

Article

Comparing Census 2021 and Labour Force Survey estimates of the labour market, England and Wales: March 2021

Comparing the percentages of adults in employment and other labour market data between Census 2021 and the Labour Force Survey, and reasons why they differ.

Contact:
Matthew Mayhew
census.customerservices@ons.
gov.uk
+44 1329 444972

Release date:
8 December 2022

Next release:
To be announced

Table of contents

1. [Main points](#)
2. [Overview](#)
3. [Comparison of estimates between sources](#)
4. [Differences in data collection](#)
5. [Question differences](#)
6. [Variable differences](#)
7. [Effects of coronavirus \(COVID-19\)](#)
8. [Census 2021 and Labour Force Survey data](#)
9. [Glossary](#)
10. [Data sources and quality](#)
11. [Related links](#)
12. [Cite this article](#)

1 . Main points

- Census 2021 responses were collected during the coronavirus (COVID-19) pandemic, a period of unparalleled and rapid change; the labour market topic will have been affected by the national lockdown, associated guidance and furlough measures.
- Data collected from the census differ to that collected on the Labour Force Survey (LFS) because of data collection and question design differences.
- Estimates from the census of those in employment are lower than those estimated on the LFS for most groups in the population, with the majority of the difference being classified as economically inactive and the remainder as unemployed.
- Estimates from the census for economically inactive adults who are looking after their family or home are significantly larger than on the LFS.
- Estimates from the census for economically inactive adults who are retired, or long-term sick or disabled, differ to the LFS because of differences in data collection methods.

Tell us what you think about this publication by [answering a few questions](#).

2 . Overview

The census is the main source of information on the population of England and Wales. It captures information about all residents on Census Day (21 March 2021), whether they live in a private household, a communal establishment, or as part of other non-household populations.

The Labour Force Survey (LFS) is the main data source in the UK for statistics relating to employment and the UK labour market. The LFS also collects some non-labour market data.

The census and the LFS both collect information about a person's labour market status. The estimates derived from each source differ because of:

- mode of data collection: the census is a self-completion questionnaire, the LFS is interviewer-led
- the questions used: the LFS uses questions that capture the International Labour Organization's definition of employment, the census does not fully capture this definition
- variable differences, resulting from deriving labour market status using different methods
- how the surveys were able to accommodate coronavirus (COVID-19) pandemic-specific issues such as furlough and self-isolation

The LFS is the main source of national-level labour market data and presents a timelier picture of the labour market of England and Wales with estimates available within six weeks of the reference period. The LFS uses international definitions to make it easier to compare across countries. It also collects more labour market information about an individual. However, as it is a sample of 80,000 people per quarter, there are limitations on the analysis that can be done at lower levels of geography or detailed multivariate analysis.

The census allows for robust subnational data at very low levels of geography, for example, at output area. The census strengths are for analysing labour market data by variables where the census is the most detailed source for data, for example, ethnicity and gender identity. Census is particularly useful when looking at more granular levels of occupation in detail. The census also captures communal establishments that are not captured at all on the LFS, which is particularly relevant for some industries and occupations.

3 . Comparison of estimates between sources

Labour Force Survey (LFS) data estimate that 27.5 million people aged 16 to 64 years were in employment in February to April 2021, compared with 26.5 million people aged 16 to 64 years on Census Day (21 March 2021).

Both the census and LFS provide estimates of the number of people in England and Wales who were employed, unemployed or inactive. We use percentages in each employment group to make comparisons between the LFS and the census. All figures discussed are [statistically significantly](#) different unless stated.

To allow a more accurate comparison of the estimates, the population base is adults aged between 16 and 64 years who live in households only. The census collects information on people who live in communal establishments, but the Labour Force Survey (LFS) does not so they are not included ([this excludes about 1 million usual residents in England and Wales](#)). We use LFS data collected between February and April 2021 to be as comparable as possible with the Census Day of 21 March 2021. Confidence intervals for the LFS data are in the accompanying dataset, along with estimates for all adults aged 16 years and over.

The LFS uses population projections to weight the data. These are based on pre-Census 2021 data, which have been adjusted for coronavirus (COVID-19) pandemic-specific issues. There is more information in our [LFS weighting methodology article](#). The census is not weighted as it is collected of the whole population, so it is not adjusted to account for pandemic-specific effects.

Estimates from the LFS will differ to those in our monthly [Employment in the UK](#) bulletin because of differences in the population base, and as official estimates of the employment rates are seasonally adjusted. This is to compare on a similar basis with the census.

Employment

The LFS estimates that 74.9% of adults in England and Wales were in employment between February and April 2021. The census estimates this number to be 71.9%. Comparing this across different population sub-groups, the LFS has consistently higher estimates of people in employment.

Table 1: The Labour Force Survey estimates a higher percentage of adults were in employment than the census
Percentage of people aged 16 to 64 years in employment, England and Wales, February to April 2021 and 21 March 2021

Population group	LFS	Census
England and Wales	74.9	71.9
England	75.0	72.0
Wales	73.7	69.6
Male	77.9	75.7
Female	71.9	68.3

Source: Office for National Statistics – Census 2021, Labour Force Survey

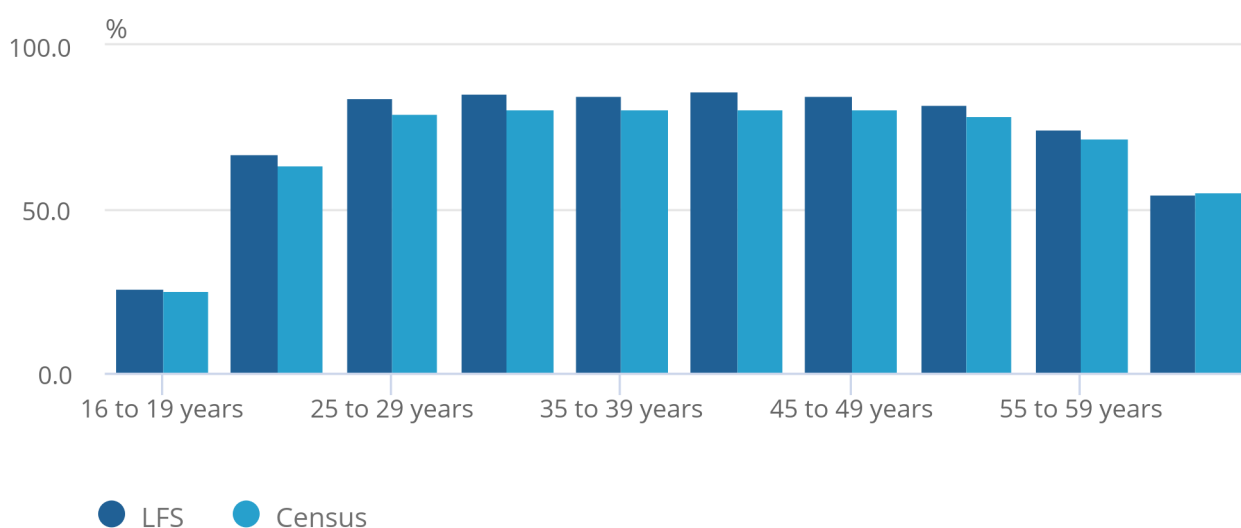
LFS estimates are also higher when considering employment by age group, with the exception of those aged between 60 and 64 years where there is no [statistically significant](#) difference. The trend in employment by age group is similar for both sources, with smaller proportions of those in younger age groups in employment. The percentage in employment is highest for people aged in their 40s.

Figure 1: The age profile for those in employment was similar in the Labour Force Survey and the census

Percentage of those in employment by age group, England and Wales, February to April 2021 and 21 March 2021

Figure 1: The age profile for those in employment was similar in the Labour Force Survey and the census

Percentage of those in employment by age group, England and Wales, February to April 2021 and 21 March 2021



Source: Office for National Statistics – Census 2021, Labour Force Survey

Unemployment and economically inactive

As the 2021 Census estimates a smaller percentage of people are in employment compared with the LFS, we would expect the census to estimate that more people are unemployed or economically inactive.

The census estimates that 4.3% of people aged 16 to 64 years in England and Wales were unemployed compared with 3.8% on the LFS. The percentage of those economically inactive was 23.8% on the census compared with 21.3% on the LFS.

Table 2: The Labour Force Survey estimates a lower percentage of adults are in unemployment and economically inactive than the census

Percentage of people aged 16 to 64 in unemployment and economically inactive, England and Wales, February to April 2021 and 21 March 2021

Group	Unemployment - LFS	Unemployment - Census	Economically Inactive - LFS	Economically Inactive - Census
England and Wales	3.8	4.3	21.3	23.8
England	3.8	4.3	21.2	23.6
Wales	3.3	4	22.9	26.4
Male	4.1	4.8	18	19.5
Female	3.5	3.8	24.6	27.9

Source: Office for National Statistics – Census 2021, Labour Force Survey

The way in which the census and LFS categorise the reason a person is economically inactive differs and this affects some of the results; see Section 6: Variable differences for details.

One group affected are individuals who are inactive because of long-term sickness or disability, which has led to them retiring early. The census records retirement as their reason, while the LFS would record long-term sickness or disability as their reason, using a follow-up question when multiple reasons are given.

This difference is seen in England where on census 4.5% are long-term sick or disabled and 3.1% are retired, compared with 4.9% long-term sick or disabled and 2.7% retired on the LFS. There is no real difference between the two estimates of long-term sick or disabled in Wales (census 6.8% compared with LFS 6.7%) while the retired figure is higher on the census at 4.0% compared with 3.0% on the LFS. [Data on health and disability from census data will be released in early 2023.](#)

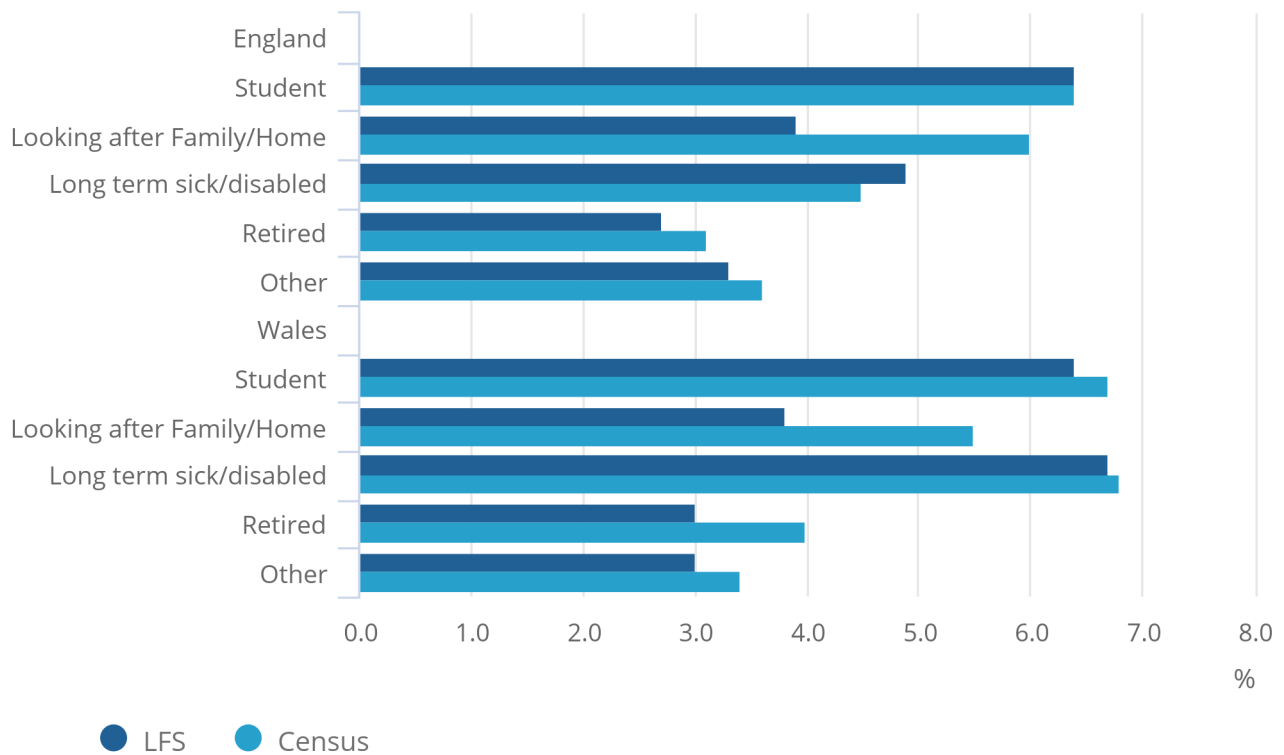
A larger proportion of adults in England reported being inactive because of looking after family or home in the census data than in the LFS (6.0% compared with 3.9%). This could be an effect of the methods the surveys used to capture behaviours seen during the coronavirus pandemic such as home schooling, but it could also be a result of the furlough scheme (discussed in Section 7: Effects of coronavirus). This is because those on furlough could have selected this option if they missed the guidance and were routed to economic inactivity questions. The difference is smaller in Wales with the census estimating 5.5% compared with 3.8% on the LFS.

Figure 2: The census reports a larger amount of people are economically inactive because of looking after family or home, compared with estimates from the Labour Force Survey

Percentage of the working population by reason for being economically inactive, England and Wales, February to April 2021 and 21 March 2021

Figure 2: The census reports a larger amount of people are economically inactive because of looking after family or home, compared with estimates from the Labour Force Survey

Percentage of the working population by reason for being economically inactive, England and Wales, February to April 2021 and 21 March 2021



Source: Office for National Statistics – Census 2021, Labour Force Survey

Occupations and industry

The estimates of those employed by occupational group is different between the LFS and census. Estimates from the LFS suggest that 25.7% of those currently employed in England and Wales work in professional occupations (for example, teachers and nurses), while estimates from the census suggest that 20.4% of those employed work in these occupations. This is the largest occupational group in both LFS and census estimates.

Other occupational groups that the LFS produces higher estimates for are associate professional and technical occupations such as actors and pilots (14.7% compared with 13.3% for census) and administrative and secretarial occupations (10.9% compared with 9.2% for census). For all other occupational groups, the census has higher estimates than the LFS.

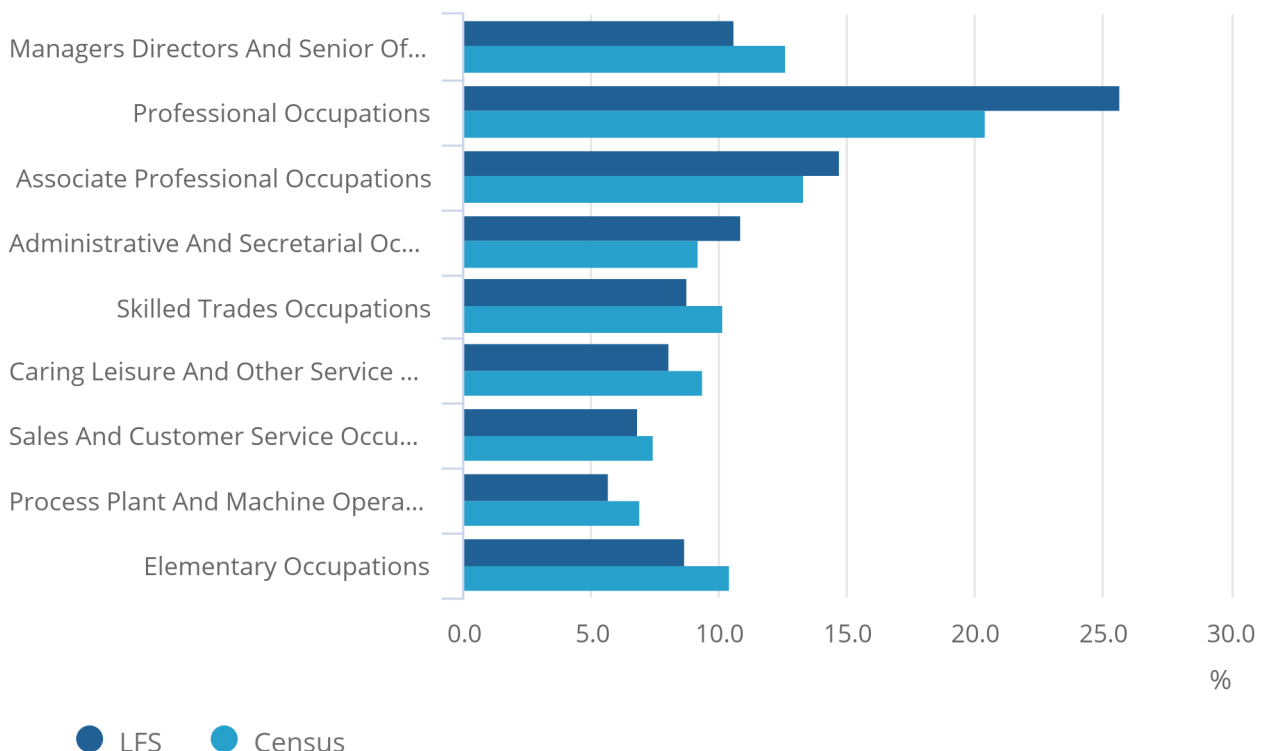
Occupational data on the LFS were affected by a coding error. Data were taken from LFS microdata before data were corrected. This error has minimal effect at the highest level of the occupational classification. It should not affect conclusions. Read more in [The impact of miscoding of occupational data in Office for National Statistics social surveys, UK](#).

Figure 3: The Labour Force Survey estimates that one-quarter of people work in professional occupations, while the census estimates this is one-fifth

Percentage of those currently in employment by their occupation, England and Wales, February to April 2021 and 21 March 2021

Figure 3: The Labour Force Survey estimates that one-quarter of people work in professional occupations, while the census estimates this is one-fifth

Percentage of those currently in employment by their occupation, England and Wales, February to April 2021 and 21 March 2021



Source: Office for National Statistics – Census 2021, Labour Force Survey

Differences also occur when comparing the industries people work in. The estimates from the LFS suggest that the most common industry is human health and social work activities (13.9%). However, the estimates from the census suggest that there are two most common industries: human health and social work activities (14.8%) and wholesale and retail trade; repair of motor vehicles and motorcycles (14.9%). The estimates from the LFS suggest that 11.7% of adults work in wholesale and retail trade; repair of motor vehicles and motorcycles. The difference in estimates in this industry is the largest between sources.

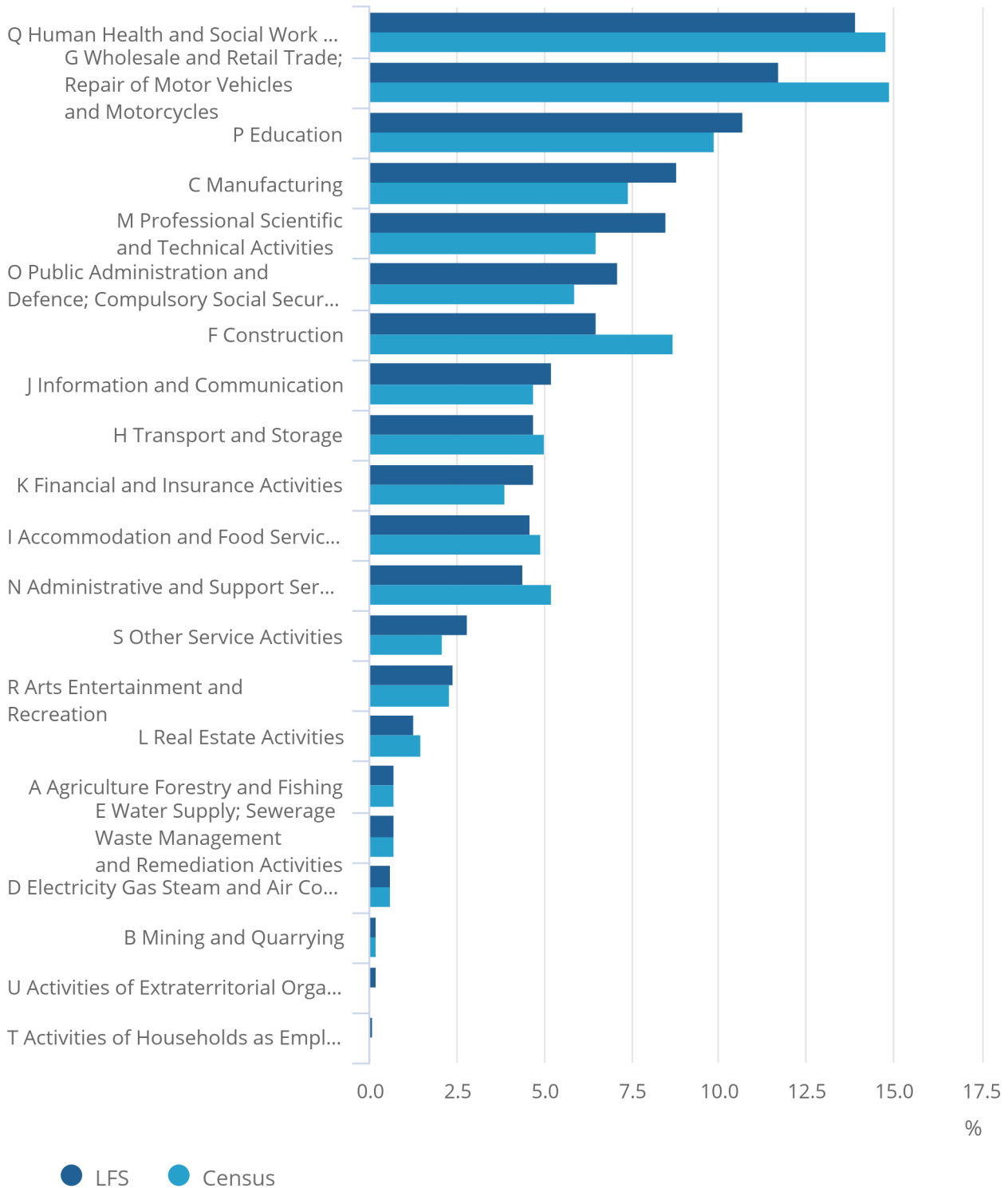
The construction industry also has a large difference between sources, with the LFS estimating that 6.5% of employed adults work in this industry, compared with 8.7% for the census.

Figure 4: Fewer people work in the human health and social work activities industry according to census data, compared with Labour Force Survey estimates

Percentage of those currently in employment by their industry, England and Wales, February to April 2021 and 21 March 2021

Figure 4: Fewer people work in the human health and social work activities industry according to census data, compared with Labour Force Survey estimates

Percentage of those currently in employment by their industry, England and Wales, February to April 2021 and 21 March 2021



4 . Differences in data collection

The Labour Force Survey (LFS) is designed to measure the labour market while the census is designed to measure the size and characteristics of the population. There are differences to the amount of data collected on the labour market because of these purposes. The census and LFS are collected in different ways, which will impact the data. Both questionnaires are carefully designed and thoroughly tested. The purpose of the data collection is different, therefore different modes are appropriate.

Census completion was requested of all residents of England and Wales. It was primarily collected using online questionnaires, with a small proportion of census returns using the paper questionnaire. Read more about [census quality and data collection](#).

The LFS is a household survey, collecting information from around 80,000 individuals each quarter. They are interviewed for the following four quarters after the initial interview; all interviews are interviewer led. The LFS only interviews those in private households and some living in NHS accommodation. Those living in communal establishments are not included in the estimates.

The coronavirus (COVID-19) pandemic affected the LFS data collection because of the restrictions on household mixing, so the mode of collection shifted to telephone interviews only. More information can be found in [Coronavirus and the effects on UK labour market statistics](#). This led to a change in the characteristics in the responding sample. Read more about the Quarter 1 (Jan to Mar) 2021 sample in the [Labour Force Survey performance and quality monitoring report](#). Estimates from the LFS have been reweighted to reduce the effect of the change and [the impact on the main labour market indicator has been assessed](#).

As the LFS is interviewer led, respondents can ask for clarification on questions from the interviewer. This can allow for a more accurate response to be obtained. The census is a self-completion questionnaire and relies on the respondent's comprehension of the question, with the help of guidance. Errors could be introduced through misinterpretation of the question. This means there are differences between the labour market estimates provided by both data sources.

Differences in the occupations and industries for those currently employed could partially be explained by this. In both cases, the respondents are asked about their job and from that, the occupation and industry is derived. In an interviewer-led scenario, they are likely to be able to ask clarifying questions to help improve the data collected. When it is completed online by a respondent, there is written guidance on how to respond but less support on how much information is needed to be able to classify their job.

Further research can be conducted to evaluate the collection methods, which were beyond the scope of this article. The Census Quality Survey can be used to measure the effect of collection mode on the census questions. Linking census data to LFS data would see the difference between the sources for individuals who appear on both sources.

5 . Question differences

The labour market is analysed as three separate groups using the International Labour Organization's (ILO) definition:

- in employment – those of working age who did one hour or more of paid work per week or those who had a job that they were temporarily away from (for example, because they were on holiday or sick)
- unemployed – those of working age without a job who have sought a job in the last four weeks and are able to start work in the next two weeks, or are out of work but have found a job and are waiting to start in the next two weeks
- economically inactive – those of working age without a job who have not sought work in the last four weeks and/or are not available to start work in the next two weeks

In the UK, working age is defined being 16 years and over.

Those who are in employment or unemployed are classified as economically active in the labour market. This definition is internationally agreed for consistency and coherence so that the labour market can be measured and compared across countries, regardless of individual countries' policies. This means the census and the Labour Force Survey (LFS) ask questions to determine someone's labour market status rather than asking them to self-classify.

The questions used to define employment status differ between the LFS and the census. The LFS uses 19 questions to identify a person's labour market status and the census uses nine questions.

Both the LFS and the census only assign a person as having an economic activity if they are aged 16 years or over. Anyone aged under 16 years is not included, regardless of if they have a job, as they are in full-time education.

Economic activity on the LFS

This section outlines the questions used to derive the economic activity of a person on the LFS. They are in the order of how the variable is derived, not the order they are asked on the survey. Read more in Volume 2 (questionnaire) and Volume 4 (derived variables) of the [Labour Force Survey user guide](#).

The questions asked in the survey refer to a specific week period (the reference week), occurring directly before the respondent's interview.

Labour market status is derived by first checking if a person meets the criteria for one of four types of employment. If they do not, a check against the criteria for being unemployed under the ILO definition follows, otherwise they are classified as economically inactive.

To classify as in employment on the LFS, during the reference week (checked in this order), the individual was either:

- on a government training scheme – they were on a training scheme (and not a student) funded by either the Department for Education, the Scottish Government, Welsh Government, or on two specific scheme types in Northern Ireland, or on any other scheme while undertaking any voluntary or community work, working for an environment taskforce, or other employment training, or are getting help setting up as self-employed before starting their business
- an employee
- self-employed
- an unpaid family worker – doing unpaid work for their or a family member's business

If the respondent is not in employment, they are classified as ILO unemployed if they:

- looked for paid work in the four weeks ending the Sunday of the reference week and were able to start within two weeks
- looked for a place on a government training scheme in the four weeks ending the Sunday of the reference week and were able to start within two weeks
- are waiting to take up a new job or business already obtained and were able to start within two weeks

Those not in either of these categories are classified as economically inactive. Individuals are separated into different types of economically inactive based on all feasible combinations of the following:

- seeking work
- whether they would like work or not
- main reason for inactivity, for example, long-term sick or disabled, looking after family or home

Economic activity on the census

The derivation of economic activity status is similar to the LFS: the person is checked against employment criteria, followed by unemployment criteria and then inactivity criteria.

A person is classified as employed on the census if during the week before they were any combination of:

- an employee
- self-employed or freelance
- temporarily away from work ill, on holiday or temporarily laid off
- on maternity or paternity leave
- doing any other kind of paid work

Those on maternity or paternity leave are classified to the in-employment group on both the LFS and census. The LFS asks whether someone worked in the reference week, then if they were away from their job, why they were away. This question has maternity or paternity leave as an option. The labour market questions route from the main working question.

Someone is classified as unemployed if they were not working during the week before Census Day but were either:

- looking for work in the four weeks before the census, and were able to start in the next two weeks
- not looking for work because they are waiting to start work in the next two weeks for a job already obtained

Everyone else is classified as economically inactive, and the reason recorded. Unlike the LFS question, the census question allows for a respondent to select multiple response options and there are additional rules added into the processing.

If the respondent is a full-time student, the reason for being inactive is because of being a student, regardless of if any other reason was selected.

If the respondent is not a full-time student, then they are:

- retired, if they selected retired regardless of any other option picked
- student, if they selected student and not retired, regardless of any other option picked
- long-term sick or disabled, if they selected this and not student or retired
- looking after family or home, if this option is selected without any other option selected except other
- other, if only other selected

Because of the preference of options in the census, a person's reason for being inactive may differ from the LFS because the LFS uses the main reason a person is inactive, if more than one applies. For example, if a disabled student is economically inactive because of their disability rather than being a student, the LFS would record them as economically inactive long-term sick or disabled, but the census would record them as economically inactive student.

6 . Variable differences

In the census, it is not possible to identify individuals who are employed on a government training scheme or as unpaid family workers. The first census labour market question includes an option about other paid work, which these groups might have chosen.

The Labour Force Survey (LFS) collects additional reasons why someone is economically inactive. These are that someone:

- is temporary sick or injured
- has not started looking for work
- does not believe that there are jobs available
- does not need a job
- is waiting for the results of a job application
- has not given a reason

These options are not available on the census, so it is assumed that anyone who would choose one of these options on the LFS would choose the "other" category on the census. The groups are quite small in comparison with the reasons captured by census.

7 . Effects of coronavirus (COVID-19)

Both the census and the Labour Force Survey (LFS) are likely to be affected by the two government interventions introduced to mitigate the effect of lockdowns on the economy. These were the [Coronavirus Job Retention Scheme \(CJRS\)](#) and the [Self-Employment Income Support Scheme \(SEISS\)](#). The term “furlough” is used to refer to both schemes in this section.

People on furlough were still classed as in employment but are considered temporarily away from the workplace. This was because the pandemic was forcing them not to work, but the expectation was that they will return to work once situations would allow.

Data from the census cannot be used to understand how many people were on furlough on Census Day (21 March 2021).

While the Labour Force Survey (LFS) added questions to help capture people on furlough, this was not possible for the census because of [legal constraints](#). Instead, when those responding to the census were asked about their economic activity in the previous week, those on furlough were [guided to select the “temporarily away from work ill, on holiday or temporarily laid off” option](#). Additionally, this option was not exclusive to those on furlough and could be selected by those who were temporarily away from work, because of annual leave, for example. The census estimates that approximately 1 million people who said that they were temporarily away from work in the week before the census.

Evidence suggests that the majority on furlough answered the census by saying that they were in employment. However, [census quality assurance](#) suggests that not all of those on furlough said that they were the sub-category “temporarily away from work ill, on holiday or temporarily laid off.”

Other data sources can be used to understand how many people were on furlough during the coronavirus pandemic including: the LFS (see ‘[An overview of workers who were furloughed in the UK: October 2021](#)’) and HM Revenue and Customs (HMRC) [Coronavirus Job Retention Scheme statistics](#) and [Self-Employment Income Support Scheme statistics](#). A [comparison of HMRC estimates of furlough and other ONS estimates](#) is also available.

8 . Census 2021 and Labour Force Survey data

Comparing Census 2021 and Labour Force Survey estimates of the labour market: Census 2021 data Dataset | Released 8 December 2022 Employment, occupation and industry data for households from Census 2021 data.

Comparing Census 2021 and Labour Force Survey estimates of the labour market: Labour Force Survey data Dataset | Released 8 December 2022 Employment, occupation and industry data from the Labour Force Survey.

9 . Glossary

Economically active

People aged 16 years and over who are either in employment or unemployed.

Employment

The number of people in employment is measured by the Labour Force Survey (LFS) and consists of people aged 16 years and over who did paid work (as an employee or self-employed), those who had a job that they were temporarily away from, those placed with employers on government-supported training and employment programmes, and those doing unpaid family work. The census is defined similarly though does not capture training schemes or unpaid family work.

Economically inactive

Economically inactive people are those without a job who have not actively sought work in the last four weeks, and/or are not available to start work in the next two weeks.

Unemployment

The number of unemployed people in the UK is measured through the Labour Force Survey (LFS) following the internationally agreed definition recommended by the International Labour Organization (ILO) – an agency of the United Nations. Unemployed people are without 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, have found a job and are waiting to start it in the next two weeks. The definition on the census is similar but the questions asked are not similar.

Please see [A guide to labour market statistics](#) for definitions of labour market variables more generally.

10 . Data sources and quality

Labour Force Survey

The [Labour Force Survey \(LFS\) is a household survey](#) that asks questions to approximately 80,000 individuals each quarter. It is rotational in design, and each household appears in the survey for at most five quarters. It asks about an individual's labour market status as well as other information.

Labour market statistics are estimates produced from these data. As the information is derived from a sample of households, it is subject to some [uncertainty](#). [Confidence intervals](#) are used to measure this uncertainty and are available for all estimates based on LFS data.

More information on the LFS is available in the [Labour Force Survey user guidance](#) and [Comparisons between other labour market sources](#).

Census

The census provides the most detailed picture of the entire population, with the same core questions asked to everybody across England and Wales. Census results can be more reliable than survey results based on a sample of the population, because the whole population is included. The UK Statistics Authority has assigned [National Statistics](#) status to Census 2021 outputs, providing assurance that these statistics are of the highest quality and value to users.

Census 2021 achieved a very high response rate of 97%. We ensure the census results reflect the whole population by using statistical methods to estimate the number and characteristics of people who were not recorded on a census response. This means that the census statistics are estimates rather than simple counts of responses so they have some statistical uncertainty associated with them. We take numerous steps to minimise possible sources of error.

Read more on in the [Quality and methodology information \(QMI\) for Census 2021 report](#).

Analysis for 2011 Census, previous analysis and similar

When [similar analysis was conducted to compare the 2011 Census with the 2011 Labour Force Survey](#) the opposite trend was seen. The 2011 Census had higher levels of employment and lower levels of unemployment and economic activity.

11 . Related links

[Labour market and travel to work: Census 2021 in England and Wales](#)

Bulletin | Released 8 December 2022

Data and supporting information about labour market and travel to work from Census 2021 in England and Wales.

[Labour market overview, UK: November 2022](#)

Bulletin | Released 15 November 2022

Estimates of employment, unemployment, economic inactivity and other employment-related statistics for the UK.

12 . Cite this article

Office for National Statistics (ONS), released 8 December 2022, ONS website, article, [Comparing Census 2021 and Labour Force Survey estimates of the labour market, England and Wales: March 2021](#)