

Labour Force Survey performance quality monitoring report: January to March 2023

Response rates, sample size and quality assessment of the Office for National Statistics quarterly Labour Force Survey.

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1 . Executive summary January to March 2023

Summary of achieved sample size

The achieved sample size for the UK Labour Force Survey (LFS) during January to March 2023 (JM23) was 57,876 individuals in 26,712 households. Please note that there were no NHS households in this period. Compared with the previous quarter October to December 2022 (OD22) this represents a decrease of 7.9% in achieved person interviews and decrease of 7.5% in household interviews.

Summary of response rates

Please note that [historical reports](#) can also be accessed.

In JM23, main response rates were as follows:

- the total response rate for Great Britain excluding imputed cases (Table 4) was 16.9%; this is down 1.6 percentage points on the previous quarter
- the response rate excluding imputed cases (Figure 3) was 28.7% in wave 1 and 13.7% in wave 5; this compares with 29.7% and 13.4% respectively in the previous quarter
- the total response rate for Great Britain including imputed cases (Table 5) was 20.2%, down 2.2 percentage points on the previous quarter
- of non-response in JM23 (Figure 5), non-contacts comprised 10.9% (down 3 percentage points on the previous quarter), circumstantial refusals were 2.5% (down 0.7% from the previous quarter), outright refusals comprised 34.6% (down 0.3 percentage points on the previous quarter) and other refusals comprised the remainder
- the English region with the highest accumulated response rate across the five waves (Table 8) was the South West (25.3%); the lowest was Inner London (12.8%)
- the overall proxy response rate (Table 9) was 38.2%; the highest proxy response rates occur in the 16 to 17 years age group (96.2%), in males (41.1%) and in the non-White ethnicity group (46.4%)
- the average income response rate (Table 10) was 83%
- the data on attrition rates are shown in Table 11; these data reveal in percentage change terms that those who drop out of the survey between waves 1 and 5 are over-represented in the 20 to 29 age bands, employees, in households with six or more people, and in the West Midlands Metropolitan Council region

A breakdown of main characteristic changes have been included in the "Respondent characteristics" section.

There have been a number of methodological and operational changes that may have affected response rates. More details on these changes are outlined in [Section 7: Comparability](#).

Respondent characteristics

To identify any potential impact on the estimates, a range of characteristics have been investigated, including age, sex, and tenure. The main changes to respondent characteristics are:

Age

Proportions for all age brackets for wave 1 respondents have remained relatively stable since January to March 2022 (JM22) (see Table 1).

Tenure

The proportions for tenure of responding household reference person (HRPs) have remained relatively stable since JM22.

Country of birth

In JM23, 12.7% of wave 1 interviews comprised non-UK born respondents. This is up from 11.5% in the previous year (JM22). The current proportion of non-UK born respondents is similar to January to March 2020 (JM20) (see Figure A).

Waves 2 to 5

Looking at waves 2 to 5, there are some notable changes. For waves 2 to 5, proportions in each age band have remained relatively stable over the last year.

For waves 2 to 5, 49% of responding HRPs owned their property outright in JM23, compared with around 47% in JM22, while the proportion of renters has remained stable at 22% over the same time period.

Table 1: Age of respondents from January to March 2022 to January to March 2023, wave 1

Wave 1 responding Under 16 16-24 25-34 35-44 45-54 55-64 65 and over

JM22	17%	7%	10%	12%	12%	15%	27%
AJ22	17%	7%	10%	12%	13%	15%	27%
JS22	16%	7%	10%	11%	12%	16%	27%
OD22	17%	7%	10%	11%	13%	15%	27%
JM23	17%	7%	10%	12%	13%	14%	28%

Source: Labour Force Survey from the Office for National Statistics

Notes

1. Because of rounding some totals for one quarter may equal more than 100%.

Table 2: Tenure of Household Reference Person from January to March 2022 to January to March 2023, wave 1

Wave 1 responding HRP	Owned outright	Being bought with mortgage or loan	Part rent	Rented	Rent free
JM22	45%	28%	1%	26%	1%
AJ22	45%	27%	1%	26%	1%
JS22	46%	26%	1%	27%	1%
OD22	45%	26%	1%	27%	1%
JM23	45%	26%	1%	27%	1%

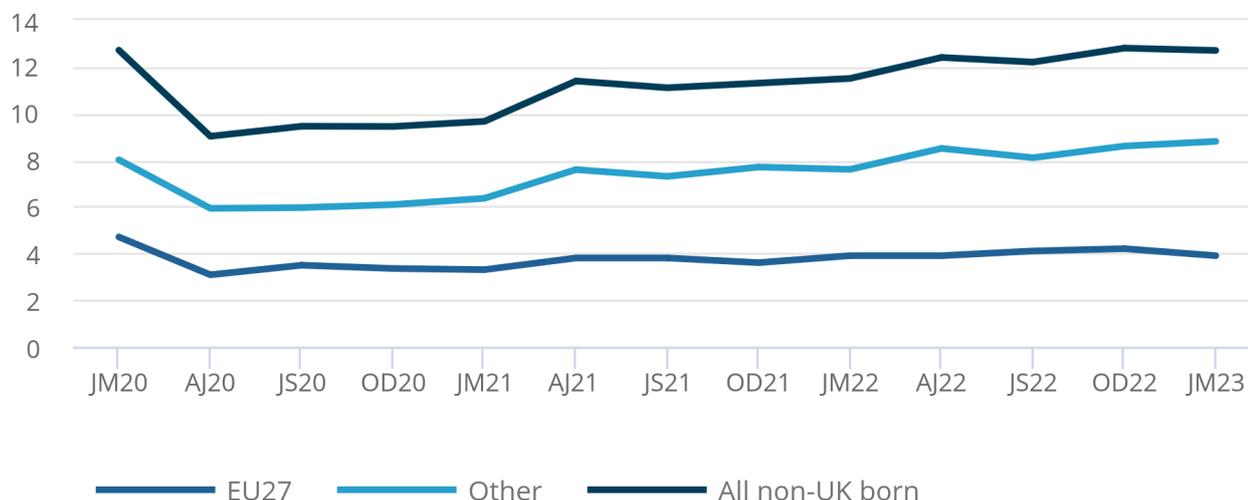
Source: Labour Force Survey from the Office for National Statistics

Notes

1. HRP – Household Reference Person some questions like tenure are only asked of one person in the household. For example say there is a 4-person household. The HRP answers the question TEN1 saying that they rent the household. On the household (and person) datasets everyone in that household will then have a value of TEN1=4 (although 3 of the respondents have not been asked the question).
2. Because of rounding, some totals for one quarter may equal more than 100%.

Figure A: Country of birth of respondents from January 2020 to March 2023, wave 1

Figure A: Country of birth of respondents from January 2020 to March 2023, wave 1



Source: Labour Force Survey from the Office for National Statistics

Notes:

1. JM20 refers to January to March 2020; AJ20 refers to April to June 2020; JS20 refers to July to September 2020; OD20 refers to October to December 2020, JM21 refers to January to March 2021; AJ21 refers to April to June 2021; JS21 refers to July to September 2021; OD21 refers to October to December 2021; JM22 refers to January to March 2022; AJ22 refers to April to June 2022; JS22 refers to July to September 2022; OD22 refers to October to December 2022; JM23 refers to January to March 2023

While some changes in the demographic coverage of the survey would be dealt with in the weighting processes, this only covers age, sex, and location. To mitigate the impact of the non-response bias in the LFS caused by changes to the way people were contacted for initial interviews since March 2020, the LFS has introduced housing tenure into the weighting methodology. While not providing a perfect solution, this has redressed some of the issues that had previously been noted in the survey results.

As a result, we have moved to using the new tenure weighting from January to March 2020 onwards for all LFS and APS microdata, to help ensure they are produced on a consistent basis. There may also be further refinements to the methodology, such as constraining the tenure weighting within region, that lead to further improvements and revisions in the future. We will continue investigating these options and implement them if they are of sufficiently significant benefit.

Because of the sharp decrease in response rates with the onset of the coronavirus (COVID-19) pandemic, the LFS wave 1 sample was doubled from July to September 2020 (JS20) onwards, to ensure achieved sample sizes could be maintained. As all interviewing had to be conducted over the phone since March 2020, phone contact details had to be obtained for the wave 1 sample. To reduce the un-productive case work rotated forward into future waves, and with that the interviewer burden, a decision was taken to code out wave 3 cases as refusals from January to March 2021 (JM21) that were unproductive in the previous two waves.

This change in methodology is now reflected in the refusal rates for wave 2, wave 3, wave 4 and wave 5 cases in April to June (AJ22) (see Tables 4 to 7 and Figure 5). A large increase in refusals to HQ can be seen for wave 2, wave 3, wave 4 and wave 5 cases resulting from cases that were unproductive in wave 1 (July to September 2021), wave 2 (October to December 2021), wave 3 (January to March 2022) and wave 4 (April to June 2022) being intentionally coded as refusal to influence case rotation. More information on the work being carried out and an [outline of changes to other ONS surveys during the coronavirus \(COVID-19\) pandemic](#) are available.

The [impact of changes made to the LFS in response to the coronavirus pandemic, and the methods used to adjust the data](#) is available.

[Indicative estimates of the LFS reweighting methodology on key indicators](#) for January to March 2020 to October to December 2020.

[New population weights using PAYE Real-Time Information data](#) to allow for changes to LFS collection methods, and changes to population movements in 2020, applied to LFS results from July 2021.

2 . Summary of quality

Relevance

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

Primary purpose

The primary purpose of the Labour Force Survey (LFS) is "the prompt publication of key aggregate, whole economy indicators, for the integrated assessment of labour market conditions" (Review of the Labour Force Survey, Office for National Statistics (ONS), 2002). The labour market covers all aspects of people's work, including the education and training needed to equip them for work, the jobs themselves, job-search for those out of work, and income from work and benefits.

Users and uses

Users of LFS data often combine them with related data from other sources to provide an overall view of the state of the labour market. One of the most important users of this sort of assessment is the Bank of England's Monetary Policy Committee, that sets interest rates to meet the government's inflation target.

Other important users of LFS data are HM Treasury and the Department for Work and Pensions. Because they are responsible for UK economic and labour market policy, they are interested in a variety of indicators of the state of the labour market, including the number of people in employment, the number of hours worked and the number of unemployed people (defined according to the International Labour Organization (ILO)). They often analyse these series by age groups, by regions and by sex. Other government users include the Department for Business, Energy and Industrial Strategy (BEIS) (to be superseded by the Department for Business and Trade), the Home Office, the Health and Safety Executive, the Scottish Government and the Welsh Government.

At the international level, LFS data are used by the Organisation for Economic Co-operation and Development (OECD) and the International Labour Organization (ILO).

Other users include local authorities, the Trades Union Congress (TUC), the Employer's Association, the Confederation of British Industry, the Institute of Employment Studies, the Institute for Public Policy Research, the National Institute of Economic and Social Research, the Policy Studies Institute, the Institute for Fiscal Studies, academic researchers, the media, and the general public.

Strengths and limitations

The main strengths of the LFS include that:

- it has the largest coverage of any household survey in the UK and can therefore generate statistics for small geographical areas
- the sampling errors are relatively small, as a result of the wave structure and the size of the survey
- the survey covers a large range of employment-related variables and non-employment-related variables, allowing cross-linking analyses to be undertaken (for example, earnings against educational attainment)

The main limitations of the LFS include that:

- the sample design provides no guarantee of adequate coverage of any industry, as the survey is not industrially stratified
- the LFS coverage omits communal establishments, except NHS housing and students in halls of residence and at boarding schools; members of the armed forces are only included if they live in private accommodation and workers aged 16 years and under are not covered
- while the LFS data are used alongside other sources to feed into the estimates of population change, the main focus of the survey is to collect labour market information and as such is not designed to measure migration flows

Main definitions

The definitions of the three economic activity groups - employed, unemployed and economically inactive - that are used in the LFS are the standard ILO definitions. It should be noted that although the LFS uses ILO definitions, these definitions are not interpreted and applied in exactly the same way in different countries. For example, although "working age" is a common term, different countries have different statutory school leaving and retirement ages. However, Eurostat collects data from member states and adjusts them to produce comparable estimates.

Accuracy

(The closeness between an estimated result and the (unknown) true value.)

The main threats to accuracy are sources of error, namely sampling error and non-sampling error, where non-sampling error includes:

- coverage error
- non-response error
- measurement error
- processing error
- model assumption error

Many of the sources of non-sampling error are difficult to measure. However, the LFS publishes detailed response rates for all waves of the survey and an overall response rate, including data time series (Tables 4 to 7 and Figures 3 and 5). Response rates are also published by government region for each wave during the particular quarter (Table 8). The LFS also publishes proxy response rates (Table 9), response rates for income questions by National Statistics Socio-economic Classification (NS-SEC) (Table 10), and attrition rates (Table 11).

Surveys, such as the LFS, provide estimates of population characteristics rather than exact measures. In principle, many random samples could be drawn, and each would give different results, because each sample would be made up of different people, who would give different answers to the questions asked. The spread of these results is the sampling variability, that generally reduces with increasing sample size.

A confidence interval is a range of values, defined by a lower and upper bound, that indicates the variability of an estimate. Statistical methods are used to calculate the sampling variability from which the confidence interval can be determined. For example, with a 95% confidence interval, it is expected that in 95% of the survey samples, the resulting confidence interval will contain the true value that would be obtained by surveying the whole population.

The LFS routinely publishes details of achieved sample sizes in terms of achieved number of household and person interviews (Table 3 and Figures 1 and 2) and sampling variability for estimates of main variables. Sampling variability (95% confidence intervals) can be found in the Sampling variability section (Dataset A11) of our [Labour market statistical bulletin](#).

3 . Achieved sample

Table 3: Achieved sample by type of household, January to March 2023

	GB		UK	
	Includes imputed	Excludes imputed	Includes imputed	Excludes imputed
Private households	23,957	20,015	26,712	22,655
Individuals in private households	51,513	41,842	57,876	47,910
NHS Households	0	0	0	0
Individuals in NHS households	0	0	0	0
Total households	23,957	20,015	26,712	22,655
Total individuals	51,513	41,842	57,876	47,910

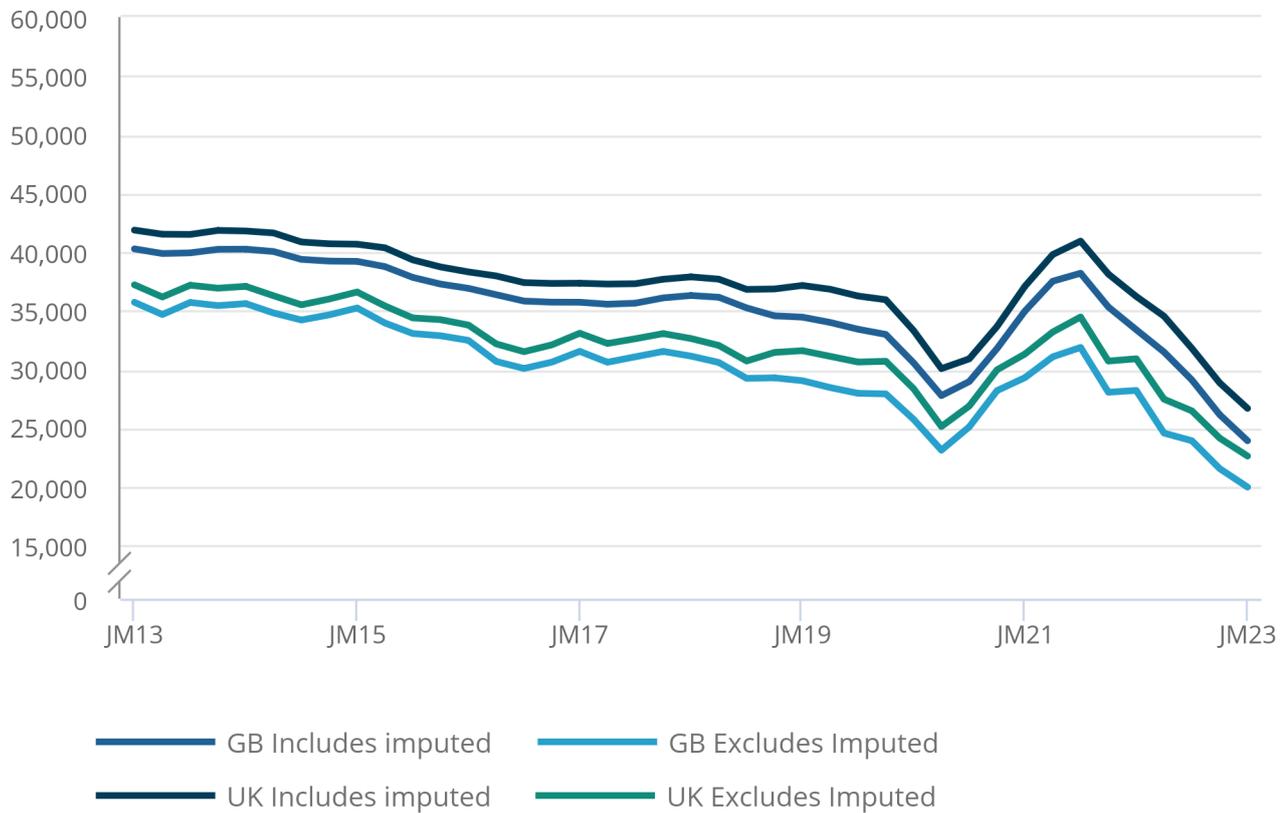
Source: Labour Force Survey from the Office for National Statistics

Figure 1: Country of birth of respondents from January 2020 to March 2023, wave 1

Great Britain and UK, January to March 2013, to January to March 2023

Figure 1: Country of birth of respondents from January 2020 to March 2023, wave 1

Great Britain and UK, January to March 2013, to January to March 2023



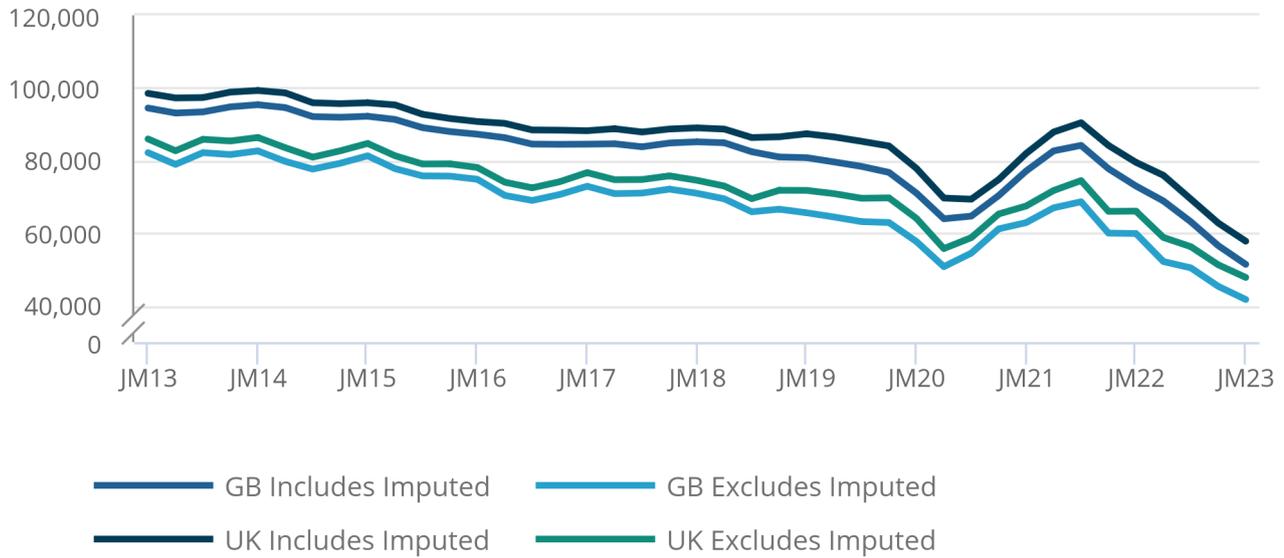
Source: Labour Force Survey from the Office for National Statistics

Figure 2: Achieved number of person interviews

Great Britain and UK, January to March 2013, to January to March 2023

Figure 2: Achieved number of person interviews

Great Britain and UK, January to March 2013, to January to March 2023



Source: Labour Force Survey from the Office for National Statistics

4 . Response rates

Table 4: Wave specific response rates, Great Britain, excluding imputed households, January to March 2023

	Wave 1 in JM23		Wave 2 in JM23		Wave 3 in JM23		Wave 4 in JM23		Wave 5 in JM23		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Eligible households found at selected units	24,304	100	23,779	100	23,779	100	23,698	100	22,772	100	118,332	100
Responding units												
Total	6,970	28.7	3,507	14.7	3,290	13.8	3,132	13.2	3,115	13.7	20,014	16.9
Full	6,595	27.1	3,200	13.5	3,052	12.8	2,888	12.2	2,874	12.6	18,609	15.7
Partial	375	1.5	307	1.3	238	1.0	244	1.0	241	1.1	1,405	1.2
Non-responding units												
Circumstantial refusal	1,262	5.2	899	3.8	698	2.9	630	2.7	438	1.9	3,927	3.3
Outright refusal	6,094	25.1	6,660	28.0	6,482	27.3	7,083	29.9	6,327	27.8	32,646	27.6
Refusal to HQ	1625	6.7	10,385	43.7	11,653	49.0	11,254	47.5	11,285	49.6	46,202	39.0
Non-contact	8,353	34.4	1,679	7.1	1,016	4.3	865	3.7	758	3.3	12,671	10.7
Addresses not issued for interviewing												
Refusal to re-interview	n/a	n/a	649	2.7	640	2.7	734	3.1	849	3.7	2,872	2.4
Co-operation rate		43.7		16.3		14.9		14.2		14.7		19.5
Contact rate		58.9		47.8		45.2		47.2		45.1		49.0

Source: Labour Force Survey from the Office for National Statistics

Notes

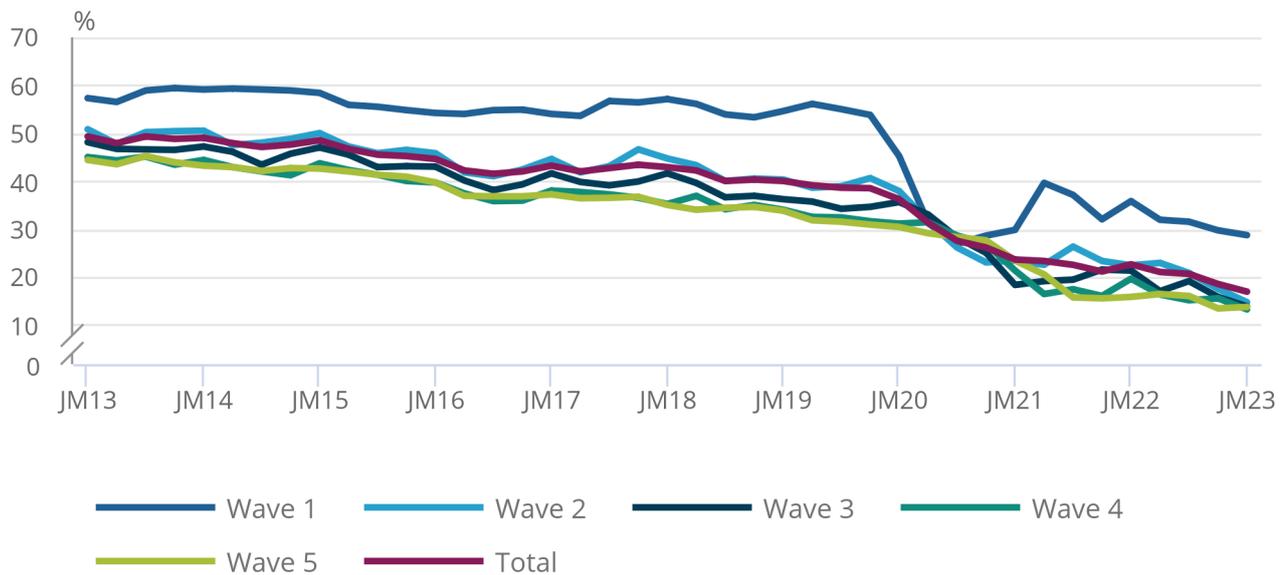
1. Excludes households for which response has been imputed.
2. The total response rate is the aggregate response rate for the quarter across all waves, based on all eligible, in-scope households.
3. For a full definition of response categories and the method used to calculate the response rates, see Section 10 Technical definitions.

Figure 3: Wave-specific response rates

Great Britain, excluding imputed households, January to March 2013, to January to March 2023

Figure 3: Wave-specific response rates

Great Britain, excluding imputed households, January to March 2013, to January to March 2023



Source: Labour Force Survey from the Office for National Statistics

Notes:

1. The total response rate is the cumulative response rate for the quarter across all waves, based on all eligible, in-scope households.
2. For a full definition of response categories and the method used to calculate the response rates, see Section 10 Technical definitions.

Table 5: Wave specific response rates, Great Britain, January to March 2023, including imputed households

	Wave 1 in JM23		Wave 2 in JM23		Wave 3 in JM23		Wave 4 in JM23		Wave 5 in JM23		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Eligible households found at selected units	24,304	100	23,779	100	23,779	100	23,698	100	22,772	100	118,332	100
Responding units												
Total	6,970	28.7	5,321	22.4	4,163	17.5	3,862	16.3	3,641	16.0	23,957	20.2
Full	6,595	27.1	3,200	13.5	3,052	12.8	2,888	12.2	2,874	12.6	18,609	15.7
Partial	375	1.5	307	1.3	238	1.0	244	1.0	241	1.1	1,405	1.2
Imputed	-	-	1814	7.6	873	3.7	730	3.1	526	2.3	3,943	3.3
Non-responding units												
Circumstantial refusal	1,262	5.2	191	0.8	318	1.3	320	1.4	237	1.0	2,328	2.0
Outright refusal	6,094	25.1	6,660	28.0	6,482	27.3	7,083	29.9	6,327	27.8	32,646	27.6
Refusal to HQ	1625	6.7	10,385	43.7	11,653	49.0	11,254	47.5	11,285	49.6	46,202	39.0
Non-contact	8,353	34.4	573	2.4	523	2.2	445	1.9	433	1.9	10,327	8.7
Addresses not issued for interviewing												
Refusal to re-interview	n/a	n/a	649	2.7	640	2.7	734	3.1	849	3.7	2,872	2.4
Co-operation rate		43.7		23.6		18.4		17.1		16.9		22.8
Contact rate		58.9		52.6		47.4		49.1		46.5		51.0

Source: Labour Force Survey from the Office for National Statistics

Notes

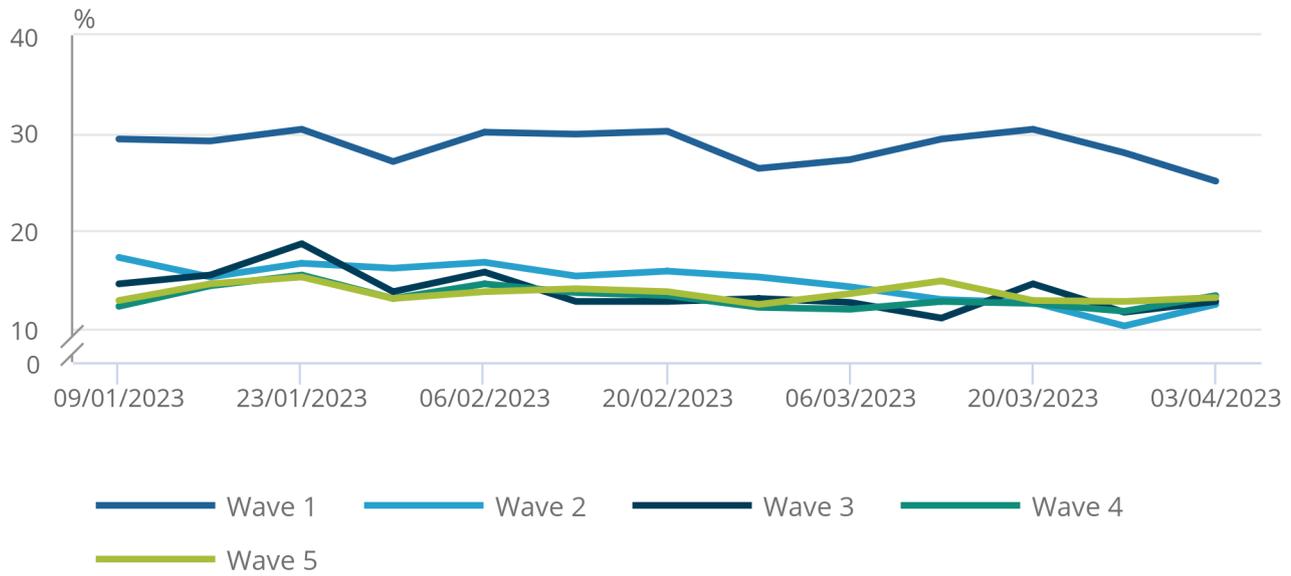
1. The total response rate is the cumulative response rate for the quarter across all waves based on all eligible in-scope households.,For a full definition of response categories and the method used to calculate the response rates, see Section 10 Technical Definitions.

Figure 4: Wave-specific response rates by week

Great Britain, excluding imputed households, January to March 2023

Figure 4: Wave-specific response rates by week

Great Britain, excluding imputed households, January to March 2023



Source: Labour Force Survey from the Office for National Statistics

Notes:

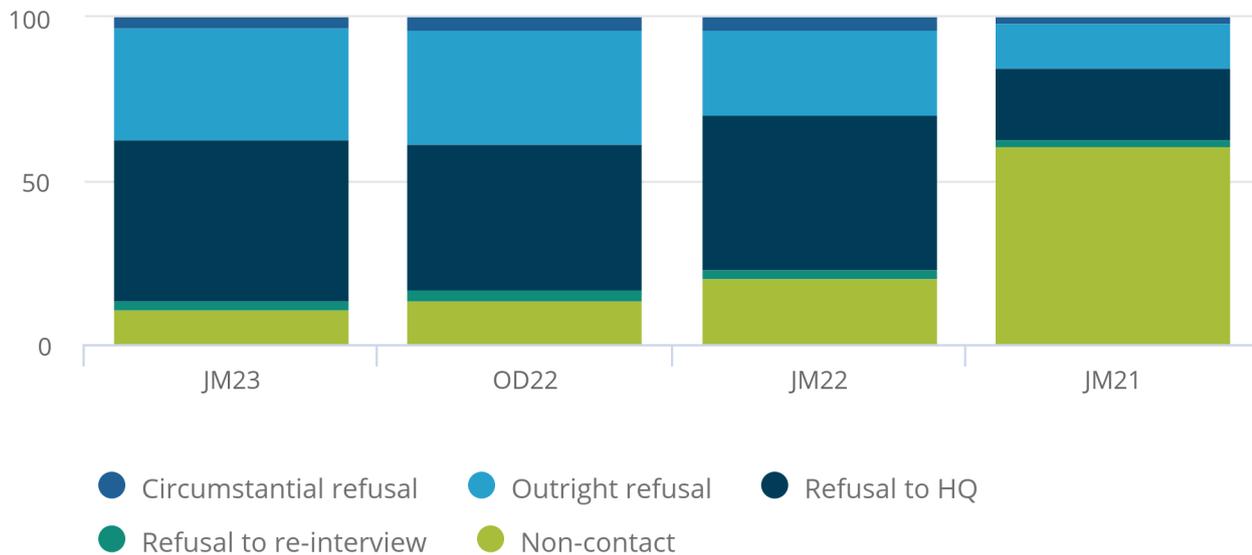
1. All selected addresses are distributed equally across the 13 weeks of the quarter.

Figure 5: Composition of non-response

Great Britain, including imputed households, January to March 2023

Figure 5: Composition of non-response

Great Britain, including imputed households, January to March 2023



Source: Labour Force Survey from the Office for National Statistics

Notes:

1. For definitions of the types of non-response, see Section 10 Technical definitions. Figures are based on the aggregate response for the quarter covering all waves.
2. JM23 refers to the period January to March 2023
3. OD22 refers to the period October to December 2022
4. JM22 refers to the period January to March 2022
5. JM21 refers to the period January to March 2021

Table 6: Wave-specific response rates, UK, January to March 2023, excluding imputed households

	Wave 1 in JM23		Wave 2 in JM23		Wave 3 in JM23		Wave 4 in JM23		Wave 5 in JM23		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Eligible households found at selected units	25,488	100	24,916	100	24,932	100	24,835	100	23,899	100	124,070	100
Responding units												
Total	7,597	29.8	4,068	16.3	3,786	15.2	3,604	14.5	3,599	15.1	22,654	18.3
Full	7,163	28.1	3,720	14.9	3,523	14.1	3,329	13.4	3,320	13.9	21,055	17.0
Partial	434	1.7	348	1.4	263	1.1	275	1.1	279	1.2	1,599	1.3
Non-responding units												
Circumstantial refusal	1,332	5.2	941	3.8	729	2.9	654	2.6	451	1.9	4,107	3.3
Outright refusal	6,392	25.1	6,765	27.2	6,555	26.3	7,116	28.7	6,351	26.6	33,179	26.7
Refusal to HQ	1,633	6.4	10,386	41.7	11,653	46.7	11,255	45.3	11,285	47.2	46,212	37.2
Non-contact	8,534	33.5	1,818	7.3	1,132	4.5	961	3.9	842	3.5	13,287	10.7
Addresses not issued for interviewing												
Refusal to re-interview	n/a	n/a	938	3.8	1,077	4.3	1,245	5.0	1,371	5.7	4,631	3.7
Co-operation rate		44.8		18.4		16.7		15.9		16.6		21.3
Contact rate		60.1		49.1		46.4		48.2		46.2		50.2

Source: Labour Force Survey from the Office for National Statistics

Notes

1. Excludes households for which response has been imputed.
2. The total response rate is the aggregate response rate for the quarter, based on all eligible, in-scope households.
3. For a full definition of response categories and the method used to calculate the response rates see Section 10: Technical definitions.

Table 7: Wave-specific response rates, UK, January to March 2023, including imputed households

	Wave 1 in JM23		Wave 2 in JM23		Wave 3 in JM23		Wave 4 in JM23		Wave 5 in JM23		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Eligible households found at selected units	25,488	100	24,916	100	24,932	100	24,835	100	23,899	100	124,070	100
Responding units												
Total	7,597	29.8	5,918	23.8	4,688	18.8	4,360	17.6	4,149	17.4	26,712	21.5
Full	7,163	28.1	3,720	14.9	3,523	14.1	3,329	13.4	3,320	13.9	21,055	17.0
Partial	434	1.7	348	1.4	263	1.1	275	1.1	279	1.2	1,599	1.3
Imputed	-	-	1,850	7.4	902	3.6	756	3.0	550	2.3	4,058	3.3
Non-responding units												
Circumstantial refusal	1,332	5.2	224	0.9	341	1.4	337	1.4	248	1.0	2,482	2.0
Outright refusal	6,392	25.1	6,765	27.2	6,555	26.3	7,116	28.7	6,351	26.6	33,179	26.7
Refusal to HQ	1633	6.4	10,386	41.7	11,653	46.7	11,255	45.3	11,285	47.2	46,212	37.2
Non-contact	8,534	33.5	685	2.7	618	2.5	522	2.1	495	2.1	10,854	8.7
Addresses not issued for interviewing												
Refusal to re-interview	n/a	n/a	938	3.8	1,077	4.3	1,245	5.0	1,371	5.7	4,631	3.7
Co-operation rate		44.8		25.4		20.2		18.9		18.8		24.6
Contact rate		60.1		53.8		48.6		50.1		47.7		52.2

Source: Labour Force Survey from the Office for National Statistics

Notes

1. The total response rate is the aggregate response rate for the quarter, based on all eligible, in-scope households.
2. For a full definition of response categories and the method used to calculate the response rates, see Section 10: Technical definitions.

Table 8: Wave specific response rates, January to March 2023, including imputed households, by region

Region	Wave 1 in JM23	Wave 2 in JM23	Wave 3 in JM23	Wave 4 in JM23	Wave 5 in JM23	Total
Tyne & Wear	35.1	25.6	21.4	20.8	17.7	24.2
Rest of North East	36.1	32.1	20.1	16.2	18.6	24.7
Greater Manchester	22.0	19.3	16.0	14.0	10.6	16.4
Merseyside	16.8	13.7	13.9	8.7	11.0	12.9
Rest of North West	28.4	22.6	17.4	16.0	16.7	20.3
South Yorkshire	25.1	25.2	19.3	19.4	15.0	20.9
West Yorkshire	28.1	24.2	17.9	16.6	10.5	19.6
Rest of Yorkshire and Humberside	38.5	20.0	20.7	20.4	20.1	24.0
East Midlands	35.5	27.6	18.1	19.3	15.9	23.4
West Midlands Metropolitan Council	24.3	17.7	13.3	11.1	11.4	15.6
Rest of West Midlands	31.5	23.2	18.6	16.6	18.2	21.7
East of England	31.3	23.6	20.8	18.9	17.4	22.5
Inner London	17.2	15.5	10.9	12.0	8.5	12.8
Outer London	20.3	14.8	12.7	12.1	13.3	14.7
South East	28.6	22.4	16.7	16.3	17.4	20.4
South West	36.2	27.3	21.2	20.8	20.5	25.3
England	28.8	22.3	17.4	16.4	15.7	20.2
Wales	28.9	22.9	17.8	15.8	20.8	21.2
Strathclyde	22.0	20.6	20.1	14.6	13.3	18.2
Rest of Scotland	31.7	24.4	17.6	16.0	18.1	21.6
Scotland	27.6	22.8	18.7	15.4	16.0	20.2
Northern Ireland	53.0	52.5	45.5	43.8	45.1	48.0

Source: Labour Force Survey from the Office for National Statistics

Notes

1. The total response rate is the aggregate response rate for the quarter based on all eligible, in-scope households. Each wave reported here is an independent sample; for example, the wave 2 response in JM23 is based on response in that quarter plus the previous quarter (OD22) where it was issued as a wave 1 case.

Table 9: Proxy response, Great Britain, January to March 2023

		All responses	Proxy	%
Age	Total (16+)	43,080	16,470	38.2
	16-17	1,038	999	96.2
	18-19	801	727	90.8
	20+	41,241	14,744	35.8
Sex	Total	43,080	16,470	38.2
	Male	20,745	8,519	41.1
	Female	22,335	7,951	35.6
Ethnicity	Total	43,080	16,470	38.2
	White	38,735	14,452	37.3
	Non-white	4,314	2,001	46.4
	Refused	31	17	54.8
	Total	43,080	16,470	38.2
Economic activity (INECAC05)	Employees	20,841	8,431	40.5
	Self-Employed	3,669	1,403	38.2
	Government schemes	48	17	35.4
	Unpaid family workers	85	23	27.1
	ILO Unemployed	785	361	46.0
	Inactive	17,652	6,235	35.3

Source: Labour Force Survey from the Office for National Statistics

Notes

1. For definition of “unpaid family workers” see Section 7 Comparability.

Table 10: Income response rates by NS-SEC, Great Britain, January to March 2023

	Wave 1 in JM23	Wave 5 in JM23	Total
NS-SEC	%	%	%
Higher managerial and professional	83.6	90.1	85.5
Lower managerial and professional	83.2	88.8	85.0
Intermediate occupations	82.2	86.3	83.4
Small employers and own account workers	76.5	89.5	83.3
Lower supervisory and technical	75.5	84.0	77.9
Semi-routine occupations	75.4	89.2	79.2
Routine occupations	76.8	81.4	78.0
Total	81.0	87.7	83.0

Source: Labour Force Survey from the Office for National Statistics

Notes

1. The percentages in Table 10 are based on all eligible in-scope respondents at wave 1 and all eligible in-scope respondents at wave 5.
2. The total response rate is the aggregate response rate for income for the quarter (wave 1 and wave 5), based on all eligible, in-scope respondents.

Table 11: Summary of attrition by key characteristics, Great Britain, January to March 2023

		Wave 1 in JM22	Wave 5 in JM23		
		Responds	Responds	Responds all waves	Non-responder
Age	<16	19.1	14.0	12.1	21.8
	16-19	3.8	2.4	2.2	4.6
	20-29	8.9	5.8	5.3	10.4
	30-39	12.9	8.7	7.3	15.1
	40-49	12.9	11.1	10.8	13.8
	50-59	15.6	16.1	15.7	15.3
	60-69	16.8	25.5	28.2	12.4
	70+	9.9	16.3	18.3	6.6
Sex	Male	48.8	49.3	49.5	48.5
	Female	51.2	50.7	50.5	51.5
Economic Activity (INECAC05)	Employees	43.0	37.8	35.8	45.7
	Self Employment	7.5	7.6	7.1	7.5
	GovTraining Scheme	0.1	0.0	0.0	0.1
	UPFW (Unpaid Family Workers)	0.2	0.3	0.3	0.1
	ILO Unemployment	1.3	1.1	1.0	1.4
	Inactive	28.8	39.3	43.6	23.4
	1	10.6	14.7	16.6	8.5
	2	34.8	43.3	47.0	30.4
Number of people in household (TOTNUM)	3	20.1	17.1	14.9	21.7
	4	22.2	17.0	15.1	24.8
	5	8.5	6.1	5.5	9.7
	6 or more	3.9	1.7	0.9	5.0
	Tyne & Wear	2.1	2.1	2.4	2.1
	Rest of North East	3.3	3.3	3.2	3.2
	Greater Manchester	3.5	2.8	2.8	3.9
	Merseyside	1.3	1.5	1.7	1.3
Rest of North West	5.3	5.3	5.0	5.3	

Region (GOVTOR)	South Yorkshire	2.0	1.9	1.8	2.0
	West Yorkshire	3.4	2.4	2.2	3.9
	Rest of Yorkshire and Humberside	3.4	3.7	3.9	3.2
	East Midlands	8.6	8.0	8.3	8.9
	West Midlands Metropolitan Council	4.3	2.9	2.8	5.0
	Rest of West Midlands	5.2	5.8	6.3	4.9
	East of England	9.2	9.6	10.5	9.0
	Inner London	2.9	2.2	1.8	3.3
	Outer London	6.9	6.5	6.2	7.1
	South East	14.7	16.7	16.6	13.7
	South West	10.2	11.4	11.2	9.5
	Wales	5.3	5.8	5.1	5.0
	Strathclyde	3.6	3.0	3.1	3.9
	Rest of Scotland	4.9	4.9	4.9	4.8

Source: Labour Force Survey from the Office for National Statistics

Notes

1. The column, Wave 1 in JM22 Responds, shows the percentage of responders in each key characteristic's category at wave 1.
2. The column, Wave 5 in JM23 Responds, shows the percentage of responders in each key characteristic's category at wave 5.
3. A significant decline in the values between waves 1 and 5 denotes a higher rate of attrition than where values are consistent between waves 1 and 5 or higher at wave 5.

5 . Timeliness and punctuality

(Timeliness refers to the lapse of time between publication and the period to which the data refer. Punctuality refers to the time lag between the actual and planned dates of publication.)

To the Office for National Statistics (ONS) Labour Market Division (LMD)

Scheduled delivery date for file: 21st April 2023.

Achieved delivery date for file: 21st April 2023.

Time lag between achieved delivery date and the end of the reference period: 12 days.

Data file for other users

Scheduled availability date for regional public and government normal release user files: 16 May 2023.

Recipients

- Bank of England
- Department for Business, Energy and Industrial Strategy (to be superseded by Department for Business and Trade)
- Department for Levelling Up, Housing and Communities
- Department for Education
- Department for Enterprise, Trade and Investment (Northern Ireland)
- Department for Culture, Media and Sport
- Department for Transport
- Department for Work and Pensions
- Department of Finance and Personnel (Northern Ireland)
- Economic and Social Research Council and Data Archive
- Health and Safety Executive
- HM Treasury
- Home Office
- Low Pay Commission
- Office for Standards in Education
- Office of Manpower Economics
- Scottish Government and Scottish Executive
- Small Business Service
- Welsh Government

6 . Accessibility and clarity

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

The [UK Data Archive](#) at the University of Essex provides free access to the various Labour Force Survey (LFS) datasets.

The [National Online Manpower Information System \(NOMIS\)](#) provide a free but highly disaggregated dataset, that covers a wealth of data for local areas.

Our Social Surveys Team provide [LFS data for a fee](#) and can be contacted by phone on +44 1633 455678 or email at socialsurveys@ons.gov.uk.

[Labour market data](#), including data from the LFS, are published every month through statistical bulletins. These include text, tables, and charts. Data contained within the bulletins are available to download, free of charge.

For questions relating to labour market statistics, please contact labour.market@ons.gov.uk.

For general queries about the LFS, please contact lfs@ons.gov.uk.

7 . Comparability

(Comparability is the degree to which data can be compared over time and domain.)

Background

The Labour Force Survey (LFS) began in 1973 and was carried out every two years until 1983. Between 1984 and 1991, data were collected annually, and the survey has been running in its present form, with quarterly sampling, since spring 1992.

During the UK's membership of the European Union, the survey was carried out under European Union regulations, that specified the way the survey should be conducted, the quality of the results that member states supply to Eurostat and the timetable for supplying results. Since the UK's exit from the European Union, these regulations do not apply anymore. Although the LFS began as a survey designed to meet international obligations, its primary purpose is now "the prompt publication of key aggregate, whole economy, indicators, for the integrated assessment of labour market conditions" (Review of the Labour Force Survey, Office for National Statistics, 2002).

Definitions

The definitions of the three economic activity groups - employed, unemployed and economically inactive - that are used in the LFS are the standard International Labour Organization (ILO) definitions.

Economically active

Those aged 16 years and over, who are either employed or unemployed in the survey reference week.

Employed

Those aged 16 years and over, who are regarded as in employment if they did at least one hour of work in the reference week (as an employee, self-employed, unpaid workers in a family business or participants in government-supported training schemes) and those who had a job that they were temporarily away from (for example, if they were on holiday).

Unemployed

Those aged 16 years and over, who are without work, want a job, have actively sought work in the last four weeks and are available to start work in the next two weeks, or are out of work but have found a job and are waiting to start it within the next two weeks.

Economically inactive

Those who are neither in employment nor unemployed. This group includes, for example, all those who are looking after a home or family, have a long-term illness or disability that prevents them working, or are retired.

Unpaid family workers

Those who are doing unpaid work in a family business.

January to March 2023 questionnaire changes

Deleted questions: EvrFur

Amended questions: not applicable

Please see [User Guide Volume 2 and 3 2022](#) for further details.

Fieldwork and operational changes

A timeline of significant operational changes that may have had an impact on response include:

- July 2010 - households with residents aged 75 years and over are removed after their initial interview from October to December 2010 (OD10); this affects response rates, as these households generally have high response rates; see the "Questionnaire changes" section for more details.
- January 2011 - a proportion of initial interviews were conducted by the telephone unit rather than face-to-face as an efficiency measure.
- June 2017 - introduction of £5 and £10 incentives randomly allocated across the sample.
- January 2018 - from January to March 2018 (JM18) onwards all initial interviews have been face-to-face, except for respondents north of the Caledonian Canal (NOCC).
- January 2018 - around 10% to 15% of the wave 1 sample moved from telephone operations to face-to-face.
- April 2018 - introduction of new administrative systems for recording field time and expenses.
- June 2018 - changes to advance materials and procedures because of the introduction of the General Data Protection Regulation.
- July 2018 - change of incentive type from a paper voucher to a card voucher.
- October 2018 - launch of a new fieldwork management tool for use in face-to-face mode.
- March 2019 - issues with the telephone system used for some cases in waves 2 to 5 resulted in poor connectivity, that may affect response rates.
- March 2020 - social distancing measures were implemented in the UK; face-to-face data collection paused, and all interviewing moved to telephone mode.
- May 2020 - unconditional incentive increased to £10 for all wave 1 households in Great Britain.
- July 2020 - wave 1 LFS sample size doubled to account for lower response rates.
- July 2020 - Northern Ireland moved from unconditional to conditional incentives for waves 1, 2 and 5 and increased the amount from £10 to £20 in wave 1.
- April 2021 - wave 1 sample reduced to 160%; Knock-to-Nudge introduced.
- October 2021 - wave 1 sample reduced to 150% of pre-coronavirus level.
- April 2022 - wave 1 sample increased to 155% of pre-coronavirus level.
- November 2022 - roll out of [knock-to-nudge for the transformed LFS parallel run](#), affecting capacity being stretched in the field.
- November to December 2022 - Royal Mail strikes resulted in advance letters to respondents being delivered late.

Survey methodology changes

Changes to State Pension age were introduced in 2010, that affected labour market and LFS publications as well as other social surveys. Under the Pensions Act 2011, the State Pension age of women was expected to increase more quickly (than originally planned) to aged 65 years between April 2016 and November 2018. From December 2018, the State Pension age for both men and women started to increase, expected to reach age 67 years by 2028.

From July to September 2010 (JS10), households that only contain respondents aged 75 years and over are removed from the sample after their wave 1 interview. This change was introduced to reduce the cost of the survey and reduce the burden on respondents. Households only containing individuals aged 75 years and over are largely economically inactive. Therefore, the value of interviewing these households is greatly reduced when considering the main aims of the LFS. The wave 1 interviews from aged 75 years and over households will receive a larger weight to make them representative of the UK population. This change results in around a 10% reduction in the household sample size and a 7% reduction in the individual sample size.

From JS10, the treatment of "concealed multi-households" on the LFS has also changed. Previously, if one sampled address turned out on inspection to be, for example, not one house but six flats, all six flats would be recorded as households and interviews would be attempted with each household. The number of households encountered could be in the hundreds. This would not be a practical approach. We decided to harmonise the approach to multi-households across all our social surveys. From JS10, if a concealed multi-household is recorded, only one household will be randomly selected to be interviewed.

8 . Coherence

(Coherence is the degree to which data that are derived from different sources or methods, but that refer to the same phenomenon, are similar.)

Data sources

The Labour Force Survey (LFS) is one of a number of sources of data about the labour market. Some sources provide data that overlap with LFS data on employment, unemployment and earnings. The Office for National Statistics (ONS) has published guidance about the strengths and limitations of each source in relation to these topics and has indicated which source is the most appropriate for different purposes. Details can be found in our [Labour market statistics guide](#).

Employment, unemployment and economic inactivity

The LFS is the source recommended by the ONS for certain employment-related statistics (for example, estimates of the number of people in employment or unemployed). The LFS is also a unique source of comprehensive, coherent information about economic inactivity, where it provides information separately about people who want a job and those who do not.

Number and industrial composition of jobs

The workforce jobs (WFJ) series provides estimates of the number of jobs in the UK economy and is the source recommended by the ONS for both the number of jobs and the industrial composition of jobs. Workforce jobs consist of the sum of employee jobs, self-employment jobs, jobs in the armed forces and government-supported trainees. Civilian workforce jobs are available by geographical region, sex and broad industry. Total workforce jobs are available by sex and broad industry.

Earnings

For estimates of change in earnings (for example, pay growth in the economy), a non-LFS source, the Average Weekly Earnings (AWE) measure (formerly the Average Earnings Index (AEI)), is the most suitable source. It provides industry and whole-economy information but excludes small employers, the self-employed and government-supported trainees. Pay, commission, bonuses, overtime and pay award arrears are included, but redundancy payments and benefits in kind are excluded.

The Annual Survey of Hours and Earnings (ASHE) includes information about the levels, distribution, and make-up of earnings and hours worked for employees in different occupations, industries, ages and regions. It should be used when the information required is not available from the AWE (such as for occupational groups, or regional analyses) and is the preferred source of the earnings of full-time employees and of the average hourly earnings of all employees. The LFS should be used when the information is not available from the AWE or from the ASHE and is the preferred source of data about the earnings of part-time and low-paid employees. There is an ONS [guide to sources of data on earnings and income](#).

9 . Summary of methods

The Labour Force Survey (LFS) covers private households, including persons who are temporarily absent. The resident population is made up of persons who regard the sample address as their main address and those who have lived in the dwelling for more than six consecutive months, even if they do not regard this as their principal dwelling. Persons absent for more than six months are not regarded as members of the resident population.

A private household comprises of one or more persons (not necessarily related) living at the same address who share cooking facilities and share a living room, sitting room or dining area. Students living in halls of residence and pupils at boarding schools are sampled through the private households of their parents. In Great Britain, an additional sample is drawn from persons living in NHS accommodation.

The year is divided into quarters of 13 weeks. Before January 2006, these were seasonal quarters:

- winter (December to February)
- spring (March to May)
- summer (June to August)
- autumn (September to November)

From January 2006, the LFS has been conducted based on calendar quarters:

- Quarter 1 - January to March
- Quarter 2 - April to June
- Quarter 3 - July to September
- Quarter 4 - October to December

For most of Great Britain, the survey base is the Royal Mail's Postcode Address File (PAF), a database of all addresses receiving mail. The list is limited to addresses receiving fewer than 25 items of post per day, to exclude businesses. Because of the very low population density in the far north of Scotland (north of the Caledonian Canal), telephone directories are used as sampling frames. Interviews in the far north of Scotland are also carried out by telephone because face-to-face interviews would be too expensive. In Northern Ireland POINTER, which is the government's central register of domestic properties, is used.

In Great Britain, a systematic sample is drawn each quarter from the three sampling bases, yielding 16,640 PAF addresses, 75 telephone numbers for the north of Scotland and 36 units of NHS housing. As the PAF is broken down geographically, the systematic sampling ensures that the sample is representative at regional level. In Northern Ireland, a simple random sample is drawn, each quarter, from each of three strata, giving 650 addresses in all.

A rotation system made up of five waves is used. Respondents are interviewed five times at 13-week intervals and one-fifth of the sample is replaced each quarter. Interviews are carried out on a face-to-face (CAPI) or telephone (CATI) basis with the help of portable computers for the interviews in the first wave. In the far north of Scotland (north of the Caledonian Canal) and for interviews in the second to fifth waves, wherever possible, interviews are carried out by telephone.

10 . Technical definitions

Imputation

If a household (or someone within a household) is unavailable for interview but was interviewed in the previous wave, responses from the previous wave are rolled forward. This is referred to as "imputation". Imputation is carried out to minimise non-response bias in estimates while simultaneously improving precision by boosting the sample size. The rationale is that most Labour Force Survey (LFS) variables do not change from one quarter to another for most people.

Responses are rolled forward for one wave only. Data are not rolled forward after a second consecutive non-response. Tables and charts (at person or household level) containing responses that have been rolled forward from the previous wave are denoted by the term "including imputed". Tables and charts that do not contain responses that have been rolled forward from the previous wave are denoted by the term "excluding imputed".

Method of calculating sampling variability

See [Section 2: Summary of quality](#) for information on the method of calculating sampling variability.

Method of calculating response rates

The response rate indicates how many interviews were achieved as a proportion of those eligible for the survey. The formula used is as follows:

RR equals (FR plus PR) divided by (FR plus PR plus OR plus CR plus RHQ plus NC plus RRI*).

Where RR is response rate, FR is full response, PR is partial response, OR is outright refusal, CR is circumstantial refusal, RHQ is refusal to HQ, NC is non-contact, RRI is refusal to re-interview, and the asterisk (*) applies to waves 2 to 5 only.

Definitions of response outcome categories

Full response

A household in which each household member has answered all applicable questions.

Partial response

A household in which questions were not completed because someone refused to be interviewed, refused part way through the questionnaire, or refused to let someone else answer on his or her behalf. However, at least one question block must have been completed. If only part of the information has been collected for a one-person household, it is coded as a refusal or non-contact.

Outright refusal

A household that refuses to respond to the survey and the interviewer feels that there is no chance of an interview at the current or in any future wave.

Circumstantial refusal

A household where the respondent refuses to respond because of a temporary circumstance (for example, going on holiday or being too busy during the field period). A circumstantial refusal enables an interviewer to call back at the next wave.

Refusal to HQ

A household that contacts headquarters to refuse to participate in the survey in response to the advance letter.

Non-contact

When an address is occupied, but where it has not been possible to contact any member of the household in the field period.

Refusal to re-interview

A household that takes part in the survey (at one or more of waves 1 to 4) but that, when asked to take part in the next wave (waves 2 to 5), refuses.

Method of calculating income response rates

The income question is asked at waves 1 and 5 only. Individuals aged 16 to 69 years, who are in employment in the reference week, form the sub-set of respondents who are eligible for these questions. The percentage response rates for the income questions are based on all eligible, in-scope respondents at wave 1 and all eligible, in-scope respondents at wave 5. The total response rate is the aggregate response rate for income for the quarter (wave 1 and wave 5), based on all eligible, in-scope respondents.

NS-SEC

NS-SEC is the [National Statistics Socio-economic Classification](#), which replaces previous classifications that were based on social class and social and economic group.

Standard Occupational Classification

An issue was identified with some occupational data on a number of Office for National Statistics (ONS) surveys, including the LFS. This was caused by the implementation of the Standard Occupational Classification (SOC) from SOC 2010 to SOC 2020. A full [public statement on the impact of SOC miscoding](#), including a list of affected variables, was published on 26 September 2022. The article includes a link to [the list of four-digit SOC codes](#) and their estimated impact level.

The issue affects all LFS and Annual Population Survey (APS) datasets from January 2021 to September 2022. In October 2022, a revised SOC 2020 coding frame was introduced, correcting the error for collecting new data from that point.

Proxy response

The LFS has to complete fieldwork to a tight timetable, and interview as many of the sampled households as possible, which leaves limited time for recalls. LFS interviewers try to interview every adult (aged 16 years and over) in each sampled household. However, when a household member is unavailable for interview, interviewers accept information by proxy from another responsible adult in the household. The proxy respondents are normally people living with a partner on behalf of their partner, and parents on behalf of their adult offspring who live with them.

Attrition

Attrition is the term applied to respondents who begin the survey but subsequently drop out. It has been known for some time that these respondents tend to have different characteristics to those who remain in all waves of the survey, that can, therefore, result in attrition bias. For example, if respondents in a particular age group have a higher tendency to drop out (attrition rate) than respondents in other age groups, then they will be under-represented in subsequent waves of the survey and in estimates.

11 . Related links

More information on the Labour Force Survey (LFS) is available:

[Labour Force Survey user guidance](#) Methodology | Last revised 18 April 2023 Guidance about the background and methodology of the Labour Force Survey (LFS).

[Labour market overview. UK Statistical bulletins](#) Bulletin | Monthly Estimates of employment, unemployment, economic inactivity and other employment-related statistics for the UK. [Labour Force Survey Quality and Methodology Information \(QMI\)](#) Methodology | Last revised 13 January 2015 Quality and Methodology Information for the Labour Force Survey, detailing the strengths and limitations of the data, methods used, and data uses and users.

[Methodology for the calculation of sampling variability in the Labour Force Survey \(PDF, 175KB\)](#) Technical note The formulas used for the calculation of standard errors (SEs) on the quarterly LFS and describe how the impact of the sample design and weighting are captured in these calculations.

[The National Online Manpower Information System \(NOMIS\)](#) Nomis is a service provided by the Office for National Statistics to give you free access to the most detailed and up-to-date UK labour market statistics from official sources.

[Labour market QMI](#) Methodology | Last revised 31 October 2011 Quality and Methodology Information for labour market statistics in the UK, detailing the strengths and limitations of the data, methods used, and data uses and users.

[UK Data Archive. University of Essex](#) Home to the UK's largest collection of social, economic and population data for over 50 years.

12 . Cite this article

Office for National Statistics (ONS), released 16 May 2023, ONS website, article, [Labour Force Survey performance and quality monitoring report: January to March 2023](#)