

Labour Force Survey performance and quality monitoring report: October to December 2023

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

Contact:
Data Advice and Relations Team
socialsurveys@ons.gov.uk
+44 1633 455329

Release date:
13 February 2024

Next release:
To be announced

Table of contents

1. [Executive summary October to December 2023](#)
2. [Summary of quality](#)
3. [Achieved sample](#)
4. [Response rates](#)
5. [Timeliness and punctuality](#)
6. [Accessibility and clarity](#)
7. [Comparability](#)
8. [Coherence](#)
9. [Summary of methods](#)
10. [Technical definitions](#)
11. [Related links](#)
12. [Cite this article](#)

1 . Executive summary October to December 2023

Summary on quality

A number of measures were introduced in the quarter of October to December 2023 to improve the achieved sample and subsequently the quality of the data. For more information, see our [Labour Force Survey: planned improvements and its reintroduction methodology](#) published in November 2023.

Over the course of 2020 and 2021, some interim adjustments were introduced to the weighting process to mitigate the impact of the non-response bias in the Labour Force Survey (LFS). These interim adjustments have been superseded by a reweighting exercise applied to the July 2022 to December 2023 data incorporating our latest estimates of size and composition of the population, increasing the representativeness of the data. For more information, see our [Impact of reweighting on Labour Force Survey key indicators: 2024 article](#) published in February 2024.

Reweighting does not address the volatility we have seen in recent periods, which we expect to reduce in coming months. Therefore, we would advise users to apply caution when interpreting short-term changes observed in the estimates from the data, and to take note of our commentary around our LFS-based statistics in coming months which will consider ongoing quality challenges.

Summary of achieved sample size

The achieved sample size for the UK Labour Force Survey (LFS) during October to December 2023 (OD23) was 44,338 individuals in 20,324 households. Please note that there were no NHS households in this period.

Compared with the previous quarter, July to September (JS23), this represents a decrease of 0.6% in household interviews and an increase of 0.2% in achieved person interviews.

Summary of response rates

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

October to December 2023 main response rates

- The total response rate for Great Britain excluding imputed cases (Table 4) was 14.8%; this is up 2.1 percentage points on the previous quarter.
- The response rate excluding imputed cases (Figure 3) was 34% in wave 1 and 8.7% in wave 5; this compares with 30.5% and 9.7%, respectively, in the previous quarter.
- The total response rate for Great Britain including imputed cases (Table 5) was 17.4%, up 1.4 percentage points on the previous quarter.
- Of non-response in OD23 (Figure 5), non-contacts comprised 10.0% (up 3.3 percentage points on the previous quarter), circumstantial refusals were 3.4% (up 1.0 percentage point from the previous quarter), outright refusals comprised 34.7% up 2.3 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 (22.4%); the lowest was Inner London (10.7%).
- The overall proxy response rate (Table 9) was 37.4%; the highest proxy response rates occur in the age group for those aged 16 to 17 years (95.5%), in males (39.5%), and in the non-White ethnicity group (45.1%).
- The average income response rate (Table 10) was 82.1%.
- 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 aged 20 to 29 years age bands, employed, in households with six or more people, and in the West Yorkshire region.

A breakdown of main characteristic changes has been included in the “Respondent characteristics” section.

There have been several methodological and operational changes that may have affected response rates. For more details on these changes, see [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 as follows.

Age

Proportions for most age brackets for wave 1 respondents have remained relatively stable since October to December 2022 (OD22) (see Table 1). In OD23, we see a slight decrease in the number of respondents aged 65 years and over from the previous quarter (down 2 percentage points from 28% to 26%).

Tenure

The proportion of responding household reference persons (HRPs) who own their property outright has decreased from 45% in OD22 to 43% in OD23. There are also a greater number of responding HRPs who are renting (29% in OD23, compared with 27% in OD22) (see Table 2).

Country of birth

In OD23, 12.9% of wave 1 interviews comprised non-UK born respondents. This is comparable with the previous year (12.8% in OD22). The current proportion of non-UK born respondents is consistent with January to March 2020 (JM20) (see Figure A).

Waves 2 to 5

Looking at waves 2 to 5, proportions in each age band have remained relatively stable over the last year.

For waves 2 to 5, 48% of responding HRPs owned their property outright in OD23, which remains consistent with OD22. The proportion of HRPs buying their home with a mortgage or loan decreased from 28% to 27% over the same time period. The proportion of renters has increased from 22% in OD22 to 23% in OD23.

Table 1: Age of respondents between October to December 2022 and October to December 2023, wave 1

Wave 1 responding	Under 16	16-24	25-34	35-44	45-54	55-64	65 and over
OD22	17%	7%	10%	11%	13%	15%	27%
JM23	17%	7%	10%	12%	13%	14%	28%
AJ23	18%	7%	10%	12%	12%	15%	27%
JS23	17%	7%	10%	12%	12%	15%	28%
OD23	18%	8%	10%	12%	12%	15%	26%

Source: Labour Force Survey from the Office for National Statistics

Notes

1. Some totals for one quarter may equal more than 100% because of rounding.

Table 2: Tenure of Household Reference Person between October to December 2022 and October to December 2023, wave 1

Wave 1 responding HRP	Owned outright	Being bought with mortgage or loan	Part rent	Rented	Rent free
OD22	45%	26%	1%	27%	1%
JM23	45%	26%	1%	27%	1%
AJ23	45%	26%	1%	26%	1%
JS23	46%	26%	1%	26%	1%
OD23	43%	27%	1%	29%	1%

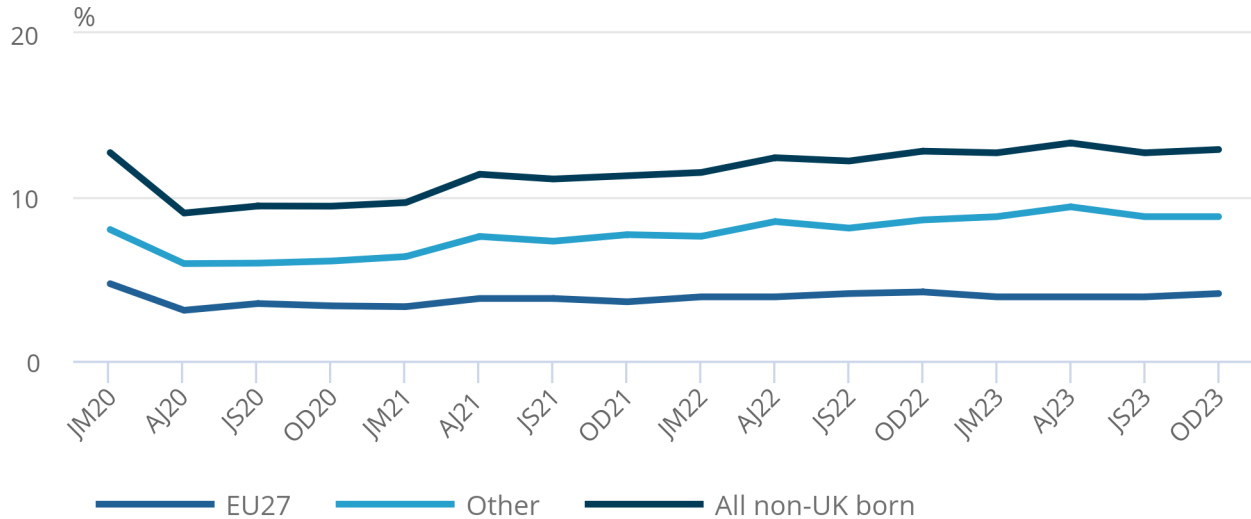
Source: Labour Force Survey from the Office for National Statistics

Notes

1. HRP refers to household reference person. Some questions, like tenure, are only asked of one person in the household; for example, if there is a four-person household. The HRP answers the question "TEN1" reporting that they rent the household. On the household (and person) datasets, everyone in that household will then have a value of "TEN1=4" (although three of the respondents have not been asked the question).
2. Some totals for one quarter may equal more than 100% because of rounding.

Figure A: Country of birth of respondents from January 2020 to December 2023, Wave 1

Figure A: Country of birth of respondents from January 2020 to December 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; AJ23 refers to April to June 2023; JS23 refers to July to September 2023; OD23 refers to October to December 2023.

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:

- Department for Business and Trade
- Home Office
- Health and Safety Executive
- Department for Transport
- Scottish Government
- 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
- Trades Union Congress (TUC)
- Employer's Association
- Confederation of British Industry
- Institute of Employment Studies
- Institute for Public Policy Research
- National Institute of Economic and Social Research
- Policy Studies Institute
- Institute for Fiscal Studies
- academic researchers
- media
- 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 different countries 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. This is 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 overview statistical bulletin](#).

3 . Achieved sample

Table 3: Achieved sample by type of household, October to December 2023

	GB		UK	
	Includes imputed	Excludes imputed	Includes imputed	Excludes imputed
Private households	17,822	15,182	20,324	17,544
Individuals in private households	38,467	32,135	44,338	37,628
NHS Households	0	0	0	0
Individuals in NHS households	0	0	0	0
Total households	17,822	15,182	20,324	17,544
Total individuals	38,467	32,135	44,338	37,628

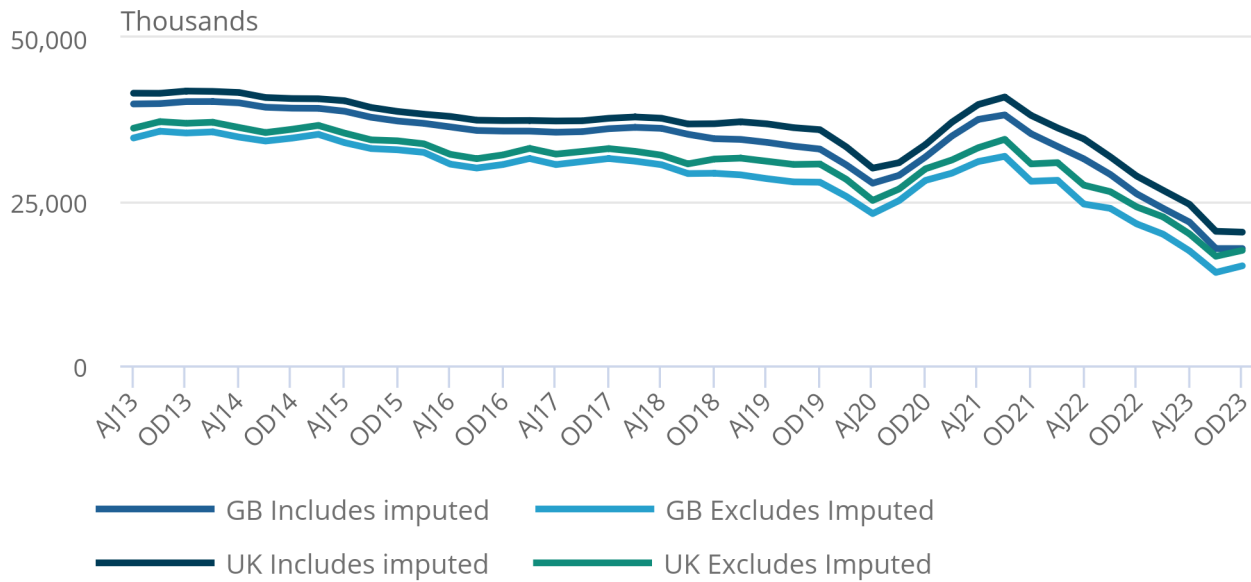
Source: Labour Force Survey from the Office for National Statistics

Figure 1: Achieved number of household interviews

Great Britain and UK, between October to December 2013 and October to December 2023

Figure 1: Achieved number of household interviews

Great Britain and UK, between October to December 2013 and October to December 2023



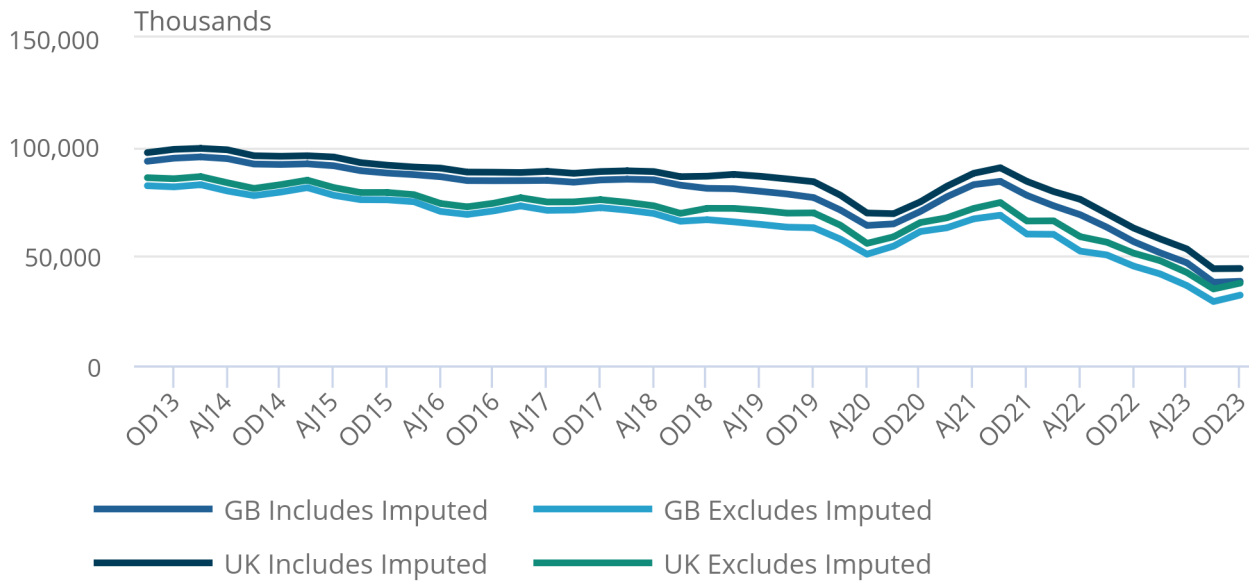
Source: Labour Force Survey from the Office for National Statistics

Figure 2: Achieved number of person interviews

Great Britain and UK, between October to December 2013 and October to December 2023

Figure 2: Achieved number of person interviews

Great Britain and UK, between October to December 2013 and October to December 2023



Source: Labour Force Survey from the Office for National Statistics

4 . Response rates

This section provides detailed response rates for the Labour Force Survey (LFS) for different waves and geographies.

Table 4: Wave-specific response rates, Great Britain, excluding imputed households, October to December 2023

	Wave 1 in OD23		Wave 2 in OD23		Wave 3 in OD23		Wave 4 in OD23		Wave 5 in OD23		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Eligible households found at selected units	15,564	100.0	14,887	100.0	24,041	100.0	23,978	100.0	23,895	100.0	102,365	100.0
Responding units												
Total	5,284	34.0	2,945	19.8	2,713	11.3	2,178	9.1	2,067	8.7	15,187	14.8
Full	5,042	32.4	2,698	18.1	2,493	10.4	2,006	8.4	1,899	7.9	14,138	13.8
Partial	242	1.6	247	1.7	220	0.9	172	0.7	168	0.7	1,049	1.0
Non-responding units												
Circumstantial refusal	1,472	9.5	1,041	7.0	688	2.9	492	2.1	290	1.2	3,983	3.9
Outright refusal	3,793	24.4	4,976	33.4	6,607	27.5	6,887	28.7	7,088	29.7	29,351	28.7
Refusal to HQ	308	2.0	2,396	16.1	12,047	50.1	12,968	54.1	13,225	55.3	40,944	40.0
Non-contact	4,707	30.2	2,964	19.9	1,217	5.1	701	2.9	420	1.8	10,009	9.8
Addresses not issued for interviewing												
Refusal to re-interview	n/a	n/a	565	3.8	769	3.2	752	3.1	805	3.4	2,891	2.8
Co-operation rate		48.7		25.9		12.3		9.7		9.1		17.0
Contact rate		67.8		62.6		43.0		41.1		40.9		48.8

Source: Labour Force Survey from the Office for National Statistics

Notes

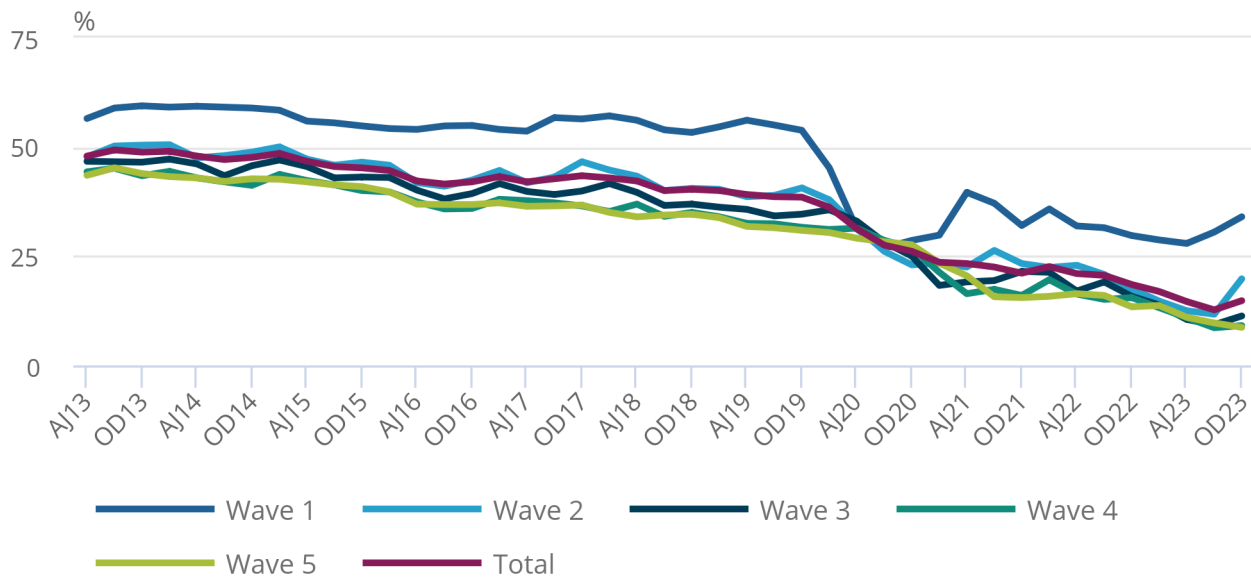
1. Excludes households for which response has been imputed.
2. The total response rate is the aggregate response rate for the quarter across all waves, based on all eligible, in-scope households.
3. For a full definition of response categories and the method used to calculate the response rates, see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

Figure 3: Wave-specific response rates

Great Britain, excluding imputed households, between October to December 2013 and October to December 2023

Figure 3: Wave-specific response rates

Great Britain, excluding imputed households, between October to December 2013 and October to December 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, October to December 2023, including imputed households

	Wave 1 in OD23		Wave 2 in OD23		Wave 3 in OD23		Wave 4 in OD23		Wave 5 in OD23		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Eligible households found at selected units	15,564	100.0	14,887	100.0	24,041	100.0	23,978	100.0	23,895	100.0	102,365	100.0
Responding units												
Total	5,284	34.0	4,210	28.3	3,400	14.1	2,618	10.9	2,317	9.7	17,829	17.4
Full	5,042	32.4	2,698	18.1	2,493	10.4	2,006	8.4	1,899	7.9	14,138	13.8
Partial	242	1.6	247	1.7	220	0.9	172	0.7	168	0.7	1,049	1.0
Imputed	-	-	1265	8.5	687	2.9	440	1.8	250	1.0	2,642	2.6
Non-responding units												
Circumstantial refusal	1,472	9.5	550	3.7	378	1.6	282	1.2	183	0.8	2,865	2.8
Outright refusal	3,793	24.4	4,976	33.4	6,607	27.5	6,887	28.7	7,088	29.7	29,351	28.7
Refusal to HQ	308	2.0	2,396	16.1	12,047	50.1	12,968	54.1	13,225	55.3	40,944	40.0
Non-contact	4,707	30.2	2,190	14.7	840	3.5	471	2.0	277	1.2	8,485	8.3
Addresses not issued for interviewing												
Refusal to re-interview	n/a	n/a	565	3.8	769	3.2	752	3.1	805	3.4	2,891	2.8
Co-operation rate		48.7		34.7		15.2		11.5		10.2		19.6
Contact rate		67.8		68.0		44.6		42.1		41.5		50.3

Source: Labour Force Survey from the Office for National Statistics

Notes

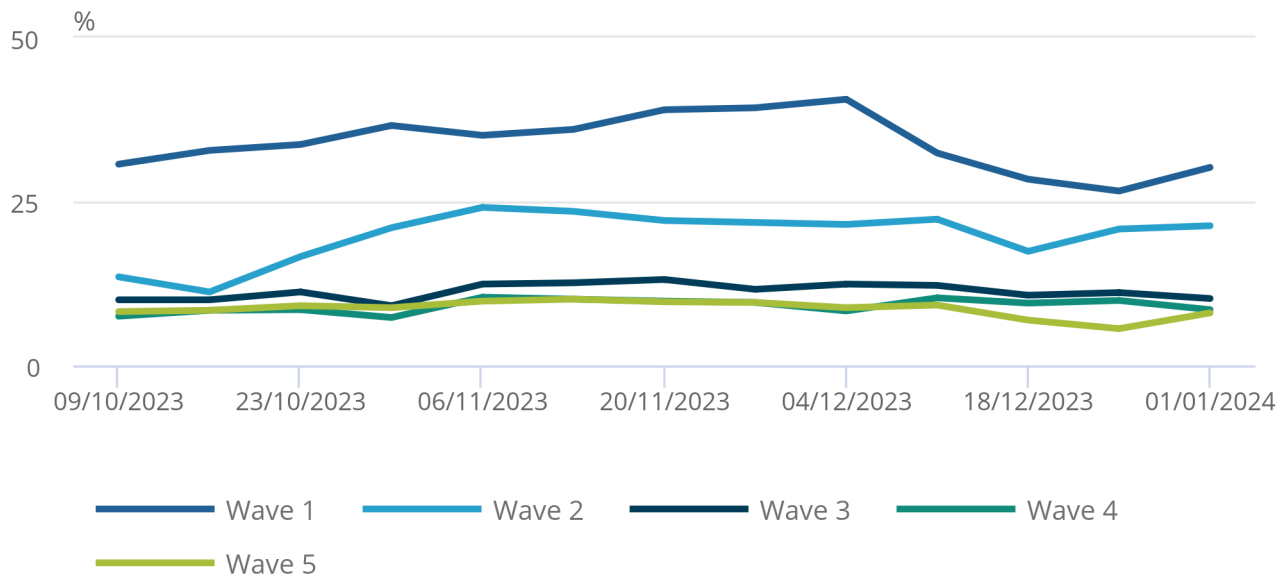
1. The total response rate is the cumulative response rate for the quarter across all waves based on all eligible, in-scope households. For a full definition of response categories and the method used to calculate the response rates, see Section 10: Technical definitions.

Figure 4: Wave specific response rates by week

Great Britain, excluding imputed households, October to December 2023

Figure 4: Wave specific response rates by week

Great Britain, excluding imputed households, October to December 2023



Source: Labour Force Survey from the Office for National Statistics

Notes:

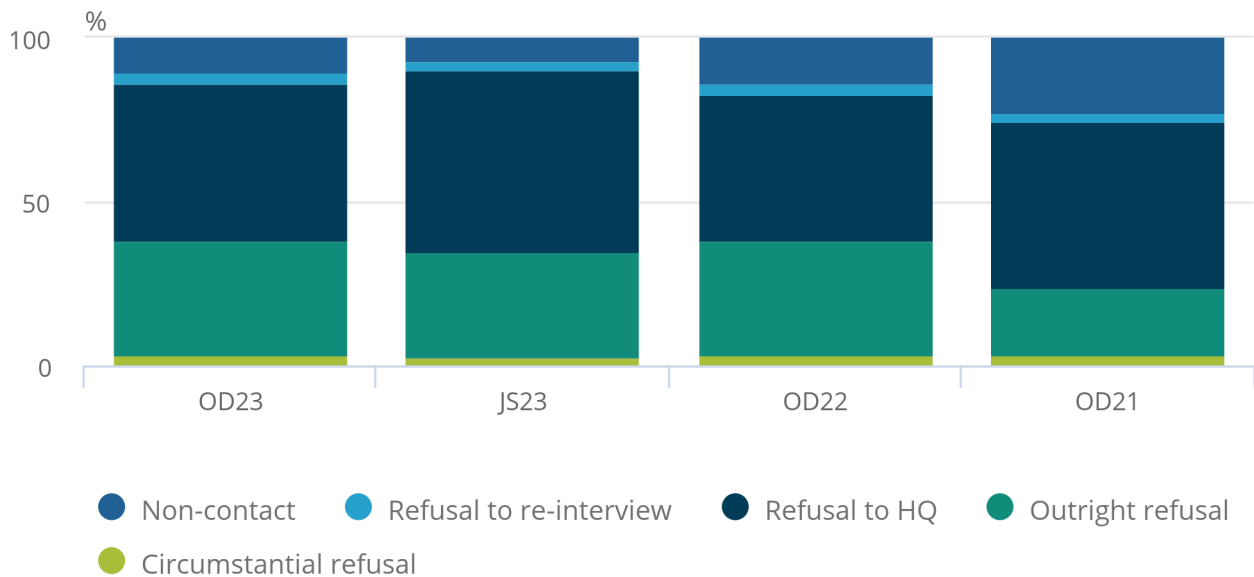
1. All selected addresses are distributed equally across the 13 weeks of the quarter.

Figure 5: Composition of non-response

Great Britain, including imputed household, October to December 2023

Figure 5: Composition of non-response

Great Britain, including imputed household, October to December 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. OD23 refers to the period October to December 2023.
3. JS23 refers to the period July to September 2023.
4. OD22 refers to the period October to December 2022.
5. OD21 refers to the period October to December 2021.

Table 6: Wave-specific response rates, UK, October to December 2023, excluding imputed households

	Wave 1 in OD23		Wave 2 in OD23		Wave 3 in OD23		Wave 4 in OD23		Wave 5 in OD23		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Eligible households found at selected units	16,733	100.0	16,098	100.0	25,244	100.0	25,177	100.0	25,083	100.0	108,335	100.0
Responding units												
Total	5,856	35.0	3,417	21.2	3,111	12.3	2,626	10.4	2,539	10.1	17,549	16.2
Full	5,547	33.2	3,132	19.5	2,876	11.4	2,419	9.6	2,345	9.3	16,319	15.1
Partial	309	1.8	285	1.8	235	0.9	207	0.8	194	0.8	1,230	1.1
Non-responding units												
Circumstantial refusal	1,537	9.2	1,055	6.6	705	2.8	511	2.0	296	1.2	4,104	3.8
Outright refusal	4,111	24.6	4,999	31.1	6,619	26.2	6,900	27.4	7,098	28.3	29,727	27.4
Refusal to HQ	317	1.9	2,397	14.9	12,047	47.7	12,969	51.5	13,225	52.7	40,955	37.8
Non-contact	4,912	29.4	3,028	18.8	1,296	5.1	761	3.0	513	2.0	10,510	9.7
Addresses not issued for interviewing												
Refusal to re-interview	n/a	n/a	1,202	7.5	1,466	5.8	1,410	5.6	1,412	5.6	5,490	5.1
Co-operation rate		49.5		28.8		13.8		11.4		11.0		19.0
Contact rate		68.8		63.6		43.9		42.2		42.0		50.0

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, 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, October to December 2023, including imputed households

	Wave 1 in OD23		Wave 2 in OD23		Wave 3 in OD23		Wave 4 in OD23		Wave 5 in OD23		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Eligible households found at selected units	16,733	100.0	16,098	100.0	25,244	100.0	25,177	100.0	25,083	100.0	108,335	100.0
Responding units												
Total	5,856	35.0	4,720	29.3	3,836	15.2	3,095	12.3	2,824	11.3	20,331	18.8
Full	5,547	33.2	3,132	19.5	2,876	11.4	2,419	9.6	2,345	9.3	16,319	15.1
Partial	309	1.8	285	1.8	235	0.9	207	0.8	194	0.8	1,230	1.1
Imputed	-	-	1,303	8.1	725	2.9	469	1.9	285	1.1	2,782	2.6
Non-responding units												
Circumstantial refusal	1,537	9.2	557	3.5	388	1.5	292	1.2	188	0.7	2,962	2.7
Outright refusal	4,111	24.6	4,999	31.1	6,619	26.2	6,900	27.4	7,098	28.3	29,727	27.4
Refusal to HQ	317	1.9	2,397	14.9	12,047	47.7	12,969	51.5	13,225	52.7	40,955	37.8
Non-contact	4,912	29.4	2,223	13.8	888	3.5	511	2.0	336	1.3	8,870	8.2
Addresses not issued for interviewing												
Refusal to re-interview	n/a	n/a	1,202	7.5	1,466	5.8	1,410	5.6	1,412	5.6	5,490	5.1
Co-operation rate		49.5		37.2		16.8		13.3		12.1		21.6
Contact rate		68.8		69.0		45.6		43.3		42.7		51.6

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, October to December 2023, including imputed households, by region

Region	Wave 1 in OD23	Wave 2 in OD23	Wave 3 in OD23	Wave 4 in OD23	Wave 5 in OD23	Total
Tyne & Wear	44.2	40.3	15.1	10.2	9.4	20.5
Rest of North East	41.4	37.2	17.7	11.9	12.1	21.4
Greater Manchester	24.9	19.5	8.9	6.2	8.4	12.1
Merseyside	28.6	19.8	11.1	5.3	5.4	12.3
Rest of North West	35.8	30.5	12.5	11.0	10.1	17.8
South Yorkshire	46.5	31.4	15.7	8.6	11.5	19.8
West Yorkshire	36.4	25.9	14.4	10.9	9.0	17.2
Rest of Yorkshire and Humberside	45.4	36.5	14.8	12.6	8.0	20.6
East Midlands	35.2	30.8	20.3	15.5	12.4	21.1
West Midlands Metropolitan Council	28.2	26.4	12.6	8.2	6.9	14.7
Rest of West Midlands	33.8	35.7	19.5	13.3	11.2	20.7
East of England	34.5	28.1	13.7	11.7	10.4	17.8
Inner London	21.4	18.9	8.8	5.5	6.0	10.7
Outer London	25.2	22.5	7.7	7.7	5.8	12.0
South East	34.6	30.4	14.6	11.8	10.0	18.3
South West	43.7	34.1	18.2	14.9	13.0	22.4
England	34.2	28.9	14.2	11.0	9.7	17.6
Wales	30.1	29.2	17.0	11.2	10.2	17.8
Strathclyde	33.9	19.9	9.6	6.3	7.6	13.5
Rest of Scotland	33.0	25.2	14.1	13.5	10.9	17.8
Scotland	33.4	23.0	12.1	10.4	9.5	16.0
Northern Ireland	48.9	42.1	36.2	39.8	42.7	41.9

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 October to December 2023 is based on response in that quarter plus the previous quarter (July to September 2023) where it was issued as a wave 1 case.

Table 9: Proxy response, Great Britain, October to December 2023

		All responses Proxy %		
Age	Total (16+)	31,998	11,965	37.4
	16-17	851	813	95.5
	18-19	654	579	88.5
	20+	30,493	10,573	34.7
Sex	Total	31,998	11,965	37.4
	Male	15,335	6,057	39.5
	Female	16,663	5,908	35.5
Ethnicity	Total	31,998	11,965	37.4
	White	28,506	10,388	36.4
	Non-white	3,463	1,561	45.1
	Refused	29	16	55.2
Economic activity (INECAC05)	Total	31,998	11,965	37.4
	Employees	15,367	6,063	39.5
	Self-Employed	2,706	1,070	39.5
	Government schemes	19	5	26.3
	Unpaid family workers	64	17	26.6
	ILO Unemployed	575	291	50.6
	Inactive	13,267	4,519	34.1

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, October to December 2023

NS-SEC	Wave 1	Wave 5	Total
	in OD23	in OD23	
	%	%	%
Higher managerial and professional	83.0	92.4	85.6
Lower managerial and professional	82.7	90.8	84.9
Intermediate occupations	80.2	83.8	81.1
Small employers and own account workers	92.3	100.0	92.9
Lower supervisory and technical	73.1	81.0	74.9
Semi-routine occupations	76.8	88.4	79.3
Routine occupations	72.0	82.1	74.5
Total	79.9	88.5	82.1

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.
3. NS-SEC refers to National Statistics Socio-economic classification.

Table 11: Summary of attrition by main characteristics, Great Britain, October to December 2023

		Wave 1 in OD22	Wave 5 in OD23	Responds all waves	Non- responder
Age	<16	18.6	12.8	9.7	21.1
	16-19	3.8	2.8	2.3	4.2
	20-29	9.2	6.2	6.1	10.5
	30-39	12.2	8.3	7.2	13.9
	40-49	12.8	9.8	8.7	14.1
	50-59	15.7	16.6	16.0	15.4
	60-69	17.0	25.0	28.0	13.6
	70+	10.6	18.4	22.1	7.3
Sex	Male	48.7	49.1	48.9	48.5
	Female	51.3	50.9	51.1	51.5
Economic Activity (INECAC05)(Employees	42.9	37.7	35.9	45.0
	Self-Employed	7.3	7.8	7.2	7.1
	Government schemes	0.1	0.0	0.0	0.1
	Unpaid family workers	0.1	0.2	0.1	0.1
	ILO Unemployed	1.5	1.1	1.1	1.7
	Inactive	29.5	40.4	45.8	24.9
	Number of people in household (TOTNUM)	11.2	15.4	18.2	9.4
1					
2	34.5	43.9	48.1	30.6	
3	20.5	16.8	14.4	22.0	
4	22.5	17.5	15.2	24.6	
5	7.4	4.8	3.1	8.5	
6 or more	3.9	1.6	0.9	4.8	
Region (GOVTOR)	Tyne & Wear	2.1	1.8	2.0	2.2
	Rest of North East	3.3	2.9	2.7	3.5
	Greater Manchester	3.9	3.5	3.6	4.1
	Merseyside	1.4	1.2	1.4	1.4
	Rest of North West	4.8	4.9	5.1	4.8
	South Yorkshire	2.3	2.3	1.9	2.3
	West Yorkshire	4.2	3.2	3.4	4.6

Rest of Yorkshire and Humberside	2.5	2.3	2.6	2.6
East Midlands	9.9	10.3	10.3	9.7
West Midlands Metropolitan Council	3.6	3.2	2.7	3.8
Rest of West Midlands	4.8	5.7	5.9	4.4
East of England	11.0	11.4	11.0	10.8
Inner London	3.3	2.9	2.6	3.5
Outer London	4.7	4.8	4.4	4.7
South East	14.1	15.1	15.7	13.6
South West	10.3	11.8	12.0	9.7
Wales	5.2	5.0	5.4	5.2
Strathclyde	3.3	2.4	2.5	3.6
Rest of Scotland	5.2	5.1	4.7	5.3

Source: Labour Force Survey from the Office for National Statistics

Notes

1. The column "Wave 1 in OD22, Responds" shows the percentage of responders in each characteristic's category at wave 1.
2. The column "Wave 5 in OD23, Responds" shows the percentage of responders in each characteristic's category at wave 5.
3. A significant decline in the values between waves 1 and 5 shows 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 Labour Market and Households Division

Scheduled delivery date for file: 19 January 2024.

Achieved delivery date for file: 19 January 2024.

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: 13 February 2024.

Recipients of the files include:

- Bank of England
- 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, which 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 by email at socialsurveys@ons.gov.uk.

Labour market data, including data from the LFS, are published every month through our [Labour market overview 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, which 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.

October to December 2023 questionnaire changes

Deleted questions: not applicable.

Amended questions: BHOLCOR, BANK, BNKH11 – updates to bank holiday questions to reflect relevant dates in 2023.

For further details, see our [Labour Force Survey user guide Volume 2 and 3 2022](#).

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 (GDPR)
- 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, which meant that 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 (COVID-19) pandemic level
- April 2022: wave 1 sample increased to 155% of pre-coronavirus pandemic 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
- July 2023: wave 1 sample reduced to the pre-coronavirus pandemic level
- October 2023 – one of the measures that was in place since the coronavirus pandemic was to code out unproductive cases in consecutive waves as refusals to headquarters (HQ); with the focus on improving the quality of the achieved LFS sample in October to December 2023, face-to-face interviewing was fully rolled out again, enabling a better follow-up process for unproductive cases; this is reflected in the decrease in refusal rates observed in waves 2 to 5
- October to November 2023: return to face-to-face interviewing, increase of the unconditional incentive, and introduction of an additional conditional incentive; for further information on other additional measures introduced in this period, see our [Labour Force Survey: planned improvements and its reintroduction methodology](#))

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.

Since 2020, the weighting approach for the LFS has had to incorporate tactical methodological changes, reflecting the challenges in conducting household surveys and measuring population change through a pandemic. In particular, the enforced change from face-to-face interviewing to telephone interviewing led to an increase in non-response bias in survey responses.

Over the course of 2020 and 2021, some interim adjustments were introduced to the weighting process to mitigate the impact of the non-response bias in the LFS. These interim adjustments have been superseded by a reweighting exercise applied to the July 2022 to December 2023 data. For more information, see our [Impact of reweighting on Labour Force Survey key indicators: 2024 article](#) published in February 2024.

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 several 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 headquarters

A household that contacts headquarters (HQ) 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.

National Statistics Socio-economic Classification

The [National Statistics Socio-economic Classification \(NS-SEC\)](#) 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

[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 13 February 2024, ONS website, article, [Labour Force Survey performance and quality monitoring report: October to December 2023](#)