

## FEATURE

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# Labour Force Survey: interim reweighting 2007

## SUMMARY

On 14 November 2007, the Office for National Statistics published revised Labour Force Survey (LFS) aggregate results in the Labour Market Statistics First Release to take account of the latest available population estimates. This article firstly describes the various new and revised population estimates and the time periods affected. This is supported by tables and charts illustrating the changes at both the total level and by age group. An outline of the reasons for making the revisions and of the basic methodology is then followed by a summary of how the new population figures impacted on the headline labour market indicators, that is, the measures of UK employment, unemployment and economic activity. Analysis is also provided of the revisions to the population estimates by Government Office Region.

On 14 November 2007, revised Labour Force Survey (LFS) estimates, that is, the aggregates in the Labour Market Statistics (LMS) First Release, were published to take into account the latest LFS population data. The LFS data sets used for detailed analysis, known as LFS microdata, are not affected. They continue to be weighted to the population estimates published in February 2003.<sup>1</sup>

On 22 August 2007, the Office for National Statistics (ONS) published the 2006 mid-year population estimates for the UK and revised estimates for 2002 to 2005. These were followed by the 2007 Q2 experimental quarterly population estimates for England and Wales on 13 September, which provided revised projections for mid-2007. These new and revised estimates have been incorporated into the calculation of the population estimates that feed into the LFS aggregate results.

In previous years, the reweighting of the LFS aggregates has coincided with the implementation of the annual review of the seasonal adjustment of the LFS. A detailed review has not been carried out in 2007; there have therefore been no changes to the way the series are seasonally adjusted.

This article gives an overview of the population estimate revisions and their impact on the headline and regional LFS aggregate results.

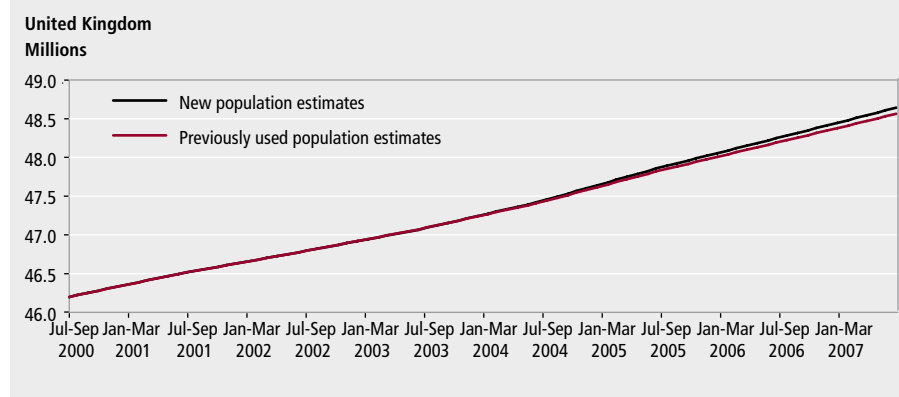
## Background to the LFS

The LFS is a continuous UK household sample survey, which collects information

from approximately 52,000 households each quarter (around 120,000 people). Since those responses reflect only a sample (approximately 1 in 400) of the total population, they are weighted on the basis of subnational population totals by age and sex to give estimates for the entire household population. The population estimates used to produce the LFS population totals are based on the annual mid-year population estimates (MYEs), and latest projections based on these MYEs. These are updated on an annual cycle and thus the LFS estimates are revised on the same basis. These annual revisions have been in operation since a new system of interim reweighting of LFS data was introduced in 2002. This methodology ensures that the LFS time series continues to be kept closely in line with the latest population estimates, thus reflecting a more accurate picture of the UK labour market.

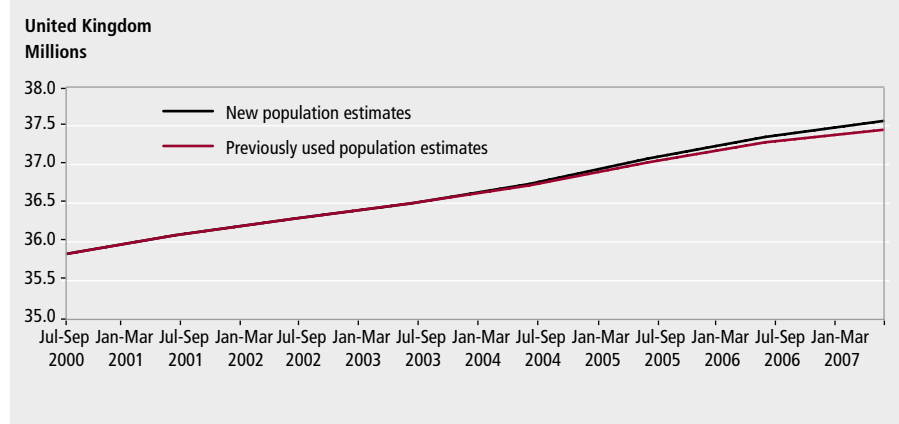
In order to remain consistent with the LFS sample, the population estimates are adjusted to exclude those outside the coverage of the LFS. Consequently, communal establishments, apart from people living in National Health Service accommodation and students living in halls of residence who have a UK-resident parent, are excluded from the LFS household population estimates. A fuller description of the history of the LFS and its methodology can be found in the Labour Force Survey User Guide, Volume 1.<sup>2</sup>

**Figure 1**  
LFS population aged 16+ totals, previous and new population estimates<sup>1</sup>

**Note:**

<sup>1</sup> Rolling three-month periods, July to September 2000 to June to August 2007.

**Figure 2**  
LFS working age population totals, previous and new population estimates<sup>1</sup>

**Note:**

<sup>1</sup> Rolling three-month periods, July to September 2000 to June to August 2007.

**Table 1**  
Revisions to headline LFS results, June to August 2007

Status	Level	Level as a percentage	Rate (percentage points)
<b>Population aged 16+</b>			
Economically active	91,000	0.3	0.1
In employment	85,000	0.3	0.1
Unemployed	6,000	0.4	-
Economically inactive	-12,000	-0.1	-0.1
<b>Working age population</b>			
Economically active	95,000	0.3	-
In employment	89,000	0.3	-
Unemployed	6,000	0.4	-
Economically inactive	20,000	0.1	-

### LFS population estimates and reweighting the LFS

The population estimates published in August and September 2007 indicate that the UK population was increasing at a slightly faster rate than had previously been estimated. **Figure 1** and **Figure 2** compare

the new LFS population aged 16+ and working age (women aged 16 to 59 and men aged 16 to 64) estimates with those previously used for the LFS aggregates.

The methodological improvements to the estimation of the mid-year estimates, which include an improved method for estimating

international migration, have contributed to the higher population growth shown in the latest LFS population aged 16+ and working age estimates. **Table A1** in the Appendix shows the revisions to the population aged 16+ and working age at each mid-year point from 2002. The largest revisions were to the period prior to the month of the reweighting exercise, 0.2 per cent for the aged 16+ estimates and 0.3 per cent for the working age estimates.

The impact of the population revisions is bigger on the working age population (**Figure 2**) than the aged 16+ population (**Figure 1**). This is because the latest estimates for people over working age (60+ for females and 65+ for males) are lower than those previously used. **Table A2** shows the impact of the new population estimates on each age group.

### Revisions to LFS aggregates

The remainder of this article will examine the impact of the population revisions on the headline indicators by labour market status. The largest revisions were to the period immediately before the month of the reweighting exercise – June to August 2007 – and these are summarised in **Table 1**.

For the population aged 16+, the downward revision to the level of economically inactive people is mainly due to the downward revision to the number of people above working age. This is because economic inactivity is significantly more prevalent among people above working age than among those of working age.

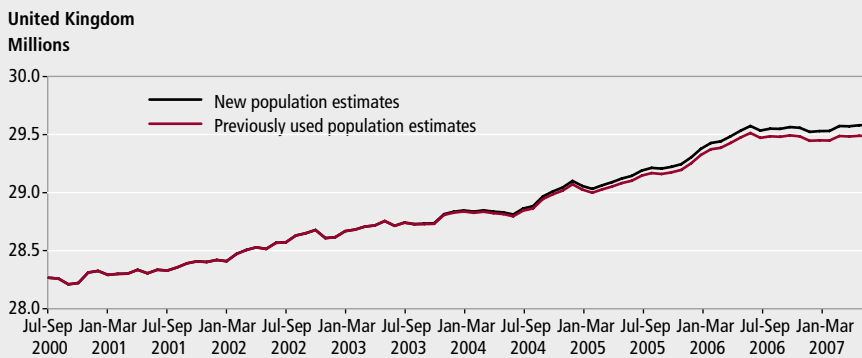
Generally, since the population revisions are included in both the numerator and denominator for the rate calculations, the revisions to the rates are very small, no more than 0.1 of a percentage point and, in many cases, zero. Consequently the following analysis focuses on the levels rather than rates.

### LFS economically active estimates

**Figure 3** shows the impact of the population revisions on the LFS working age (16 to 59/64) economically active levels.

The UK working age economically active level has been increasing at a slightly higher rate over the period than had previously been estimated. The LFS working age economically active level combines the LFS working age employment and unemployment levels. These will be examined in more detail below. The largest revisions were to the period immediately before the month of the reweighting exercise, 0.3 per cent for the working age

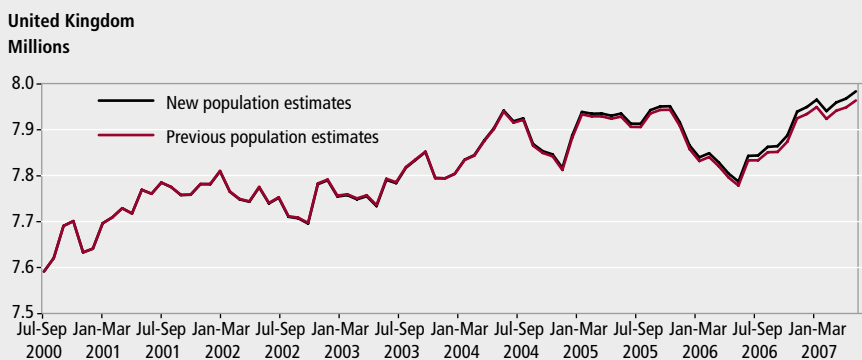
**Figure 3**  
**LFS working age economically active totals, previous and new population estimates<sup>1</sup>**



**Note:**

<sup>1</sup> Rolling three-month periods, July to September 2000 to June to August 2007.

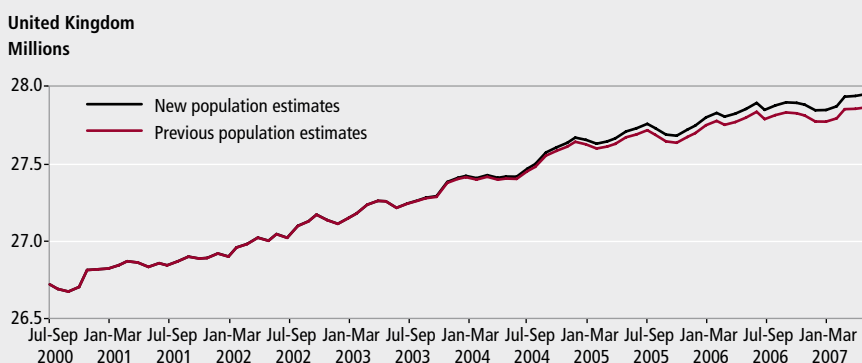
**Figure 4**  
**LFS working age economically inactive totals, previous and new population estimates<sup>1</sup>**



**Note:**

<sup>1</sup> Rolling three-month periods, July to September 2000 to June to August 2007.

**Figure 5**  
**LFS working age employment totals, previous and new population estimates<sup>1</sup>**



**Note:**

<sup>1</sup> Rolling three-month periods, July to September 2000 to June to August 2007.

economically active estimates.

**LFS economically inactive estimates**

**Figure 4** shows the impact of the population revisions on the LFS working age (16 to 59/64) economically inactive levels.

The UK working age economically inactive level has been increasing at a slightly higher rate over the period than had previously been estimated. The revisions to the LFS working age economically inactive levels are no greater than 0.1 per cent, as seen for June to August 2007.

**LFS employment estimates**

**Figure 5** shows the impact of the population revisions to the LFS working age (16 to 59/64) employment levels.

**Table A3** shows the revisions to the employment levels for June to August 2007, broken down by age group. The largest revisions are to the period immediately before the reweighting, 0.3 per cent for the working age employment estimates.

**LFS unemployment estimates**

**Figure 6** shows the impact of the population revisions to the LFS working age (16 to 59/64) unemployment levels.

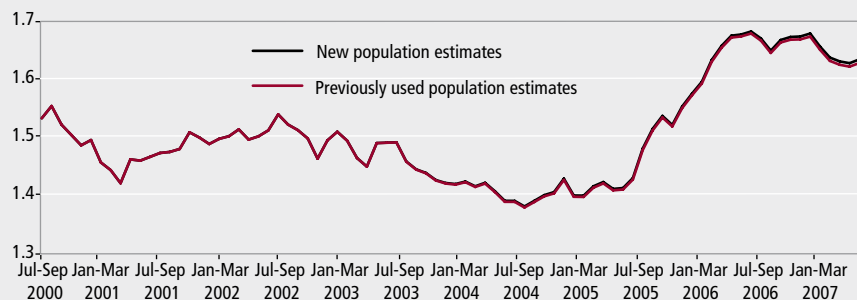
**Table A3** also shows the revisions to the unemployment levels for June to August 2007, broken down by age group. The largest revisions were to the period immediately before the reweighting exercise, 0.4 per cent for the working age unemployment estimates.

**LFS population revisions by Government Office Region (GOR)**

**Figure 7** shows the revisions to the June to August 2007 LFS household population data using the latest population aged 16+ estimates, broken down by region.

The largest upward revision for June to August 2007 was in Yorkshire and The Humber, 65,000. The largest downward revision was seen in London, 106,000. Overall, the estimates for seven regions were revised upwards and five were revised downwards. **Table A4** details the changes in the economic activity status of each GOR for June to August 2007 as a result of the latest population estimates. The percentage change between the new and previously used 16+ population estimates does vary between regions: for Yorkshire and The Humber it peaks at +1.6 per cent in June to August 2007 and for London it reaches -1.7 per cent over the same period.

Figure 6

LFS working age unemployment totals, previous and new population estimates<sup>1</sup>United Kingdom  
Millions

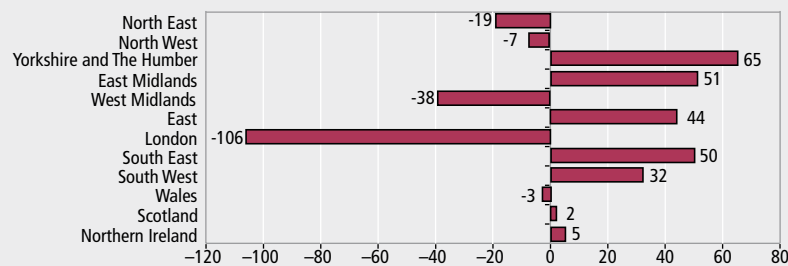
## Note:

1 Rolling three-month periods, July to September 2000 to June to August 2007.

Figure 7

LFS aged 16+ population data revisions to levels: by GOR, June to August 2007<sup>1</sup>

Thousands



## Note:

1 Rolling three-month period.

## APPENDIX

Table A1

## New and previous population aged 16+ and working age estimates

	16+				16-59/64				Thousands
	Previous	New	Revision	% change	Previous	New	Revision	% change	
Jun-Aug 2002	46,773	46,773	0	0.0	36,297	36,297	0	0.0	
Jun-Aug 2003	47,069	47,065	-4	0.0	36,500	36,498	-2	0.0	
Jun-Aug 2004	47,409	47,421	12	0.0	36,733	36,752	19	0.1	
Jun-Aug 2005	47,822	47,860	38	0.1	37,032	37,082	49	0.1	
Jun-Aug 2006	48,193	48,250	57	0.1	37,296	37,366	70	0.2	
Jun-Aug 2007	48,563	48,642	79	0.2	37,459	37,575	115	0.3	

Source: Office for National Statistics

## Notes

- 1 A more detailed article and information about interim reweighting and inconsistencies between micro- and macro-level data can be found in Labour Market Trends April 2004 at [www.statistics.gov.uk/downloads/theme\\_labour/lmt\\_apr04.pdf](http://www.statistics.gov.uk/downloads/theme_labour/lmt_apr04.pdf)
- 2 See [www.statistics.gov.uk/statbase/product.asp?vlnk=1537](http://www.statistics.gov.uk/statbase/product.asp?vlnk=1537)

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**Table A2**  
**New and previous population estimates: by age band**

	Thousands							
	16-17				18-24			
	Previous	New	Revision	% change	Previous	New	Revision	% change
Jun-Aug 2002	1,514	1,512	-1	-0.1	4,997	4,996	0	0.0
Jun-Aug 2003	1,528	1,526	-2	-0.1	5,131	5,131	0	0.0
Jun-Aug 2004	1,563	1,560	-2	-0.2	5,248	5,268	20	0.4
Jun-Aug 2005	1,578	1,573	-5	-0.3	5,371	5,393	21	0.4
Jun-Aug 2006	1,577	1,569	-8	-0.5	5,496	5,515	19	0.3
Jun-Aug 2007	1,591	1,587	-3	-0.2	5,591	5,633	43	0.8
	25-34				35-49			
	Previous	New	Revision	% change	Previous	New	Revision	% change
Jun-Aug 2002	8,175	8,183	9	0.1	12,734	12,728	-5	0.0
Jun-Aug 2003	7,991	8,005	14	0.2	12,907	12,902	-5	0.0
Jun-Aug 2004	7,859	7,876	17	0.2	13,063	13,057	-7	-0.1
Jun-Aug 2005	7,818	7,857	39	0.5	13,215	13,211	-3	0.0
Jun-Aug 2006	7,772	7,818	46	0.6	13,337	13,338	1	0.0
Jun-Aug 2007	7,730	7,795	65	0.8	13,420	13,424	4	0.0
	50-59/64				60/65+			
	Previous	New	Revision	% change	Previous	New	Revision	% change
Jun-Aug 2002	8,878	8,877	-2	0.0	10,476	10,476	0	0.0
Jun-Aug 2003	8,943	8,934	-8	-0.1	10,569	10,567	-2	0.0
Jun-Aug 2004	9,000	8,991	-9	-0.1	10,676	10,669	-7	-0.1
Jun-Aug 2005	9,051	9,048	-3	0.0	10,790	10,778	-12	-0.1
Jun-Aug 2006	9,114	9,127	13	0.1	10,896	10,884	-13	-0.1
Jun-Aug 2007	9,128	9,135	8	0.1	11,104	11,068	-37	-0.3

Source: Office for National Statistics

**Table A3**  
**Changes as a result of the latest population estimates: by age group and economic activity status, June to August 2007**

	Thousands			
	Economically active	In employment	Unemployment	Economically inactive
16-17	-2	-1	0	-2
18-24	31	27	4	11
25-34	57	54	3	8
35-49	3	3	0	1
50-59/64	5	5	0	2
60/65+	-4	-4	0	-32

Source: Office for National Statistics

**Table A4**  
**Changes as a result of the latest aged 16+ population estimates: by economic activity status and Government Office Region, June to August 2007**

Government Office Region	Thousands			
	Economically active	In employment	Unemployed	Economically inactive
North East	-15	-15	-1	-4
North West	-7	-7	0	0
Yorkshire and The Humber	47	43	4	18
East Midlands	36	33	3	15
West Midlands	-29	-27	-2	-10
East	27	25	2	17
London	-74	-66	-8	-32
South East	29	28	1	21
South West	22	21	1	10
Wales	-3	-3	0	0
Scotland	7	6	1	-5
Northern Ireland	5	5	0	0

Source: Office for National Statistics