1.6	1.0	1.03
31UE Hinckley and Bosworth	124	53	2.3	0.69	61.1	2.7	0.80	4	2	0.9	1.10	2.1	1.1	1.10
31UG Melton	81	26	1.4	0.69	65.1	3.6	0.83	*	*	*	*	*	*	*
31UH North West Leicestershire	103	52	2.2	0.64	63.9	2.6	0.72	3	1	0.8	0.98	1.7	1.0	0.98
31UJ Oadby and Wigston	61	24	1.8	0.81	58.8	4.5	0.95	*	*	*	*	*	*	*
32UB Boston	75	31	1.8	0.66	57.1	3.3	0.75	3	2	0.8	1.02	2.8	1.5	1.02
32UC East Lindsey	135	61	2.9	0.75	53.3	2.6	0.83	6	3	1.3	1.15	2.6	1.2	1.15
32UD Lincoln	93	44	3	0.92	56.5	3.8	1.02	6	3	1.2	1.07	4.0	1.6	1.07
32UE North Kesteven	131	57	2.5	0.78	62.0	2.8	0.89	3	2	0.9	1.17	1.6	1.0	1.17
32UF South Holland	100	43	2.4	0.79	55.4	3.2	0.89	5	2	0.9	0.97	2.8	1.2	0.97
32UG South Kesteven	192	73	3.2	0.86	64.2	2.8	0.99	3	2	1.6	1.62	2.2	1.4	1.63
32UH West Lindsey	103	41	2.1	0.72	52.1	2.7	0.78	5	2	0.9	1.03	2.8	1.2	1.03
33UB Breckland	110	59	3.1	0.74	51.3	2.7	0.81	5	3	1.3	1.09	2.4	1.1	1.09
33UC Broadland	152	66	2.6	0.70	66.2	2.7	0.84	3	2	0.9	1.08	1.6	0.9	1.08
33UD Great Yarmouth	78	40	2.4	0.71	52.4	3.2	0.80	7	5	1.5	1.05	5.9	2.0	1.06
33UE Kings Lynn and West Norfolk	131	71	3.3	0.75	56.5	2.6	0.83	3	2	1.1	1.09	1.5	0.8	1.09
33UF North Norfolk	83	46	2.5	0.69	51.1	2.8	0.74	*	*	*	*	*	*	*
33UG Norwich	139	71	3.9	0.94	60.0	3.3	1.05	11	6	1.7	1.03	4.9	1.4	1.03
33UH South Norfolk	146	61	2.6	0.70	56.4	2.4	0.77	3	2	0.8	1.02	1.4	0.8	1.02
34UB Corby	61	37	2.2	0.70	67.3	4.0	0.83	*	*	*	*	*	*	*
34UC Daventry	76	37	2.8	0.90	55.2	4.2	0.98	6	3	1.1	0.91	4.6	1.7	0.91
34UD East Northamptonshire	107	46	2.2	0.72	65.8	3.3	0.86	6	3	1.2	1.11	3.6	1.7	1.12
34UE Kettering	86	46	2.7	0.74	57.6	3.4	0.84	3	2	0.8	0.84	2.0	1.0	0.84
34UF Northampton	232	109	4.4	0.84	64.2	2.6	1.01	14	7	2.0	1.07	4.4	1.2	1.07
34UG South Northamptonshire	112	48	2.1	0.66	65.9	2.8	0.77	7	3	0.9	0.89	3.7	1.3	0.89
34UH Wellingborough	105	41	2.1	0.74	63.1	3.3	0.85	3	1	0.7	0.95	2.2	1.1	0.95
35UB Alnwick	94	15	0.9	0.79	55.6	3.3	0.88	4	1	0.4	1.18	2.3	1.3	1.18
35UC Berwick-upon-Tweed	81	13	0.9	0.87	60.5	4.1	0.98	*	*	*	*	*	*	*

	Employment							ILO Unemployment						
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	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
35UD Blyth Valley	179	37	1.6	0.82	56.2	2.5	0.92	5	1	0.6	1.19	2.2	1.0	1.19
35UE Castle Morpeth	110	25	1.1	0.72	55.2	2.5	0.76	4	1	0.6	1.16	2.8	1.3	1.16
35UF Tynedale	140	25	1.3	0.80	52.5	2.7	0.87	12	2	0.7	1.11	5.1	1.5	1.11
35UG Wansbeck	138	27	1.4	0.85	53.3	2.9	0.94	3	1	0.3	1.09	1.0	0.7	1.09
36UB Craven	58	25	2.1	0.85	53.8	4.5	0.93	*	*	*	*	*	*	*
36UC Hambleton	103	42	2.5	0.82	58.5	3.5	0.92	*	*	*	*	*	*	*
36UD Harrogate	221	76	2.5	0.68	62.7	2.1	0.80	10	3	1.1	0.99	2.9	0.9	0.99
36UE Richmondshire	41	24	1.7	0.65	54.8	3.9	0.69	3	2	0.9	0.97	3.7	2.1	0.97
36UF Ryedale	87	26	1.2	0.57	60.6	2.9	0.67	4	1	0.6	0.97	2.8	1.4	0.97
36UG Scarborough	131	50	2.3	0.72	57.2	2.7	0.81	5	2	1.0	1.07	2.6	1.1	1.07
36UH Selby	114	46	2.4	0.77	63.4	3.3	0.88	6	3	1.0	0.99	3.5	1.4	1.00
37UB Ashfield	122	56	3.1	0.83	56.1	3.1	0.93	3	2	0.9	1.08	1.5	0.9	1.08
37UC Bassetlaw	110	51	2.8	0.79	59.2	3.3	0.92	4	2	1.0	1.04	2.4	1.2	1.05
37UD Broxtowe	120	60	2.4	0.65	65.8	2.7	0.76	3	1	0.9	1.11	1.4	1.0	1.11
37UE Gedling	121	58	3.0	0.80	62.1	3.2	0.92	4	2	1.2	1.23	2.1	1.3	1.24
37UF Mansfield	99	50	3.0	0.82	59.2	3.6	0.94	9	4	1.5	1.08	5.2	1.9	1.08
37UG Newark and Sherwood	140	59	2.7	0.77	58.6	2.7	0.85	*	*	*	*	*	*	*
37UJ Rushcliffe	138	58	2.6	0.76	64.8	2.9	0.90	7	4	1.2	0.97	3.9	1.3	0.97
38UB Cherwell	184	78	2.7	0.68	71.5	2.4	0.86	11	5	1.6	1.11	4.9	1.5	1.12
38UC Oxford	97	93	4.3	0.76	70.6	3.2	0.91	4	4	1.8	1.02	3.0	1.4	1.03
38UD South Oxfordshire	164	66	2.5	0.64	61.5	2.3	0.74	6	3	1.0	0.95	2.4	0.9	0.96
38UE Vale of White Horse	151	67	2.6	0.71	64.6	2.5	0.81	4	2	0.9	1.01	1.7	0.8	1.01
38UF West Oxfordshire	117	59	2.2	0.59	66.8	2.5	0.70	*	*	*	*	*	*	*
39UB Bridgnorth	90	25	1.2	0.67	53.3	2.7	0.73	3	1	0.5	1.05	1.7	1.0	1.05
39UC North Shropshire	118	31	1.5	0.78	58.5	2.9	0.87	9	3	1.0	1.32	5.0	1.9	1.32
39UD Oswestry	101	20	1.1	0.77	60.4	3.1	0.86	*	*	*	*	*	*	*
39UE Shrewsbury and Atcham	251	53	1.5	0.67	64.5	1.8	0.78	9	2	0.7	1.11	2.5	0.9	1.12
39UF South Shropshire	121	22	1.0	0.73	57.4	2.7	0.79	3	1	0.4	1.07	1.8	1.0	1.07
40UB Mendip	144	51	2.5	0.77	56.7	2.8	0.87	7	3	1.0	0.99	3.0	1.1	0.99
40UC Sedgemoor	116	54	2.9	0.83	52.1	2.8	0.90	8	4	1.3	1.04	3.6	1.2	1.04
40UD South Somerset	177	78	2.8	0.67	58.4	2.2	0.76	4	2	0.9	1.05	1.3	0.7	1.05
40UE Taunton Deane	163	59	2.2	0.71	67.1	2.5	0.85	*	*	*	*	*	*	*
40UF West Somerset	58	17	1.3	0.83	67.9	5.2	0.98	*	*	*	*	*	*	*
41UB Cannock Chase	104	51	2.3	0.69	63.7	2.9	0.81	4	2	1.0	1.08	2.5	1.3	1.08
41UC East Staffordshire	147	64	2.6	0.73	69.3	2.8	0.89	5	2	1.0	1.01	2.3	1.0	1.01
41UD Lichfield	105	49	2.2	0.65	58.0	2.7	0.73	*	*	*	*	*	*	*
41UE Newcastle-under-Lyme	145	65	3.2	0.83	63.6	3.2	0.97	5	3	1.1	1.04	2.5	1.1	1.04
41UF South Staffordshire	105	54	2.6	0.73	61.2	2.9	0.82	5	2	1.2	1.15	2.7	1.4	1.16
41UG Stafford	147	68	2.4	0.63	64.0	2.3	0.75	7	3	1.2	1.01	3.1	1.1	1.02
41UH Staffordshire Moorlands	105	47	2.3	0.69	56.0	2.8	0.76	5	2	1.1	1.09	2.5	1.3	1.09
41UK Tamworth	106	39	2.0	0.73	64.3	3.5	0.89	7	3	1.3	1.15	5.6	2.2	1.16
42UB Babergh	100	37	2.1	0.77	57.2	3.4	0.90	12	4	1.3	1.02	6.9	2.0	1.03
42UC Forest Heath	70	32	1.8	0.65	62.4	3.7	0.77	3	1	0.7	0.90	2.6	1.4	0.90
42UD Ipswich	216	69	2.7	0.82	63.4	2.5	0.96	11	3	0.9	0.97	2.8	0.9	0.97
42UE Mid Suffolk	135	49	2.4	0.77	58.8	2.9	0.87	4	2	0.8	1.07	2.1	1.0	1.07
42UF St. Edmundsbury	143	56	2.0	0.61	60.2	2.2	0.69	3	1	0.6	0.97	1.1	0.6	0.97
42UG Suffolk Coastal	198	61	2.3	0.72	59.8	2.3	0.82	6	2	1.1	1.38	1.8	1.0	1.38

	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
42UH Waveney	94	50	3.0	0.79	51.1	3.1	0.86	3	2	0.9	1.04	1.6	0.9	1.04
43UB Elmbridge	139	62	2.7	0.69	60.5	2.7	0.82	9	4	1.5	1.10	3.8	1.4	1.10
43UC Epsom and Ewell	67	36	2.0	0.60	56.6	3.2	0.68	4	2	1.2	1.04	3.7	1.8	1.04
43UD Guildford	134	82	3.9	0.86	67.3	3.2	0.99	3	2	0.9	0.96	1.3	0.8	0.96
43UE Mole Valley	73	38	2.2	0.69	54.7	3.2	0.77	*	*	*	*	*	*	*
43UF Reigate and Banstead	166	80	3.3	0.77	67.3	2.7	0.90	3	1	0.8	0.95	1.2	0.7	0.95
43UG Runnymede	123	51	2.1	0.69	68.8	2.9	0.80	*	*	*	*	*	*	*
43UH Spelthorne	138	53	2.0	0.63	71.9	2.7	0.83	5	2	0.7	0.88	2.1	0.9	0.88
43UJ Surrey Heath	70	44	2.4	0.68	62.7	3.4	0.79	*	*	*	*	*	*	*
43UK Tandridge	80	43	2.0	0.61	59.6	2.9	0.69	*	*	*	*	*	*	*
43UL Waverley	121	59	2.7	0.69	60.7	2.8	0.80	*	*	*	*	*	*	*
43UM Woking	123	52	1.8	0.54	69.7	2.4	0.69	4	1	0.7	0.92	2.0	1.0	0.92
44UB North Warwickshire	93	35	1.6	0.71	69.7	3.3	0.86	*	*	*	*	*	*	*
44UC Nuneaton and Bedworth	122	58	3.0	0.78	55.5	2.9	0.86	6	3	1.1	0.94	3.0	1.1	0.95
44UD Rugby	137	54	2.1	0.67	65.0	2.6	0.81	*	*	*	*	*	*	*
44UE Stratford-on-Avon	168	62	2.7	0.80	59.0	2.6	0.87	6	3	1.0	1.01	2.5	0.9	1.01
44UF Warwick	164	75	2.4	0.62	65.4	2.2	0.72	3	1	0.8	1.02	1.3	0.7	1.02
45UB Adur	61	30	2.0	0.72	56.2	3.8	0.80	*	*	*	*	*	*	*
45UC Arun	143	70	3.5	0.81	51.6	2.6	0.86	6	4	1.5	1.11	2.7	1.1	1.11
45UD Chichester	123	62	3.1	0.81	63.2	3.2	0.92	*	*	*	*	*	*	*
45UE Crawley	95	66	2.4	0.60	71.4	2.7	0.73	3	2	1.6	1.37	2.6	1.7	1.37
45UF Horsham	153	67	2.6	0.70	63.3	2.5	0.82	6	3	1.1	1.07	2.4	1.0	1.08
45UG Mid Sussex	145	71	2.9	0.68	62.5	2.5	0.81	4	2	0.9	1.01	1.6	0.8	1.01
45UH Worthing	119	56	2.2	0.61	67.2	2.7	0.74	3	1	0.8	1.09	1.4	1.0	1.10
46UB Kennet	154	47	1.8	0.70	62.6	2.4	0.78	7	2	0.8	0.99	3.2	1.1	0.99
46UC North Wiltshire	250	77	1.9	0.60	70.2	1.7	0.73	3	1	0.5	1.05	0.8	0.5	1.05
46UD Salisbury	201	59	2.0	0.68	58.9	2.0	0.76	10	3	1.0	1.04	3.0	1.0	1.05
46UF West Wiltshire	262	68	2.3	0.75	64.2	2.1	0.88	11	3	0.8	0.90	2.6	0.7	0.91
47UB Bromsgrove	157	49	2.0	0.74	64.9	2.6	0.86	4	2	0.7	1.08	2.0	1.0	1.09
47UC Malvern Hills	96	32	2.0	0.85	53.1	3.4	0.94	6	2	0.8	1.00	3.7	1.4	1.00
47UD Redditch	124	43	1.9	0.71	66.4	2.9	0.86	*	*	*	*	*	*	*
47UE Worcester	159	54	1.9	0.65	68.5	2.5	0.80	6	2	0.9	1.08	2.4	1.1	1.08
47UF Wychavon	147	56	2.3	0.70	54.7	2.3	0.77	6	2	0.8	0.94	2.0	0.8	0.94
47UG Wyre Forest	126	46	2.1	0.71	58.1	2.6	0.80	5	2	0.9	1.07	2.6	1.1	1.07

	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
Wales	14,048	1,431	8.4	0.98	56.7	0.3	1.09	607	71	3.6	1.40	2.8	0.1	1.41
NA Anglesey, Isle of	734	32	0.6	0.78	56.1	1.1	0.86	25	1	0.2	1.10	1.8	0.4	1.10
NC Gwynedd	547	58	1.5	0.86	57.9	1.5	0.95	11	1	0.5	1.25	1.4	0.5	1.25
NE Conwy	682	50	1.1	0.80	52.8	1.2	0.87	28	2	0.4	1.13	2.4	0.5	1.14
NG Denbighshire	684	43	0.9	0.79	56.2	1.2	0.88	19	1	0.3	1.07	1.6	0.4	1.07
NJ Flintshire	698	74	1.5	0.76	59.2	1.2	0.86	16	2	0.4	1.02	1.3	0.3	1.03
NL Wrexham	699	68	1.3	0.72	61.6	1.2	0.83	33	4	0.7	1.27	3.2	0.7	1.27
NN Powys	644	65	1.4	0.79	59.5	1.3	0.88	16	2	0.4	1.10	1.5	0.4	1.10
NQ Ceredigion	607	33	1.2	1.23	51.0	1.9	1.31	24	2	0.4	1.36	3.1	0.7	1.36
NS Pembrokeshire	631	54	1.4	0.90	53.6	1.4	0.99	30	3	0.5	1.10	2.6	0.5	1.10
NU Carmarthenshire	774	86	1.7	0.79	57.1	1.1	0.87	31	4	0.7	1.15	2.5	0.5	1.15
NX Swansea	748	106	2.6	0.91	53.2	1.3	0.99	29	5	1.0	1.25	2.6	0.5	1.26
NZ Neath Port Talbot	591	60	1.5	0.84	52.2	1.3	0.92	40	4	0.7	1.15	3.7	0.6	1.15
PB Bridgend	580	62	1.5	0.81	54.3	1.3	0.89	32	4	0.7	1.13	3.1	0.6	1.14
PD Vale of Glamorgan, The	558	60	1.5	0.82	58.8	1.4	0.92	22	2	0.6	1.13	2.4	0.5	1.13
PF Rhondda, Cynon, Taff	620	106	2.6	0.85	55.4	1.4	0.95	33	6	1.1	1.12	3.2	0.6	1.12
PH Merthyr Tydfil	433	27	0.8	0.84	56.9	1.6	0.94	28	2	0.4	1.17	4.0	0.8	1.17
PK Caerphilly	658	81	1.9	0.86	55.4	1.3	0.96	47	6	0.9	1.09	4.2	0.6	1.10
PL Blaenau Gwent	456	31	0.9	0.89	54.1	1.6	0.98	23	2	0.3	1.09	2.7	0.6	1.09
PM Torfaen	697	44	0.9	0.73	59.2	1.1	0.82	31	2	0.3	1.05	2.5	0.5	1.06
PP Monmouthshire	690	45	1.0	0.86	58.7	1.3	0.96	15	1	0.3	1.13	1.5	0.4	1.13
PR Newport	657	71	1.5	0.80	60.6	1.3	0.92	34	4	0.7	1.10	3.2	0.6	1.10
PT Cardiff	660	173	4.9	1.01	59.4	1.7	1.14	40	12	2.3	1.33	4.2	0.8	1.33

	Employment							ILO Unemployment						
	Total				Rate			Total				Rate		
	Sample Size	Estimate[1]	Standard Error[1]	Design Factor	Estim ate	Standard Error	Design Factor	Sample Size	Estimate[1]	Standard Error[1]	Design Factor	Estim ate	Standard Error	Design Factor
Scotland	16,413	2,618	14.6	1.05	59.4	0.3	1.18	667	111	5.6	1.40	2.5	0.1	1.40
QA Aberdeen City	536	124	3.5	1.03	64.0	1.8	1.16	23	5	1.3	1.31	2.5	0.7	1.31
QB Aberdeenshire	527	141	2.7	0.67	65.8	1.3	0.78	18	5	1.2	1.14	2.3	0.6	1.14
QC Angus	626	54	1.3	0.84	56.3	1.4	0.92	33	3	0.6	1.07	3.4	0.6	1.07
QD Argyll & Bute	682	40	0.8	0.80	56.1	1.2	0.88	14	1	0.2	1.13	1.3	0.3	1.13
QE Scottish Borders, The	528	54	1.3	0.80	56.7	1.4	0.88	23	2	0.5	1.11	2.5	0.6	1.11
QF Clackmannanshire	293	24	0.8	0.85	56.9	2.0	0.95	17	1	0.4	1.17	3.3	0.9	1.17
QG West Dunbartonshire	537	41	1.0	0.78	56.9	1.3	0.87	24	2	0.5	1.17	3.0	0.6	1.18
QH Dumfries and Galloway	658	71	1.4	0.76	57.1	1.2	0.84	12	2	0.5	1.19	1.2	0.4	1.20
QJ Dundee City	589	65	2.4	1.22	53.8	1.9	1.33	20	2	0.6	1.22	1.9	0.5	1.23
QK East Ayrshire	542	55	1.4	0.86	55.3	1.4	0.95	39	4	0.8	1.24	4.5	0.8	1.24
QL East Dunbartonshire	623	50	1.1	0.77	56.1	1.2	0.85	19	2	0.4	1.11	1.9	0.4	1.11
QM East Lothian	536	51	1.1	0.74	60.6	1.3	0.84	24	2	0.5	1.19	2.9	0.6	1.20
QN East Renfrewshire	475	44	1.0	0.73	58.5	1.4	0.83	11	1	0.3	1.08	1.5	0.4	1.08
QP Edinburgh, City of	480	269	6.8	0.85	64.1	1.6	0.96	11	7	2.2	1.13	1.7	0.5	1.13
QQ Falkirk	587	77	1.7	0.77	59.7	1.3	0.87	30	4	0.7	1.04	3.1	0.6	1.04
QR Fife	460	173	4.5	0.80	57.7	1.5	0.89	15	6	1.8	1.21	2.1	0.6	1.21
QS Glasgow City	596	282	7.2	0.87	56.7	1.5	0.96	35	17	2.7	0.97	3.3	0.5	0.98
QT Highland	565	121	2.6	0.82	62.8	1.4	0.92	22	5	1.2	1.25	2.7	0.6	1.26
QU Inverclyde	489	36	0.9	0.77	55.5	1.3	0.84	30	2	0.4	1.08	3.4	0.6	1.09
QW Midlothian	440	45	1.0	0.72	63.1	1.4	0.82	8	1	0.3	1.09	1.2	0.4	1.09
QX Moray	575	45	1.1	0.84	58.3	1.4	0.94	28	3	0.5	1.17	3.2	0.6	1.17
QY North Ayrshire	542	57	1.5	0.84	51.3	1.4	0.91	43	5	0.8	1.14	4.3	0.7	1.14
QZ North Lanarkshire	551	163	4.0	0.82	59.5	1.5	0.93	27	8	1.7	1.15	3.0	0.6	1.15
RA Orkney Islands	138	12	0.5	0.80	67.5	2.9	0.92	*	*	*	*	*	*	*
RB Perth and Kinross	534	73	1.7	0.79	59.3	1.4	0.88	19	3	0.6	1.11	2.1	0.5	1.11
RC Renfrewshire	600	86	1.8	0.75	60.1	1.3	0.84	27	4	0.8	1.04	2.8	0.5	1.05
RD Shetland Islands	105	12	0.6	0.77	65.4	3.1	0.90	*	*	*	*	*	*	*
RE South Ayrshire	552	51	1.2	0.78	54.1	1.3	0.85	25	2	0.4	1.04	2.5	0.5	1.04
RF South Lanarkshire	642	154	3.4	0.78	59.3	1.3	0.88	24	6	1.3	1.11	2.2	0.5	1.12
RG Stirling	542	44	1.1	0.87	59.7	1.5	0.97	17	1	0.4	1.12	2.0	0.5	1.12
RH West Lothian	563	90	1.8	0.70	63.2	1.3	0.81	17	3	0.8	1.18	2.2	0.6	1.18
RJ Eilean Siar (Western Isles)	300	13	0.4	0.79	58.9	1.7	0.88	9	-	0.1	1.17	1.8	0.6	1.17
Northern Ireland	2,838	835	10.1	0.88	57.1	0.7	1.00	117	39	4.0	1.20	2.7	0.3	1.21

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, is approximately distributed as a Poisson variable. For such a variable, the mean and the variance are equal and are estimated by n.

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

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

$\text{Var}(Ei=Wi * ni) = Wi^2 * ni \quad (1)$

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:

$Var(Ei) = Wi^2 * ni * deffi$ (2)

Thus:

Cv(Ei)=Square root (deffi/ni) (3)

For the threshold for this variable, we must have:

cv(Ei) < 0.2 (4)

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

ni > 25 * deffi

Or in terms of the grossed estimate:

Ei > 25 * Wi * deffi (5)

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

Wi 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

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 JD14 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		**Wave 1 and Wave 5**	
Variable	**Variable Name**	**Variable**	**Variable Name**
ATFROM	Type of business if working from home	**DAYSPZ**	Number of different days per week worked
EVDAY	Work during day	**EVHM98**	Ever do any paid or unpaid work at home
EVENG	Work in evening in past 4 weeks	**FLEX10(1-3)**	Type of working hours arrangement
EVEVE	Work during evening	**HOMED(1-3)**	Locations of work in refwk (main job)
EVNGHT	Work during night	**LSSOTH**	Time off flexi or annual
EVSAT	Work on Saturdays	**NOLWF**	Main reason (family) for not looking for work
EVSUN	Work on Sundays	**OYCIRC**	Employment situation 12 months ago
NIGHT	Night work in the last 4 weeks	**OYMNGE**	Managerial duties 1 year ago
NWNCRE(1 -2)	Reason (care services) for not looking for work	**OYMPE02**	Number of employees where worked 1 year ago
PTNCRE7(1-2)	Reason (care services) for part time work	**OYMPS02**	Number of people employed 1 year ago
SATDY	How many Saturdays worked in past 4 weeks	**OYSIND**	Work for same firm in refwk as 12 months ago
SMESIT	Reason working from home	**OYSOCC**	Main occupation in refwek same as 12 months ago
SUNDY	How many Sundays worked in past 4 weeks	**OYSOLO**	On own or with employees 1 year ago
YNOTFT	Reason for not wanting a full time job	**OYSTAT**	Employee or self-employed 1 year ago
YPTCIA	Reason for part time job	**OYSUPVI**	Supervisory responsibilities 1 year ago.
		SHFTYP	Type of shift pattern
		SHFTWK99	Shiftwork in main job
		USUWRKM(1-3)	Regular/normal work pattern
		WCHDAY(1-7)	Which days usually worked

More information about these variables can be found in the user guide 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 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)