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# Impact of ONS’s Labour Force Survey Reweighting Exercise: December 2024

Theme: Labour Market

Geographical Area: Northern Ireland

The Labour Force Survey has been reweighted from the January to March 2019 quarter, to make use of more recent population estimates, increasing the aged 16 to 64 population in the UK by 484,000 (1.1%) and in NI by 7,000 (0.6%).

As part of this reweighting exercise, ONS uncovered an error in its processing of the NI labour market results. This error was detected in the previous version of the coding used by ONS for weighting Northern Ireland data, whereby weights were multiplied by a design weight in two separate parts of the code. This has now been corrected, resulting in the larger impact of this reweighting exercise on Northern Ireland estimates than for the other countries of the UK

## Key Points

* The impact of the reweighting to recent periods has been to increase the employment rate and decrease the economic inactivity and unemployment rates. There is a clear divide in the impact before and after summer-2022, the latter period showing larger impacts.
* An ONS error in the processing of NI labour market data has now been corrected in the reweighting exercise resulting in larger impacts on the NI data than the other countries in the UK.
* For summer-2022 onwards, the employment rate has been revised upwards by an average of 1.3pps, ranging from 0.7pps to 2.0pps. The largest impact was in the August to October 2023 quarter.
* For this later period, the economic inactivity rate has been revised downwards by an average of 1.2pps, ranging from 1.9pps to 0.7pps. The largest impact was in the August to October 2023 quarter.
* The unemployment rate has been revised downwards over the reweighting period by an average of 0.2pps, ranging from 0.3pps to 0.1pps. The largest impact was in the September to November 2022 quarter.

## Background

The Labour Force Survey (LFS) is a household sample survey carried out by interviewing individuals about their personal circumstances and work. Headline indicators of unemployment, employment, and economic inactivity are derived from the survey data in a process where responses are weighted to population totals to provide estimates at both NI and UK levels.

Typically, the Office for National Statistics (ONS) would reweight the LFS every two years to take account of updated population estimates and projections, although this schedule has changed during the past four years since the COVID-19 pandemic.

The preceding reweighting took place in February 2024 and covered the period July to September 2022 and September to November 2023. This reweighting used the latest population estimates (published November 2023) along with forward population projections. Prior to this, there were reweightings in June 2022, July 2021, and October 2020. The impact of these reweightings, along with related information from ONS, can be found on the NISRA website at <https://www.nisra.gov.uk/publications/background-information-lfs>.

The reweighting published today includes more recent population information and covers the period between January to March 2019 and April to June 2024. These new population estimates incorporate information on the size and composition of the UK population based on 2022 mid-year estimates and projected forward using scaling factors from 2021-based National Population projections, published in January 2024. This reweighting also revises the weighting methodology for January to March 2020 through to June to August 2022, to align them with the methodology used in later periods, as introduced in the preceding reweighting exercise.

As part of this reweighting exercise, ONS uncovered an error in its processing of the NI labour market results. This error was detected in the previous version of the coding used by ONS for weighting Northern Ireland data, whereby weights were multiplied by a design weight in two separate parts of the code. The error dates back to the January to March 2020 quarter during the pandemic, when the undetected changes were initially small. This has now been corrected, resulting in the larger impact of this reweighting exercise on Northern Ireland estimates than for the other countries of the UK.

Further information on this reweighting is available from ONS at: <https://www.ons.gov.uk/releases/impactofreweightingonlabourforcesurveykeyindicatorsdecember2024>.

NISRA is working with the ONS to improve the quality assurance of its indicators in order to try and prevent errors of this nature reoccurring. Response rates to the Northern Ireland Labour Force Survey (LFS) continue to be robust and NISRA considers that the survey in Northern Ireland continues to provide the best possible indicators for the local labour market at this time.

Please note that all statistics included in this paper refer to seasonally adjusted estimates and estimates of change are based on unrounded data. All data are available in Excel format, and have been published alongside this paper on the NISRA website on the [LFS background information](https://www.nisra.gov.uk/publications/background-information-lfs) page.

## Population Changes

Figure 1 shows the published and revised NI population estimates from 2019 to 2025.

### Figure 1: NI Population Estimates, 2019 to 2025, Published and Revised

Note: this graph has a non-zero axis.

## Results of the reweighting exercise across the UK

As part of this reweighting exercise and as described in Section 2, ONS uncovered an error in its processing of the NI labour market results. This has now been corrected, resulting in the larger impact of this reweighting exercise on Northern Ireland estimates than for the other countries of the UK (figure 2).

### Figure 2: The results of the reweighting exercise across the UK

*Revision to employment, unemployment, and economic inactivity rates by country of the UK, April to June 2024*

Source: Labour Force Survey from the Office for National Statistics

## Employment in NI

### Figure 3: NI Employment Rates (Aged 16 to 64, Seasonally Adjusted) Previously Published and Revised Estimates, Rolling Quarters Dec to Feb 2019 through to Apr to Jun 2024

Note: this graph has a non-zero axis.

The effect of the reweighting on the employment rate trend comes in two sections: the effect on the period up to June to August 2022 was mixed and generally small; the effect on the period July to September 2022 onwards is larger and exclusively upwards as shown in Figure 3. Keep in mind that there were different weighting methodologies in use for these two periods prior to this reweighting.

The largest increase between the previously published estimates and the revised estimates is 2.0pps, seen in August to October 2023, whilst the largest decrease was 0.6pps in February to April 2020. Over the earlier period to June to August 2022, the average change was +0.1pps, whilst in the later period from July to September 2022 onwards, the average change was +1.3pps.

There are three periods where the effect is statistically significant: July to September 2023, August to October 2023, and September to November 2023.

### Figure 4: NI Employment Levels (Age 16 and over, Seasonally Adjusted), Previously Published and Revised Estimates, Rolling Quarters Dec to Feb 2019 through to Apr to Jun 2024

Note: this graph has a non-zero axis.

Figure 4 shows that the effect of the reweighting on the employment level trend has been upwards for all data points, with the greatest changes being seen in 2024. The revisions to the employment levels range from an increase of 2,000 people, for June to August 2020, to an increase of 30,000 people for August to October 2023.

There are thirteen periods where the changes to the employment level are statistically significant: December to February 2021, March to May 2021, May to July 2023 through November to January 2024, and January to March 2024 through April to June 2024.

## Economic Inactivity in NI

### Figure 5: NI Economic Inactivity Rates (Aged 16 to 64, Seasonally Adjusted), Previously Published and Revised Estimates, Rolling Quarters Dec to Feb 2019 through to Apr to Jun 2024

Note: this graph has a non-zero axis.

For the economic inactivity rate, figure 5 shows that the reweighting has caused a mixed change to the period between January to March 2019 and June to August 2022, with an average decrease of 0.1pps during this time. For the July to September 2022 onwards period, the impact has been entirely downwards, with an average decrease of 1.2pps. Again, this is because two separate weighting methodologies have been replaced.

In the earlier period, the largest increase was 0.6pps, recorded in February to April 2020, whilst the largest decrease was 1.2pps in March to May 2021. Looking at the later period, the decrease ranged from 1.9pps in August to October 2023, and 0.7pps in January to March 2023.

There are three periods where the effect is statistically significant: July to September 2023, August to October 2023, and September to November 2023.

### Figure 6: NI Economic Inactivity Levels (Age 16 and over, Seasonally Adjusted), Previously Published and Revised Estimates, Rolling Quarters Dec to Feb 2019 through Apr to Jun 2024

Note: this graph has a non-zero axis.

Like the employment rate above, the impact on the economic inactivity level comes in two sections, again split by the June to August 2022 and July to September 2022 points. In the earlier period, the effect of the reweighting is mixed, with some periods increasing and some decreasing. During this earlier period the largest changes are +10,000 people in February to April 2020 and -10,000 people in March to May 2021. In the later period, the reweighting has caused decreases to every date. These changes vary between -7,000 people in October to December 2022 and -23,000 people in August to October 2023. In the earlier period, the average change was an increase of 3,000 people, whereas in the later period it was -14,000 people.

There are three periods where the effect is statistically significant: July to September 2023, August to October 2023, and September to November 2023.

## Unemployment in NI

### Figure 7: NI Unemployment Rates (Age 16 and over, Seasonally Adjusted), Previously Published and Revised Estimates, Rolling Quarters Dec to Feb 2019 through Apr to Jun 2024

Figure 7 shows that the effect of the reweighting on the unemployment rate is small. Over this period, the average change was -0.1pps, ranging from +0.3pps in September to November 2020 and -0.3pps in January to March 2021. Although less obvious than on the other trends, the split between the periods up to June to August 2022 and following July to September 2022 can be seen in the unemployment rate. In the earlier period, the effect of reweighting is mixed, whereas in the later period the effect is entirely downwards.

None of the changes are statistically significant.

### Figure 8: NI Unemployment Levels (Age 16 and over, Seasonally Adjusted), Previously Published and Revised Estimates, Rolling Quarters Dec to Feb 2019 through Apr to Jun 2024

The effect of the reweighting on the unemployment level trend is substantially less pronounced than that seen for either the employment or economic inactivity levels, which is due to the much lower number of unemployed responses. During the reweighted period, the average change to the unemployment level was 0, reflected in the mixed impact across the trend. The largest increase was +3,000 people in September to November 2020, whilst the largest decrease was -2,000 people in January to March 2021.

None of the changes are statistically significant.