

Article

# Comparing Census 2021 and Labour Force Survey estimates of the labour market, England and Wales: 13 March 2023

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.

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# 1 . Main points

- The latest census, in March 2021, covered 59.6 million people in England and Wales and was conducted during the coronavirus pandemic, a period of unparalleled and rapid change.
- Census 2021 estimated that there were 1 million fewer people aged 16 to 64 years in employment (26.5 million or 71.9%) than the Labour Force Survey (LFS) (27.5 million or 74.9%), and the main reason for this is that some furloughed people likely reported that they were out of work rather than in employment when completing the census; however, most census respondents answered questions on their labour market status in the way we expected.
- Furloughed census respondents were given guidance on how to complete questions about their economic activity so that they would still be counted as being in employment, but legal constraints meant that it was not possible to change the questions to specifically identify those on furlough.
- Of the individuals who reported being furloughed in the LFS between January and June 2021 (over 2,300 respondents, who were thus counted as being in employment), around 9 in 10 described themselves in the census as being in employment; however, around 1 in 10 said that they were either unemployed or economically inactive on the census.
- If differences between the LFS and census responses for furloughed individuals were entirely a result of misreporting employment status on the census, scaling up these figures to HM Revenue and Customs (HMRC) counts of furloughed jobs suggests that this could account for as much as 62% of the 1 million difference (or just over 600,000) in the estimated number of people who were employed.
- The true extent of misreporting employment figures on the census is likely to be lower than the figure suggests, because it does not account for people's circumstances being different on Census Day and on the day of their LFS interview; nor does it account for the possibility of people being on furlough from more than one job.
- Other explanations for the different estimates include differences in the method of data collection (the census was a self-completed questionnaire, whereas the LFS is interviewer led) and context effects.

## 2 . The purpose of the census and the Labour Force Survey (LFS) when considering the labour market

Census 2021 and the LFS are rich sources of data in different respects for labour market statistics. Both sources can be used to estimate the number of people who are economically active (including those who are in employment and those who are unemployed and actively looking for work), and the number of people who are economically inactive (such as those who are retired). However, caution should be taken when comparing figures from the two sources, because they are not directly comparable.

Building on our [previous publication](#), this article provides further detail on the conceptual reasons why the outputs from the LFS and Census 2021 are different, including new analysis that has linked the census with responses from the LFS. Reasons for the differences include how the data are collected, the questionnaires used, coverage, and extraordinary confounding effects related to the time of census data collection during the coronavirus (COVID-19) pandemic.

The LFS is used to produce the timeliest National Statistics on the labour market, including estimates of the number of people who are employed, unemployed, and economically inactive. The survey has been developed to be primarily focused on labour market issues, and to obtain responses that are coherent with internationally agreed definitions. The survey runs on a quarterly basis and has a representative sample of around 1% of the population. However, the sample size means that there are limitations on the analysis that can be done at lower levels of geography, or through detailed multivariate analysis.

The census has not been developed to primarily understand labour market issues. Instead, the census is designed to provide National Statistics across a wider range of household and individual characteristics, at the most detailed geographical levels. For the labour market, this means that we can provide detailed analysis for population subgroups at lower levels of geography, such as Output Areas.

### 3 . Important differences between Census 2021 and the Labour Force Survey (LFS)

When it comes to estimating the size of the labour market, differences are to be expected between the census and the LFS. For example, [Census 2011 estimated that there were 602,000 more household residents](#) aged 16 to 64 years who were employed in England and Wales when compared with the LFS responses collected around the same time.

A discrepancy of a similar size was [found during Census 2021](#). This time, it was the other way around; the LFS showed around 1 million more household residents aged 16 to 64 years were employed in England and Wales when compared with Census 2021 (see Table 1).

Further analysis that quantifies the differences between these two sources can be found in our [Comparing Census 2021 and Labour Force Survey Estimates of the labour market article](#).

Table 1: Compared to the census, the LFS estimates more people to be in employment and fewer people to be unemployed and economically inactive

	Census 2021	Labour Force Survey	Difference
<b>Number of household residents (thousands)</b>			
Employed	26,460	27,519	-1,059
Unemployed	1,590	1,402	+189
Inactive	8,749	7,821	+928
<b>Percentages (%)</b>			
Employed	71.9	74.9	-3.0
Unemployed	4.3	3.8	+0.5
Inactive	23.8	21.3	+2.5

Source: Census 2021 and Labour Force Survey from the Office for National Statistics

#### Notes

1. Figures represent household residents aged 16 to 64 years England and Wales, March 2021.
2. Census figures are for Census Day (21 March 2021).
3. LFS figures are for February to April 2021 and have not been seasonally adjusted.
4. Figures are for all usual household residents; LFS figures will differ to those published elsewhere due to the different population denominator.
5. Figures may not sum due to rounding.

## Method of data collection

The way that the data are collected in the census and the LFS is likely to lead to differences between estimates from the two sources.

Census 2021 data were collected from respondents through online or paper self-completion questionnaires, whereas the LFS is conducted by telephone with an interviewer. Therefore, while guidance on answering questions was available to census respondents, they did not have an interviewer to help clarify concepts.

## Measurement differences

The questions used to define labour market status differ between the census and the LFS. The census is designed to capture a wide range of household and individual level characteristics, which means that there is limited space to cover the level of detail found in the LFS. The LFS uses 19 questions to identify a respondent's labour market status according to an internationally agreed definition. The census, on the other hand, uses nine questions to provide a reasonable approximation of a respondent's labour market status while minimising the time and effort needed to respond.

Further information on the precise questionnaire differences can be found in our [Comparing Census 2021 and Labour Force Survey estimates of the labour market: March 2021 article](#).

## Context effects

Given that the LFS is a survey that concentrates on labour market issues, this could lead respondents to give more consideration to the labour market questions asked on the LFS than on a multi-purpose questionnaire like the census.

## Coverage of Census 2021 and the LFS

Estimates from Census 2021 are based on a response rate of 97% of the usual resident population of England and Wales. This is then adjusted to reflect the size and characteristics of the non-respondents, so that the census results reflect the whole usually resident population. Although the LFS is based on data from a sample of the population, results are weighted to the total household population. However, because the LFS sample size is relatively small for some population sub-groups and smaller geographical areas, these will typically have large sampling variances, which is not the case with the census. This means that the census is a valuable tool in assessing labour market conditions for those with particular characteristics in small geographical areas.

Furthermore, the LFS collects data across a quarter, so that estimates are the average over the quarter, while the census collects data on a single day. While the figures in Table 1 cover almost the same time period, it is possible that a person's labour market status could have changed between the responses to both surveys (see Section 4).

The main population coverage difference between the two sources is communal establishments. The LFS includes data collected from those living in student halls and NHS accommodation, whereas the census includes data from a broader range of communal establishments, including nursing homes and boarding houses. That said, this does not affect the data summarised in Table 1, where those resident in communal establishments have been excluded.

## LFS Weighting

The LFS weights the survey responses to be representative of the population. A set of household resident population totals is used to form the weights. These are based on pre-coronavirus (COVID-19) pandemic population estimates which have been adjusted using HM Revenue and Customs (HMRC) real-time information data to reduce the impact of the pandemic on the data collected. Our [Labour Force Survey weighting methodology](#) and volume 1 of our [LFS user guide methodology](#) details the method used to calculate the weights. The method to estimate the household resident population is [different on Census 2021](#).

The two different estimation methods lead to slightly different household resident population estimates of England and Wales. The household population was estimated to be 36,799,070 (rounded to the nearest five people) in Census 2021, while estimates from the LFS were 36,741,888; a difference of 57,182 people. This will lead to some differences between the estimates of those in employment. However, the impact of this is likely to be minimal.

## 4 . The impact of the coronavirus pandemic

Both Census 2021 and the Labour Force Survey (LFS) were affected by the two government interventions introduced to mitigate the effect of the coronavirus (COVID-19) pandemic and the resulting 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 employed but are considered temporarily away from the workplace.

Around the time of Census 2021, [HM Revenue and Customs \(HMRC\) statistics show that 3.8 million employments](#) (CJRS as of 21 March 2021) and [1.8 million self-employed jobs](#) (SEISS as of April to May 2021) in England and Wales were furloughed. This came to a total of 5.6 million jobs. The HMRC figures are based on claims to the CJRS and SEISS schemes by businesses, meaning that the statistics represent jobs rather than individuals, and a person will be counted for each furloughed job. However, only a minority of people will have been counted more than once in the HMRC figures. The LFS estimate that [around 1 million people in the UK had two jobs](#) at around the time of the census, representing [around 3% of those in employment](#).

Evidence also shows that the pandemic was associated with anomalies in labour market data. For example, since the start of the pandemic until January 2021, it was observed that around 500,000 workers had switched their employment status from self-employed to employee, as mentioned in our [Painting the full picture: what our statistics tell us about the labour market blog](#). Despite this switch, the number that had changed jobs had not increased from normal levels. A further 155,000 workers were estimated to have made the switch between January to March 2021. For information on the possible reasons for these changes, see our [Understanding changes in self-employment in the UK: January 2019 to March 2022 article](#).

## Measurement differences and method of data collection

The scope of Census 2021 and its questions were set by [The Census \(England and Wales\) Order 2020](#), a statutory instrument. This meant that it was not possible to change the labour market questions so we that could specifically identify those on furlough without parliamentary approval. Instead, when census respondents were asked about their economic activity, additional guidance was included to encourage those on furlough to select that they were "temporarily away from work ill, on holiday, or temporarily laid off." This option was not exclusive to furlough; for example, it could be selected by those who were on annual leave. This means that the census cannot accurately identify those who were furloughed. But the LFS already included a wider range of response options to capture reasons for being temporarily away from work, so its responses were adapted to capture additional information about those on furlough.

This issue may have been compounded by the method of data collection. As described previously, the LFS is interviewer led, meaning that respondents have an opportunity to get help and clarify concepts. However, this was not the case with the self-completed census, meaning that some on furlough may have been confused with how to respond despite the extra guidance. We would expect the interviewer-led LFS to be successful in recording people on furlough. However, there is a possibility that some were not recorded as being on furlough or in employment in the LFS but were recorded as employed in the census. That said, the effect of this should be negligible.

To examine this more closely, we identified furloughed people who completed the LFS between January and June 2021 and linked them to their Census 2021 responses. The data were linked through a combination of address, household, and other individual data, giving a sample of 2,332 individuals on furlough (see Table 2). Of these, around 9 in 10 said they were employed (89%), meaning that most answered in a way that was consistent with the additional guidance. However, 11% did not answer in a way that was consistent with the guidance, with 2% of these saying they were unemployed and 9% saying they were economically inactive.

Table 2: Our analysis of linked individuals on furlough shows that the majority said they were employed on the census

Census response	Furlough count (from LFS)	Furlough percentage (unweighted)
Employed	2,074	89
Unemployed	37	2
Inactive	221	9

Source: Census 2021 and Labour Force Survey from the Office for National Statistics

### Notes

1. Figures represent household residents aged 16 to 64 years England and Wales, March 2021.
2. This table includes raw figures that have not been weighted to be representative of the population.

It is also possible that some people's circumstances were different on Census Day from what they were when they completed their LFS interview. This means that giving different answers on the census and the LFS was not necessarily incorrect.

The LFS has recorded an [increase in the number of adults aged 16 to 64 years who are economically inactive since the start of 2020](#). Looking at the three-month periods around the time of Census 2021, there were 8,808 thousand (8,808,000) economically inactive adults from November 2020 to January 2021, which then rose to 8,841 thousand (8,841,000) from February to April 2021. Subsequently, in May to July 2021, the number of economically inactive adults decreased to 8,765 thousand (8,765,000). It is possible that Census 2021 was also reflecting the rise in economic inactivity that was measured by the LFS from February to April 2021.





## 5 . Reconciling the differences between Census 2021 and the Labour Force Survey (LFS)

As discussed, Census 2021 and the LFS demonstrate a difference of 1 million people in employment at a similar point in time. Census 2021 estimated that 26.5 million adults aged 16 to 64 years (71.9%) were employed in England and Wales compared with 27.5 million (74.9%) from the LFS. In this section, we explore whether it is possible to resolve the difference between the two sources.

As described in Section 3, Census 2021 had a response rate covering 97% of the England and Wales population, whereas the LFS had a sample of around 1% of the population. As with all surveys, there will be a [margin of error or uncertainty](#) associated with the estimates. Table 3 provides the 95% confidence intervals for each estimate of adults in employment; these give the degree of uncertainty and help us to see how precise the estimate is. Specifically, the confidence intervals include a range of values likely to contain the unknown population value. Both sources have small margins of error, but the margin of error is smallest for Census 2021 because the sample size includes most of the population.

To reconcile the difference between Census 2021 and the LFS, we need to see if we can reduce the gap between the Census 2021 upper confidence limit (26,486 thousand people in employment) and the LFS lower confidence limit (27,348 thousand people in employment). This is a gap of around 861 thousand (861,000) people, far closer to the absolute difference seen between the two sources following the 2011 Census of 602 thousand (602,000) people.

Table 3: Estimates of the number in employment and the margin of error from Census 2021 and the Labour Force Survey

	Census 2021			Labour Force Survey		
	Estimate	95% Lower Confidence Limit	95% Upper Confidence Limit	Estimate	95% Lower Confidence Limit	95% Upper Confidence Limit
<b>Number of household residents (thousands)</b>	26,460	26,404	26,486	27,519	27,348	27,691
<b>Percentages (%)</b>	71.9	71.7	72.0	74.9	74.4	75.4

Source: Census 2021 and Labour Force Survey from the Office for National Statistics

### Notes

1. Figures represent household residents aged 16 to 64 years England and Wales, March 2021.

Based on a sample of 2,332 individuals on furlough, the analysis in Section 4 shows that around 9 in 10 (89%) responded to Census 2021 in a way that was consistent with the guidance. For instance, they stated that they were in employment but temporarily away from work, leaving around 1 in 10 (11%) who did not respond in line with the guidance. While there is no definitive source for the precise number of individuals on furlough during the census period, estimates from HM Revenue and Customs (HMRC) suggests that 5.6 million jobs were furloughed around this time in England and Wales. This means that there were 616 thousand (616,000) furloughed jobs where people may not have responded as expected on Census 2021, assuming that our linked analysis is representative of the furloughed population. This partly explains the discrepancy between the two data sources (see Table 4). However, the true extent of such misreporting on Census 2021 is likely to be materially lower than that. This is because the figure does not consider how people's circumstances may have been different between Census Day and the day of their LFS interview. Nor does it consider the possibility of people being on furlough from more than one job.

Table 4: Estimates of the number in employment when the Census 2021 estimate is adjusted to account for the possible impact of furlough

	<b>Adjusted Census 2021</b>	<b>Labour Force Survey</b>	<b>Difference</b>
<b>Number of household residents (thousands)</b>	27,076	27,519	-443,199
<b>Percentages (%)</b>	73.6	74.9	-1.3

Source: Census 2021 and Labour Force Survey from the Office for National Statistics

#### Notes

1. Figures represent household residents aged 16 to 64 years, England and Wales, March 2021.

This discrepancy is not fully reconciled even when assuming that the differences between the LFS and Census 2021 were entirely a result of misreporting employment status on the census (see Table 4). Census 2021 was conducted during the coronavirus (COVID-19) pandemic and it is possible that this impacted the way people responded to the census. People may have underreported employment status in the census in contrast to other surveys for unknown reasons. Contextual influences like these have also been noted for [other measures such as disability](#), where it is possible that the pandemic may have influenced how people perceived their conditions or illnesses.

In conclusion, Census 2021 found 1 million fewer people in employment than the Labour Force Survey (LFS). There may have been a tendency for some people who were furloughed to report that they were out of work rather than in employment when completing the census. Additionally, the discrepancy can be further explained by other measurement differences, differences in the mode of data collection, and context effects. Furthermore, it is also possible that some of the discrepancy will be explained by genuine changes in people's economic activity status around the time of Census Day, March 21 2021. Users should be aware of these issues when interpreting Census 2021 labour market figures. However, overall, most census respondents responded to the labour market questions in the way that we expected.

## 6 . 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.

### 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 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 they are out of work, have found a job and are waiting to start it in the next two weeks.

Please see our [A guide to labour market statistics methodology](#) for more general definitions of labour market terms.

## 7 . Data sources and quality

### Labour Force Survey (LFS)

The [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 [our Labour Force Survey user guidance methodology](#) and our [Comparisons between other labour market sources methodology](#).

### 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 that 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 in our [Quality and methodology information \(QMI\) for Census 2021 report](#).

## 8 . Future developments

We will continue to publish data from Census 2021 on the labour market theme over the coming years. Our analysis will maximise the benefits of the census by publishing granular (detailed) insights for sub-national geographies and sub-groups of the population.

## 9 . 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.

[Employment in local authorities, England and Wales: Census 2021](#) Article | Released 13 March 2023  
Data from Census 2021 for people living in local authorities of England and Wales who are in and out of work covering employment, unemployment, and economic inactivity.

[Labour market overview, UK](#) Bulletin | Released monthly  
Estimates of employment, unemployment, economic inactivity and other employment-related statistics for the UK.

## 10 . Cite this article

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