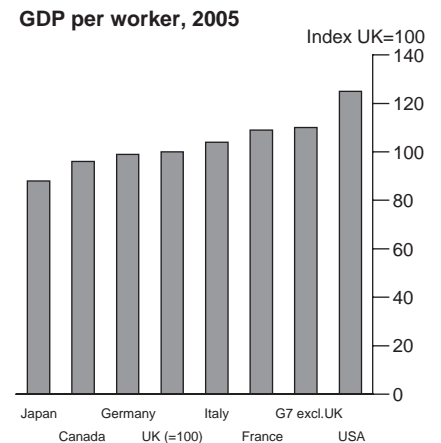


21 February 2007

Coverage
United Kingdom
Theme
The Economy

International comparisons of productivity

Revised data for 2005 continues to show the UK's labour productivity performance, on a GDP per worker basis, lower than that of France and the USA, similar to that of Canada, Germany and Italy, and above that of Japan. Whereas Canadian and Italian data have been previously used to construct the G7 totals, this release is the first time that Canadian and Italian data has been separately identified (see Background Note 5). The 2005 ranking of countries' productivity performance is little different from 2004 and from previously published estimates, although this release marks the first time that ICP estimates have been published for Canada and Italy.



UK productivity in 2005, as measured by GDP per worker, was behind that of the average of the other G7 countries as a group (the G7 countries being Canada, France, Germany, Italy, Japan, the USA and the UK). The USA continues to lead the UK with GDP per worker 25 per cent higher than that of the UK.

In 2005 Canada's and Germany's productivity performances were 4 per cent and 1 per cent respectively below that of the UK, whereas Italy's productivity performance was 4 per cent higher than that of the UK. Given the measurement difficulties that exist with making international comparisons, differences of a few percentage points between the productivity estimates for individual countries should not be seen as significant. The 2005 figures suggest therefore that the UK has similar levels of productivity to Canada, Germany and Italy.

Revisions to the GDP per worker data cover the period 1990 to 2005 and are a result of the GDP and purchasing power parities source data being revised. The revisions are relatively small in magnitude and are mainly a result of the PPP data being revised for all G7 countries. The exception is Japan, whose revisions to GDP were not available for the last released data but appear in this release.

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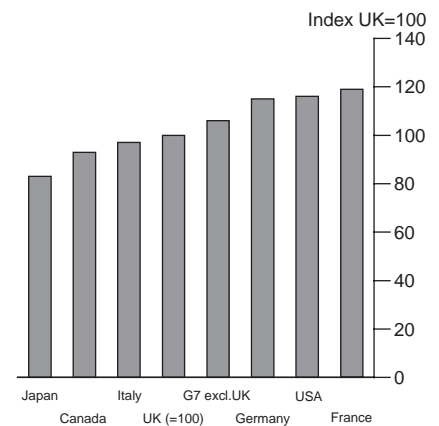
Also published are estimates of international comparisons of GDP per hour worked. As with GDP per worker, users are advised to allow a margin of error of a few percentage points when making comparisons across countries. GDP per hour worked takes into account how long workers in individual countries work on average. Since working patterns differ across countries, this affects the ranking of the countries. US workers work longer hours than their UK counterparts meaning that the UK performance relative to the USA using GDP per hour worked is better than when comparing on a per worker basis. In contrast, workers in continental Europe tend to work shorter hours on average. Hence the relative performance of the UK compared with France and Germany is worse on a per hour basis than it is on a per worker basis.

Revised data for 2005 shows that the ranking of countries, on a GDP per hour worked basis, remains unchanged from that reported in October 2006. The UK is ahead of Japan but behind Germany, the USA and France. These three countries continue to be the best performers using this measure of productivity.

This release marks the first time that these data have been published for Canada and Italy. The 2005 figures show that the UK is ahead of Canada on this measure of productivity whereas the UK and Italy have similar levels of productivity as measured by GDP per hour worked.

There have also been revisions to the GDP per hour estimates, covering the period 1990 to 2005. As with the GDP per worker, the revisions are mainly the result of revisions to PPP source data.

GDP per hour worked, 2005



BACKGROUND NOTES

1. Further information about the ICP can be found on the National Statistics website at <http://www.statistics.gov.uk/cci/nugget.as?id=160>
2. ONS publishes ICP twice yearly, estimating Gross Domestic Product (GDP) per worker and GDP per hour worked.
3. ICP estimates are now published to the nearest whole number. However, as advised in previous releases, differences of a few percentage points between the productivity estimates from individual countries should not be seen as significant because of the measurement difficulties that are present when making international comparisons.
4. This release shows the second set of annual data of GDP per hour worked to be released as a National Statistic. Since the September 2005 release, the OECD has made methodological improvements to the hours worked data that allows international comparisons to be made.
5. This release represents the first time that ICP estimates have been published individually for Canada and Italy. Previously results were presented for the UK relative to the USA, France, Germany, Japan and group of seven (G7) countries excluding the UK (UK=100). These were included in ICP because they are key competitors of the UK. The USA is chosen because it is the world's leading economy, France and Germany are the major European economies and Japan is the leading economy in Asia. Additionally France, Germany and the USA are listed in the Department of Trade and Industry's Public Service Agreement productivity target. Japan was also part of this target but has been removed in recent years. For transparency reasons, it has been decided to publish ICP data for Canada and Italy individually.
6. It should be noted that Italy has a larger than average informal economy. Italy makes an upward adjustment to its GDP data to account for this. However all the extra employment may not be captured by the Labour Force Survey, which would imply that Italy's productivity performance may be overstated.
7. Revisions have not been published for Canada and Italy in this release as this is the first time that ICP data have been published for these countries.
8. The PPP data has been of a higher quality since 1995 for European countries compared to earlier years. Annual benchmark results have been provided by Eurostat to ensure consistency and continuity in PPPs for European countries from 1995 and from 1999 for non-EU countries. OECD integrates these annual benchmark results with its own triennial benchmarks. More details of this can be found at www.statistics.gov.uk/cci/article.asp?ID=1120

9. A technical note, which provides further detail about the international comparisons of productivity methodology, the compilation process, and a detailed analysis of past revisions, can be found on the National Statistics website at www.statistics.gov.uk/cci/article.asp?ID=1069
10. The OECD also publishes international comparisons of GDP per hour worked. The differences between the ONS and OECD series are not large. They can be explained by the different sources used for the component data. In particular, OECD recently decided to move to the National Accounts as the main source of employment data for most countries whereas ONS employment data is based on countries' Labour Force Surveys. There are also slight differences in the GDP data as the OECD uses the Annual National Accounts data to obtain the GDP data whereas ONS uses the Quarterly National Accounts.
11. ICP are a comparison of levels of productivity and should not be used in any time series analysis. The methodology of Purchasing Power Parities (PPPs) is not designed for intertemporal analyses to be made. PPPs can only be viewed as point in time estimates of the relative prices between two countries. They measure the relative price across countries of a basket of goods and services in a specific year. Since this representative basket of goods and services changes over time, ICP should not be presented as a time series but only as point in time estimates. This means that the productivity gap between countries can be assessed in individual years but not on an intertemporal basis.
12. GDP data for each country in local current prices are revalued to take account of currency using PPPs. GDP at purchasing power parity is effectively a (relative) volume measure of GDP. For each country, GDP at purchasing power parity is divided by either an employment or total hours worked measure to produce a labour productivity estimate. The derived labour productivity measure for each country in each year is then divided by the UK estimate for that year and multiplied by one hundred to produce an index relative to the UK equal to 100. Numbers in excess of 100 indicate that productivity is higher in the other countries than the UK. Numbers below 100 indicate that productivity is higher in the UK.
13. Data sources for this release are as follows: GDP from the OECD Main Economic Indicators, January 2007, PPP estimates from the OECD PPP website (last updated in December 2006), Employment from OECD Annual Labour Force Statistics, September 2006, Average Hours Worked from OECD Employment Outlook, July 2006.
14. Following the methodological change in the compilation of the UK official productivity estimates, with effect from September 2004, the definition of the headline productivity measure, that is Gross Value Added (GVA) per worker, for the whole economy is now closer to that used in ICP.



15. Details of the policy governing the release of new data are available from the press office.
16. **National Statistics** are produced to high professional standards set out in the National Statistics Code of Practice. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from political interference. © Crown Copyright 2007.

International Comparisons of Productivity

Table 1: GDP per worker

	Canada	France	Germany	Italy	Japan	UK	USA	G7	G7 exc. UK
1990	118	131		133	107	100	137		
1991	116	131	113	132	107	100	136	123	125
1992	115	130	115	131	104	100	136	122	124
1993	113	126	111	132	100	100	133	119	121
1994	112	124	111	132	97	100	131	118	119
1995	111	123	111	134	97	100	130	117	119
1996	109	122	109	132	97	100	129	117	118
1997	107	121	107	129	94	100	128	115	116
1998	106	121	105	129	91	100	128	114	115
1999	109	119	105	127	91	100	131	115	117
2000	106	118	104	125	91	100	128	114	115
2001	104	116	102	121	89	100	125	111	112
2002	98	112	99	115	87	100	122	108	109
2003	97	109	104	111	88	100	123	109	110
2004	95	108	101	106	87	100	123	108	109
2005	96	109	99	104	88	100	125	109	110

Note: index, UK = 100. Data for all years and all countries have been subject to revision in this release.

Source: Office for National Statistics

Table 2: GDP per hour worked

	Canada	France	Germany	Italy	Japan	UK	USA	G7	G7 exc. UK
1990	117	136		123	93	100	132		
1991	115	136	129	122	94	100	132	119	121
1992	113	133	127	119	92	100	129	117	118
1993	110	129	123	120	91	100	125	115	116
1994	109	128	124	122	89	100	123	114	115
1995	109	130	126	124	90	100	122	114	115
1996	106	128	126	122	89	100	122	113	114
1997	106	128	124	119	88	100	120	112	113
1998	104	128	121	118	85	100	120	111	112
1999	106	126	122	116	86	100	121	112	113
2000	103	126	121	115	85	100	119	110	111
2001	101	126	120	112	84	100	118	109	110
2002	95	123	116	106	82	100	113	105	106
2003	94	119	122	103	81	100	114	106	106
2004	91	117	118	98	81	100	113	104	105
2005	93	119	115	97	83	100	116	106	106

Note: index, UK = 100. Data for all years and all countries have been subject to revision in this release.

Source: Office for National Statistics

International Comparisons of Productivity

Table R1: Revisions to GDP per worker

Year	Canada	France	Germany	Italy	Japan	UK	USA	G7	G7 exc. UK
1990	-	0		-	0	0	0		
1991	-	1	-1	-	1	0	0	0	0
1992	-	0	0	-	0	0	-1	0	0
1993	-	0	0	-	0	0	0	0	0
1994	-	0	0	-	0	0	0	1	0
1995	-	0	0	-	0	0	0	0	0
1996	-	0	0	-	1	0	0	1	0
1997	-	0	0	-	0	0	0	0	0
1998	-	0	0	-	0	0	0	0	0
1999	-	0	0	-	1	0	0	0	1
2000	-	0	0	-	0	0	0	0	0
2001	-	0	0	-	0	0	-1	-1	-1
2002	-	0	0	-	1	0	0	0	0
2003	-	-3	4	-	0	0	-1	0	0
2004	-	-2	2	-	-1	0	-2	-2	-1
2005	-	-1	2	-	-1	0	-2	-1	-1

Note: Revisions refer to the difference between the data released on 21 February 2007 and the data released on 04 October 2006.

Source: Office for National Statistics

Table R2: Revisions to GDP per hour worked

Year	Canada	France	Germany	Italy	Japan	UK	USA	G7	G7 exc. UK
1990	-	0		-	0	0	0		
1991	-	0	-1	-	0	0	0	0	0
1992	-	0	0	-	1	0	0	0	0
1993	-	0	-1	-	1	0	0	1	0
1994	-	0	0	-	1	0	0	1	0
1995	-	0	0	-	1	0	0	1	0
1996	-	0	0	-	1	0	0	0	0
1997	-	0	0	-	1	0	0	0	0
1998	-	0	0	-	0	0	0	0	0
1999	-	0	0	-	0	0	0	0	0
2000	-	0	0	-	0	0	0	0	0
2001	-	0	0	-	0	0	0	0	0
2002	-	0	0	-	1	0	0	0	0
2003	-	-4	6	-	-1	0	-1	0	0
2004	-	-2	3	-	-1	0	-2	-2	-1
2005	-	-1	2	-	0	0	-1	-1	-1

Note: Revisions refer to the difference between the data released on 21 February 2007 and the data released on 04 October 2006.

Source: Office for National Statistics