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The Director of ONS is also the National Statistician and the Registrar General for England and Wales.

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You can also find National Statistics on the Internet at: www.statistics.gov.uk

A fuller list of contact points can be found on page 67.

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In brief

Consultation on ONS's statistics work programme 2008–2012: second phase

The Office for National Statistics (ONS) has launched the second phase of a consultation on statistical priorities. The five-year funding settlement was agreed in April 2007 as part of the Comprehensive Spending Review and covers the period from 2007/08 to 2011/12.

Phase one of the consultation took place during June and July 2007 and resulted in 90 responses being received from organisations and individuals. Details of the responses received for those who granted permission to publish their responses can be found at the address given below.

Within the link below, Annex C describes the current range of outputs for each National Statistics theme, the developments that are already planned, the responses to phase one consultation and ONS proposals for additional investment.

Views are invited from all ONS's stakeholders and those with an interest in its business, using the response template at Annex A. This asks just four questions and seeks replies by 30 November.

Responses will be considered by ONS and feed into its planning process. The final statistical work programme will be published in the new year. The work programme and the responses to the consultation will inform the thinking as the new Statistics Board starts to consider statistical priorities for the long term.

More information

www.statistics.gov.uk/about/consultations/ons-stat-work-prog-phase2.asp

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Improving price statistics – the Ottawa Group

The Ottawa Group was set up by the UN Statistical Commission as a forum for specialist academics and practitioners to share their experiences and discuss research on crucial problems of measuring price change. The focus has been on applied research particularly, though not exclusively, in the area of Consumer Price Indices (CPI).

Its first meeting was in October 1994 in Ottawa. The first paper was presented by Marta Haworth of the UK's Central Statistical Office (now Office for National Statistics (ONS)) on 'Sampling and Data Capture Issues in CPI Construction'.

It was fitting that the tenth meeting of the Group, in October this year, returned to Ottawa, 13 years and 200 papers later.

Over the years the Ottawa Group has contributed to international best practices in many key areas of CPI methodology and compilation, perhaps most significantly in relation to dealing with quality change and bias. Perhaps one of the group's biggest specific achievements with long lasting consequences has been the active participation of its members in production of the ILO Manual on Consumer Price Indices. David Fenwick, then Director of Consumer Price Indices at ONS, chaired the technical expert group who were given the task of drafting the manual and most of the chapter authors were members of the Ottawa Group.

ONS continues to be actively involved in the Ottawa Group and at the most recent meeting presented a paper on the factors that influence people's perceptions and experiences of inflation; the paper also included an overview of the interactive Personal Inflation Calculator launched on the ONS website earlier this year. This led to an interesting discussion on the technical issues relating to the calculation of inflation rates for specific categories of people, and a number of other National Statistical Offices indicated a keen interest in developing a similar interactive tool to encourage people's understanding of inflation.

ONS also presented a progress report on a project it is currently leading to develop a handbook of practical issues on CPI construction confronted by developing countries.

It also chaired a session reviewing the first ten years of the Ottawa Group and presented proposals for the future which focused on a more systematic approach to index construction and development, with the goal of moving to the production of a more coherent and inclusive family of good quality and fit-for-purpose price indices. This would encompass: standardisation and harmonisation of methodologies; progress on outstanding measurement issues (such as introducing owner-occupied housing costs); coherence with Producer Price Indices and deflators; and looking at statistical designs which will generate better value-for-money statistics.

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National Statistician gives evidence to House of Lords Economic Affairs Committee

On 16 October, the National Statistician, Karen Dunnell, gave evidence to the House of Lords Economic Affairs Committee Inquiry into the economic impact of immigration, along with Paul Wiles (Chief Scientific Adviser, Home Office, responsible for statistics) and David Frazer (Head of Statistics, Department for Work and Pensions). This followed the submission of written evidence to the Committee by a number of organisations including the Office for National Statistics, the Bank of England, the Statistics Commission and a several local authorities. Further details are available at the address given below.

Committee members asked questions about statistics about migrants, how they might be improved, and the extent of cross-departmental co-operation in developing migration statistics to meet user needs. A full transcript of the hearing can be accessed from the House of Lords website at the address given below.

More information

Written submissions
www.parliament.uk/parliamentary_committees/lords_economic_affairs/eaffwrevid.cfm

Transcript of hearing
www.parliament.uk/parliamentary_committees/lords_economic_affairs.cfm

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Intangible investment and productivity in the Pre-Budget Report

The Pre-Budget Report (PBR) was announced on 9 October by the Chancellor of the Exchequer. In his speech to the House of Commons, he referred to new analysis suggesting that UK businesses might be investing in skills, innovation and intellectual property proportionally as much as those in the United States. Full details of the PBR can be obtained from the address given below. The analysis, published as a Treasury Economic Working Paper alongside the PBR, investigates the consequences for a range of macroeconomic variables, including productivity, of treating business spending on knowledge as investment.

This report (see details below) summarises the findings of a Treasury-funded project led by Professor Jonathan Haskel, co-authored with Mauro Giorgio Marrano and Gavin Wallis, as reported in the June edition of *Economic & Labour Market Review*.

The authors of the report use information from a number of ONS and independent sources to evaluate how much UK companies could be investing in knowledge. Based on these data and a number of assumptions, the analysis concludes that:

- business investment in 2004 would have been about double the official measure. Investment in intangibles was £123 billion, compared with tangible investment of £96 billion
- the value of measured market sector output would have been higher by about 6 per cent in 1970 and 13 per cent in 2004
- instead of the ratio of nominal business investment to market sector output falling since 1970, it would have been rising
- growth in labour productivity and capital deepening would have been higher than previously estimated
- total factor productivity growth would not have slowed down since 1990, as it appears on current measures, but would have been picking up, and
- comparing the results with the US suggests that the share of intangible investment in market sector output is similar in both countries

These results imply a number of challenges to the way National Accounts, in the UK and abroad, measure and record a range of business expenditures.

While traditional measurement techniques may underestimate the importance of investment in intangibles in driving productivity growth in recent years, National Accounts need to comply with international standards and guidelines to ensure consistency and comparability. ONS is responding to these challenges by playing an active role, in the UK and internationally, in driving forward this agenda:

- in the *Blue Book* 2007, ONS revised its software investment estimates by improving its estimates of own-account software expenditure
- ONS is also about to produce a preliminary Satellite Account treating R&D expenditures as investment, thereby leading on the implementation of the ongoing revision to the SNA. ONS contributes to the Eurostat and OECD working groups that will set out the implementation guidance
- ONS plays a key advisory role to the academic team refining its estimates of intangible investment through detailed industry analysis and discussions with business representatives

More information

Pre-Budget report
www.hm-treasury.gov.uk/pbr_csr/report pbr_csr07_repindex.cfm

Treasury Economic Working Paper
www.hm-treasury.gov.uk/pbr_csr/documents/ pbr_csr07_intangible.cfm

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SNA93 revision and its implementation

This year's OECD National Accounts Working Party meeting was held in Paris between October 2 and 3. The SNA93 revision process (SNA93 Rev. 1) and its implementation were the two most important topics discussed at this meeting.

SNA93 Rev. 1 will include all 44 issues agreed by the United Nations Statistical Commission. It will be published in two volumes: Volume 1, to be published in 2008, will cover chapters 1 to 17, while Volume 2, to be published in 2009, will cover chapters 18 to 27.

Feedback from the worldwide consultation on draft chapters has led SNA93 Rev. 1 to proceed with care on a few issues such as: treatment of research and development (R&D) as capital; cost of capital for market producers to be voluntary; cost of capital for non-market producers where further research is needed; capitalisation of military expenditure as recommended; and undertaking more research on R&D.

In EU Member states, the revised ESA95 will cover all recommendations agreed at international level. Drafting of chapters begins in January 2008. A completed report will be submitted to the European Commission for approval in March 2009. All EU countries are expected to adopt the revised ESA95 by 2014; the same applies to OECD countries. Special features will be the implementation by all countries of R&D and pensions satellite accounts.

In readiness for implementation, Eurostat is asking Member countries to properly inform and raise awareness about the ESA95 revision project, and National Statistical Institutes to conduct impact assessments of the revision of ESA95 to evaluate resources needed for the priority project and to give an idea of the potential impact on main aggregates to political users as early as possible. For its part, Eurostat will organise three meetings: two on the transmission timetable to be held between September 2008 and February 2009, and a meeting for economists, macroeconomic statisticians and national accountants to be held in 2009. Public consultation of users will take place in mid-2008.

Other issues discussed were: the OECD handbooks on measuring capital (revised), on measuring intellectual property and on measurement of volume output of health and education; and revisions analysis and transmission of data.

Some countries shared their knowledge and experience in compiling estimates of household non-financial assets, satellite accounts for R&D and environmental accounts.

For its part, the Office for National Statistics has now begun making preparations towards the eventual implementation of ESA95 Rev. 1.

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UPDATES

Updates to statistics on www.statistics.gov.uk

8 October

Index of production

Manufacturing: 0.4% three-monthly rise to August
www.statistics.gov.uk/cci/nugget.asp?id=198

Producer prices

Factory gate inflation rises to 2.7% in September
www.statistics.gov.uk/cci/nugget.asp?id=248

9 October

UK trade

Deficit narrowed to £4.1 billion in August 2007
www.statistics.gov.uk/cci/nugget.asp?id=199

16 October

Inflation

September: CPI at 1.8%; RPI down to 3.9%
www.statistics.gov.uk/cci/nugget.asp?id=19

17 October

Average earnings

Pay growth steady in year to August 2007
www.statistics.gov.uk/cci/nugget.asp?id=10

Employment

Rate falls to 74.4% in three months to August
www.statistics.gov.uk/cci/nugget.asp?id=12

18 October

Public sector

September: £3.8 billion current budget deficit
www.statistics.gov.uk/cci/nugget.asp?id=206

Retail sales

Positive underlying growth continues
www.statistics.gov.uk/cci/nugget.asp?id=256

19 October

GDP growth

Economy rose by 0.8% in Q3 2007
www.statistics.gov.uk/cci/nugget.asp?id=192

Index of services

1.0% three-monthly rise into August
www.statistics.gov.uk/cci/nugget.asp?id=558

31 October

Local employment

London has greatest regional contrast
www.statistics.gov.uk/cci/nugget.asp?id=252

Local inactivity

Lowest rate of 7.4% in Surrey Heath
www.statistics.gov.uk/cci/nugget.asp?id=1013

Local unemployment

Lowest rate of 2.2% in Eden, Cumbria

FORTHCOMING RELEASES

Future statistical releases on www.statistics.gov.uk

5 November

Index of production – September 2007

7 November

Annual survey of hours and earnings (ASHE) 2007 – stage 1

Low pay - 2007

9 November

UK trade – September 2007

12 November

Producer prices – October 2007

13 November

Consumer price indices – October 2007

Digest of engineering turnover and orders – September 2007

14 November

Labour market statistics – November 2007

Labour Force Survey reweighting – 2007

MM19: Aerospace and electronic cost indices – August 2007

MM24: Monthly review of external trade statistics – September 2007

15 November

Public and private sector breakdown of labour disputes

Retail sales – October 2007

SDM28: Retail sales – October 2007

16 November

Annual Business Inquiry: provisional results, 2006

19 November

Focus on consumer price indices – October 2007

20 November

Internet connectivity – Q3 2007

MM22: Producer prices – October 2007

Public sector finances – October 2007

21 November

Average weekly earnings – September 2007

Index of labour costs per hour – Q3 2007

22 November

Business investment provisional results – Q3 2007

23 November

Experimental market sector gross value added (GVA) – Q3 2007

Index of services – September 2007

Public sector finances: supplementary (quarterly) data

UK output, income and expenditure – Q3 2007

27 November

Monthly digest of statistics – November 2007

28 November

Services producer price index (experimental statistics) – Q3 2007

30 November

Distributive and service trades – September 2007

E-commerce and ICT 2006

Sector classification guide

Economic review

November 2007

Anis Chowdhury
Office for National Statistics

SUMMARY

GDP continued to grow robustly in 2007 quarter three, driven by a pick up in services sector output but offset by lower manufacturing output. On the expenditure side in 2007 quarter two, business investment and household spending strengthened. The current account deficit narrowed in 2007 quarter two. The trade deficit narrowed in 2007 quarter two and showed signs of further narrowing in quarter three. The labour market remains buoyant but average earnings remain relatively subdued. The public sector finances position deteriorated in September 2007. Consumer price inflation was unchanged in September. Producer output price inflation was unchanged in September, but still exhibited signs of upward pressure.

GROSS DOMESTIC PRODUCT

Third quarter growth of 0.8 per cent

The preliminary GDP growth for the third quarter of 2007 is now available. GDP growth for the third quarter of 2007 is estimated to have grown fairly strongly, by 0.8 per cent, unchanged from the growth rate in the previous quarter. The initial estimate for the annual rate of growth was 3.3 per cent, up from 3.1 per cent in the previous quarter. It should be noted that these estimates are based on the output approach to measuring GDP. The headline figure will be firmed up later as more data becomes available (**Figure 1**).

The growth rate in the UK economy in 2007 quarter three was led by a strengthening in services sector output, which continues to lead growth. This was offset by a weakening in industrial output, led mainly by slower growth in manufacturing output. Construction output also contributed to growth by sustaining the strong rate of expansion from the previous quarter.

Figure 1
Gross Domestic Product

OTHER MAJOR ECONOMIES

Global growth weakens

Data for 2007 quarter three was not yet available at the time of writing this article. Data for 2007 quarter two showed a mixed picture for the other major OECD countries, but overall, a weakening picture of the world economy.

US GDP data for the second quarter of 2007 showed an upturn compared to a deceleration in quarter one. Growth was a fairly strong 1.0 per cent in the second quarter, an acceleration from subdued 0.2 per cent growth in the previous quarter. The strengthening in growth in the latest quarter may partly be attributed to weak quarter one data, particularly in terms of government consumption and net exports. In the second quarter, growth was mainly led by corporate non-residential investment which accelerated, by 7.0 per cent following 6.0 per cent growth in the previous quarter, but this was mainly concentrated in structural spending. Net exports also contributed to growth, with growth of 1.9 per cent following growth of 1.6 per cent in the previous quarter. The upsides to growth were partially offset by weak growth in consumer spending, partly due to the impact of higher energy prices. Consumption growth was 0.4 per cent in quarter two, a marked slowdown from growth of 0.9 per cent in quarter one.

Japan's GDP growth in contrast shrank in 2007 quarter two. Growth fell by 0.3 per cent compared to growth of 0.7 per cent in the previous quarter. The marked deceleration was partly due to a weak net export picture, with exports growing by 0.8 per cent compared to 3.4 per cent in the previous quarter. Residential investment contracted markedly, by 3.4 per cent in quarter two after falling by 0.8 per cent in the previous quarter. Capital investment also declined, by 2.6 per cent compared to a fall of 1.2 per cent in the previous quarter. Household consumption showed a weakening picture with growth of 0.3 per cent compared to 0.8 per cent in the previous quarter.

Growth in the three biggest mainland EU economies – Germany, France and Italy – also exhibited signs of weakening. According to the Eurostat's estimate, euro area GDP grew by 0.3 per cent in 2007 quarter two. This is a deceleration compared

to growth of 0.7 per cent growth in the previous quarter. -

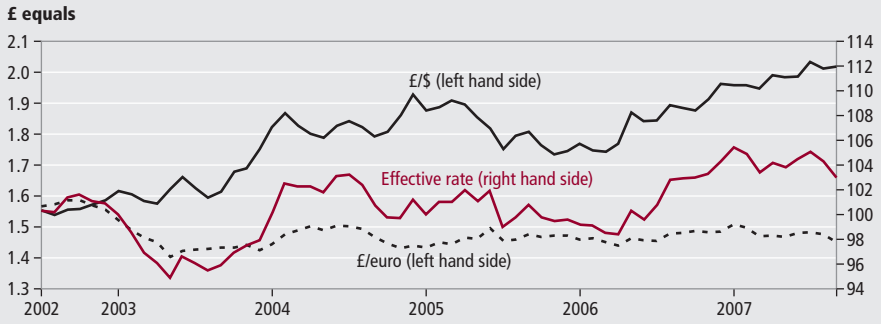
German GDP growth according to the initial estimate showed a deceleration in the latest quarter. Growth was 0.3 per cent compared to a modest growth of 0.5 per cent in the previous quarter. Growth was mainly driven by an increase in exports which grew by 0.9 per cent, following a fall of 0.3 per cent in quarter one. Imports in contrast fell by 0.9 per cent in the second quarter. Household consumption expenditure also contributed to growth, but by a lesser extent. Growth was 0.6 per cent, reversing the marked decrease of 1.8 per cent in the previous quarter. This was countered by a negative contribution from investment which fell by 1.3 per cent in 2007 quarter two, reversing positive growth of 2.1 per cent in the previous quarter; strong growth in capital and machinery investment was offset by a strong decrease in construction investment. Government expenditure made a neutral contribution to growth. French GDP growth slowed in 2007 quarter two; growth was 0.3 per cent compared to growth of 0.5 per cent in quarter one. The deceleration was partly due to a weak net export picture with imports growing by 2.1 per cent from 0.7 per cent in the previous quarter and exceeding exports. The weakening in GDP growth was also partly due to virtually flat business investment which decelerated sharply from the previous quarter. This was offset by fairly strong growth in household consumption expenditure of 0.6 per cent, up marginally from 0.5 per cent in the previous quarter. Italian GDP growth was just 0.1 per cent in 2007 quarter two following 0.3 per cent growth in the previous quarter. This was mainly due to flat industrial production, partly due to the appreciation of the euro.

FINANCIAL MARKETS

Share prices weaken and pound stabilises

Equity performance showed a weakening in 2007 quarter three after showing evidence of fairly buoyant growth in 2007 quarter; but down sharply from the 11.0 per cent growth seen in quarter one. The FTSE All-Share index fell by 3.0 per cent in 2007 quarter three after growing by 4.3 per cent in the previous quarter. The decrease in equity growth may mainly be attributed to concerns regarding the slowdown in the world economy, particularly the US economy, which is in part connected to the markets risk aversion towards assets associated with the US sub-prime housing market.

Figure 2
Exchange rates



As for currency markets, 2007 quarter three saw sterling's average value broadly flat compared to the previous quarter. The pound appreciated against the dollar by 1.7 per cent in 2007 quarter three, similar to the rate in the previous quarter. Against the euro, sterling's value depreciated by 0.2 per cent after depreciating by 1.2 per cent in the previous quarter. Overall, the quarterly effective exchange rate was flat after depreciating by 0.5 per cent in 2007 quarter two (Figure 2).

The recent movements in the exchange rate might be linked to a number of factors. Firstly, exchange rate movements can be related to the perceptions of the relative strengths of the US, the Euro and UK economy. The appreciation of the pound against the dollar in 2007 quarter three may be partly linked to perceptions of stronger UK economic growth, leading to greater inflationary pressures and therefore the prospects of higher interest rates in the UK. The potential for future rate rises may have been a factor in sterling's recent appreciation. In fact, interest rates were increased by a further 0.25 percentage point in June 2007, which followed the 0.25 percentage point interest increase in May 2007 and leaves interest rates currently standing at 5.75 per cent.

In contrast, there have been particular concerns in recent months regarding the relative weakness of US GDP growth. Furthermore, inflationary pressures have been relatively subdued in the US. This may have lessened the likelihood of further interest rate rises in the US. In fact, US interest rates were lowered by 0.50 percentage points in September 2007 to 4.75 per cent, in response to fears about a US economic slowdown, partly caused by the housing market weakness.

In the euro-area, the depreciation in the third quarter may be partly a result of perceptions that interest rate rises may have peaked in the UK. The depreciation of the pound against the euro in the second quarter of 2007 may have come in response to prospects of monetary tightening in the euro-zone; in fact, interest rates were increased by a further 0.25 percentage points in June to leave interest rates currently standing at 4.0 per cent. However, compared to US and UK rates, euro-zone interest rates still remain fairly moderate and accommodative.

Secondly, another factor for the US depreciation relative to the pound may be due to the current account deficit which is generally seen as a weakness for the US economy. The dollar may have fallen recently in response to a readjustment process, with the intended consequence of making exports cheaper and imports dearer – thus in theory leading to switch in expenditure to home produced goods and ultimately leading to a narrowing in the deficit.

Thirdly, another factor may be due to a lack of international appetite for dollar denominated assets, particularly from central banks, whom are choosing to mix up their currency assets on their balance sheets (for portfolio and risk management purposes) thereby further undermining the value of the dollar.

OUTPUT

Services sector drives economic growth

GDP growth in 2007 quarter three was estimated at 0.8 per cent, similar to the rate in the previous quarter. On an annual basis it was 3.3 per cent, up from 3.1 per cent in the previous quarter.

Construction activity is estimated to have grown strongly in the third quarter of

2007. Construction output grew by 0.8 per cent in 2007 quarter three, unchanged from growth in the previous quarter. Comparing the quarter on the quarter a year ago, construction output rose by 3.4 per cent following growth of 3.5 per cent in the previous quarter (Figure 3).

As for external surveys of construction, the CIPS survey signalled strengthening activity in 2007 quarter three with the average headline index at 62.5, up from 59.3 in the previous quarter. Stronger activity was driven by a rise in commercial activity. The RICS in its 2007 quarter three construction survey reported that growth had stabilised but still remained high with the balance at plus 16, the same as in the previous quarter.

Total output from the production industries rose by 0.2 per cent in 2007 quarter three after increasing by 0.7 per cent in the previous quarter. On an annual basis it rose by 0.7 per cent, unchanged from growth in the previous quarter. The main driver for the slowdown in production was manufacturing output. Manufacturing output grew by just 0.2 per cent, after fairly strong growth of 0.8 per cent in the previous quarter. On an annual basis, manufacturing output growth decelerated to 0.6 per cent from 1.1 per cent in the previous quarter (**Figure 4**). Lower production was also partly driven by a contraction in the output of the mining and quarrying industries (including oil & gas). Output fell by 0.3 per cent following growth of 1.3 per cent in the previous quarter. This was offset by a strengthening in the output of the electricity, gas and water supply industries which increased by 1.0 per cent in the third quarter compared to contraction in output of 0.4 per cent in the previous quarter. On an annual basis, utilities output was flat after falling by 1.1 per cent in the previous quarter.

Production growth has generally been slow since the second quarter of 2006 due to weakness in mining and quarrying and utilities output, offset through most of this period by relatively strong manufacturing output. There was a pick up in production in 2007 quarter two, but this appears not to have been sustained in quarter three, due to a decline in manufacturing output. Manufacturing output has been pretty volatile in recent quarters. The output of the agriculture, forestry and fishing industries weakened in the latest quarter with output falling by 0.7 per cent after an increase of 0.2 per cent in the previous quarter.

Figure 3
Construction output

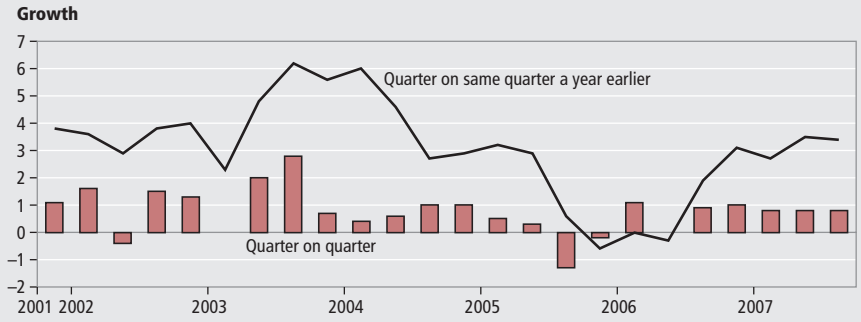


Figure 4
Manufacturing output

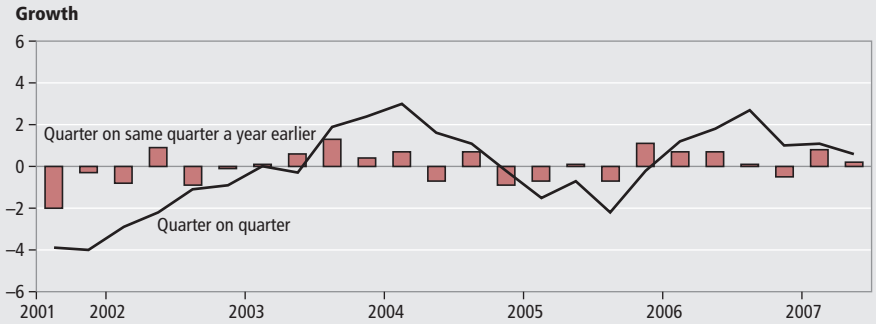
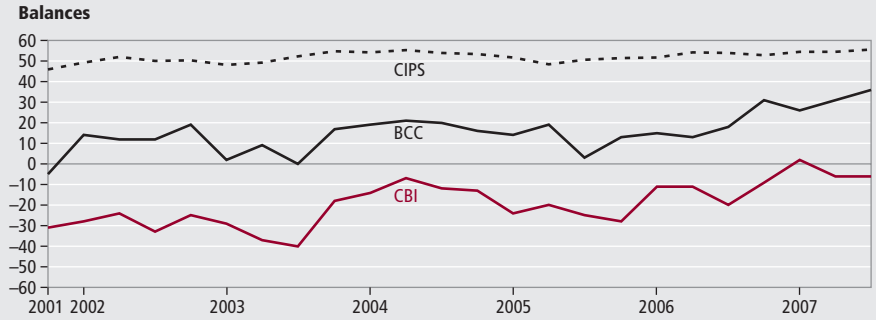


Figure 5
External manufacturing indicators



External surveys of manufacturing for 2007 quarter three showed a mixed picture (Figure 5). In the past, it has not been unusual for the path of business indicators and official data to diverge over the short term. These differences happen partly because the series are not measuring exactly the same thing. External surveys measure the direction rather than the magnitude of a change in output and often inquire into expectations rather than actual activity.

The CIPS average headline index for manufacturing indicated a stable but robust picture in the latest quarter. The headline index was 55.6, up from 54.5 in the previous quarter. The CBI in its 2007 quarter three Industrial Trends survey reported negative total orders with the balance at minus 6. The BCC in its 2007 quarter three survey reported a mixed but overall a fairly buoyant picture of manufacturing activity. The home sales balance was plus 36 and the home orders balance was plus 26.

Overall the service sector, by far the largest part of the UK economy, continues to be the main driver of UK growth. Growth was 1.0 per cent in 2007 quarter three, up from 0.9 per cent in the previous quarter (**Figure 6**). Growth on an annual basis was 4.0 per cent, up from 3.7 per cent in the previous quarter. Growth was recorded across most sectors. The main contribution to the pick up in the

growth rate continued to be provided by business services and finance output which grew by 1.7 per cent in the latest quarter, similar to the rate in the previous quarter. Growth was also led by an acceleration in the output of the distribution, hotels and catering sector, with growth of 1.1 per cent, up from 0.6 per cent in the previous quarter. The transport, storage and communication sector also recorded strong growth at 1.1 per cent, up from 0.8 per cent in the previous quarter. The output of government and other services in contrast was virtually flat, following growth of just 0.1 per cent in the previous quarter.

The external surveys on services continued to show a fairly robust picture in line with the official picture. The CIPS average headline index in 2007 quarter three was 57.1, although down slightly from 57.4 in the previous quarter and continued to be led by new orders. It should be noted that the CIPS survey has a narrow coverage of the distribution and government sectors.

The CBI and BCC also reported a fairly healthy picture of service sector activity (**Figure 7**). The CBI in its latest services sector survey in August reported a split in fortunes between business and professional services firms. Business volumes saw sales growth whilst consumer services firms' sales growth decelerated. The consumer services volume balance was at plus 15 from plus 44 in the previous quarter. For business & professional services, the balance was at plus 31 from plus 27 in the previous quarter. The BCC in its 2007 quarter three survey reported a weakening picture of service sector activity, but overall balances for home orders and sales remained positive at plus 23 and plus 29 respectively.

Figure 6
Services output

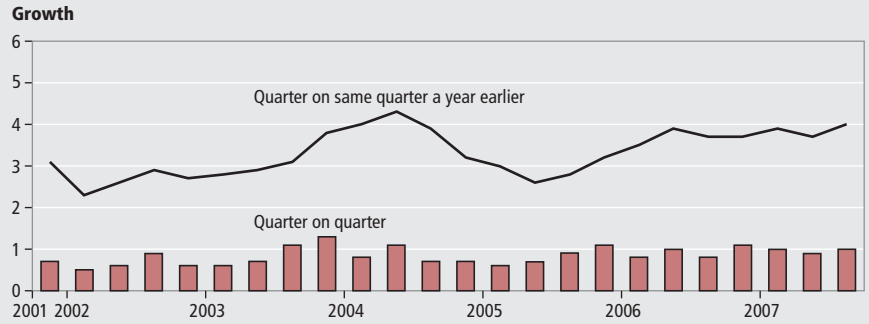


Figure 7
External services

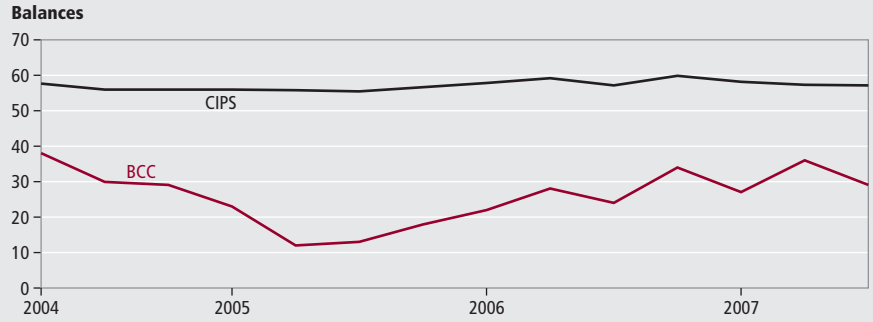
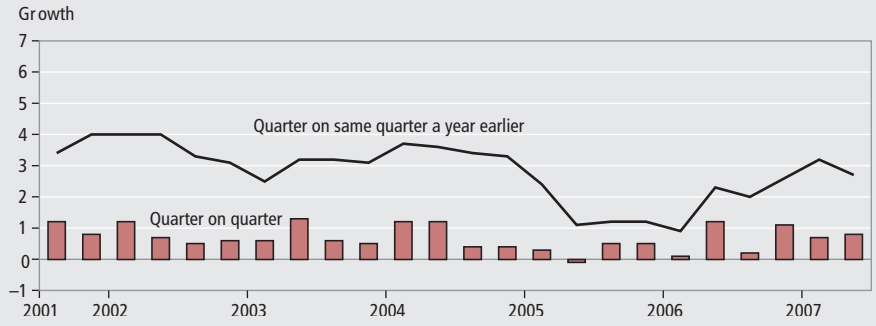


Figure 8
Household demand



EXPENDITURE

Consumers' spending buoyant

Household consumption expenditure growth accelerated slightly in 2007 quarter two at a fairly strong rate of 0.8 per cent. This follows growth of 0.7 per cent in the previous quarter. Growth compared with the same quarter a year ago was 2.7 per cent, down from 3.2 per cent in the previous quarter (**Figure 8**). In terms of expenditure breakdown, the growth in household consumption expenditure was recorded across all goods but was mainly driven by an acceleration in durable and semi-durable goods expenditure. This was offset by lower growth in non-durable and services goods.

Indications of consumer demand for 2007 quarter three appear mixed. What is as yet uncertain is the impact on the UK economy from the US sub-prime housing crisis and the subsequent credit crunch. Early indications suggest that the impact in the UK, in terms of consumer expenditure has not had much effect but there may have been some impact on mortgage borrowing, possibly as a result of tighter lending criteria adopted by some banks and building societies, particularly towards first time buyers and those considered higher credit risks.

One key indicator of household expenditure is retail sales. Retail sales growth strengthened in 2007 quarter three from quarter two. Retail sales grew by 1.7 per cent in the latest quarter, an acceleration from growth of 1.4 per cent in the previous quarter. However, looking at the underlying picture, the increase in retail sales seems to have been generated significantly by heavy discounting in shops and early sales which can be reflected in the price deflator (that is, shop prices) which fell on average by around 1.0 per cent in the latest quarter compared to relatively modest growth of 0.5 per cent in the previous quarter.

Retail sales figures are published on a monthly basis and the latest available figures for September showed a robust picture (**Figure 9**). This may suggest that in the third quarter, past interest rate rises

don't seem to be having much of an impact as yet on spending, but as mentioned earlier, discounting is clearly supporting retail sales growth. It should be noted that retail sales account for around 40 per cent of household expenditure. According to the latest figures, the volume of retail sales in the three months to September 2007 was 1.7 per cent higher than the previous three months. This followed growth of 1.3 per cent in the three months to August. On an annual basis, retail sales continued to grow strongly. Retail sales on the latest three month on the same three months a year ago jumped to 5.2 per cent, compared to 4.2 per cent in the three months to August compared to the same period a year ago.

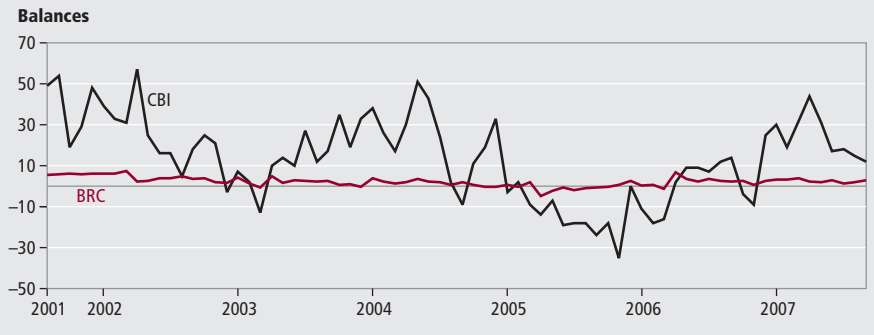
At a disaggregated level, retail sales growth during the three months to the end of September was driven by growth in the 'Predominantly non-food stores' sector, together with an acceleration in sales in the 'Predominantly food stores' sector. Growth in the 'Predominantly non-food stores' sector was 2.3 per cent, up from 2.2 per cent in the three months to August. Within this sector in the three months to September, growth was registered across most sectors and was led by the 'Household good stores' sector which grew by 4.8 per cent. The 'Non-store retailing and repair' sector also recorded strong growth of 2.9 per cent. In contrast, retail sales growth in the 'Textile, clothing and footwear stores' sector showed a fall of 1.4 per cent. Growth in the 'Predominantly food stores' sector rose sharply to 0.8 per cent in September, reversing a fall of 0.2 per cent in the previous month. The buoyancy in retail sales could be partly attributed to the fall in shop prices, which fell by 1.5 per cent in September.

External surveys for retail reported a relatively buoyant picture of growth. The CBI in its monthly Distributive Trades survey reported slower but still fairly healthy growth, with a balance of plus 12 in September, down from plus 15 in August. The BRC reported that retail sales increased by 3.0 per cent on a like-for-like basis in September, up from 1.8 per cent in the previous month (**Figure 10**).

Another indicator of household consumption expenditure is borrowing. Household consumption has risen faster than disposable income in recent years as the household sector has become a considerable net borrower and therefore accumulated high debt levels. Bank of England data on stocks of household debt outstanding to banks and building societies shows household debt at unprecedented levels relative to disposable income.

Figure 9
Retail sales

Figure 10
External retailing indicators



There are two channels of borrowing available to households; i) secured lending, usually on homes; and ii) unsecured lending, for example, on credit cards. On a general level, increases in interest rates increases debt servicing costs, may discourage borrowing and in the process displace consumer expenditure on certain goods.

According to the latest figures from the Bank of England, there are signs that past interest rate rises may have begun to impact on lending and borrowing in 2007 quarter three and possibly due to the credit crunch.

According to the latest Bank of England figures, total net lending to individuals was £9.5 billion in August, down from £10.3 billion from the end of the second quarter. The fall in total lending was driven by a decrease in net lending secured on dwellings, which rose by £8.5 billion in August, compared to £9.3 billion at the end of 2007 quarter two. Net consumer credit was on the other hand was stable with an increase of £1.0 billion in August, similar to the level in June 2007.

Household expenditure can invariably be linked to house prices through household equity withdrawal (HEW). Both Nationwide and Halifax reported an easing in house price growth in 2007 quarter three from the previous quarter, possibly indicating interest rate rises are beginning to have some effect on house price growth. This could have an impact on expenditure via HEW in the latest quarter. The Halifax reported that house price growth slowed to 0.9 per cent in quarter three from 2.3 per cent in quarter two. Nationwide reported house prices rose by 1.6 per cent in quarter three compared to 1.9 per cent in quarter two. Bank of England figures for 2007 quarter two showed HEW falling by £3.0 billion to £10.0 billion from the previous quarter, and this could extend into a further downward trend in quarter three, thereby impacting somewhat on expenditure.

On the upside, another measure of expenditure showed a relatively strong picture. M4 (a broad money aggregate of UK money supply) rose by £56.0 billion in 2007 quarter three, up from £50.0 billion in quarter two.

Finally, underlying fundamentals such as the prevalence of a relatively healthy labour market, together with higher disposable income and a lower savings ratio may sustain expenditure, as was the case in quarter two.

BUSINESS DEMAND

Business investment strengthens

Total investment weakened in 2007 quarter two, compared to the previous quarter. Growth contracted by 0.9 per cent following an increase of 1.1 per cent in the previous quarter. On an annual basis, total investment grew by 6.2 per cent, a slowdown from 9.0 per cent growth in the previous quarter. The weakening in total investment was primarily driven by slower growth in dwellings investment and to a lesser extent other machinery and equipment (Figure 11).

Business investment grew relatively strongly throughout 2006. In 2007 quarter one, business investment weakened. In the latest quarter, there appears to be a turnaround with a recording of fairly modest growth. Business investment grew by 0.4 per cent in 2007 quarter two, in contrast to the fall of 0.5 per cent in the previous quarter. Business investment on an annual basis slowed but still continues to grow fairly robustly. Growth was 7.6 per cent, down from 9.8 per cent annual growth in the previous quarter.

Evidence on investment intentions from the latest BCC and CBI surveys showed a mixed picture. According to the latest quarterly BCC survey, the balance of manufacturing firms planning to increase investment in plant and machinery rose 5 points to plus 33 and in services firms fell 2 points to plus 17 in 2007 quarter three. The CBI in its 2007 quarter three Industrial Survey reported a subdued investment picture, with the investment balance of plant and machinery weakening to minus 14 from minus 6 in the previous quarter.

GOVERNMENT DEMAND

Government expenditure moderates

Government final consumption expenditure grew fairly modestly in 2007 quarter two. Growth was 0.3 per cent, down from 0.5 per cent in quarter one. Growth quarter on quarter a year ago strengthened. Growth was 2.0 per cent compared to 1.2 per cent in 2007 quarter one (**Figure 12**).

Public sector finances worsen

The latest figures on the public sector finances reported in the current financial year to September 2007, illustrated a relatively weak picture. It showed a higher current budget deficit together with a higher level of net borrowing. Overall, the government continued to operate a financial deficit, with government expenditure continuing to exceed revenues, partly to fund capital spending. In the financial year April to September 2007/08, the deficit was £15.4 billion; this compares with a deficit of £11.9 billion in the financial year April to September 2006/07. In the financial year April to September 2007/08, net borrowing was £25.7 billion; this compares with net borrowing of £21.1 billion in the financial year April to September 2006/7. The higher current budget deficit was mainly due to lower corporation tax, income tax and VAT receipts in September together with higher interest payments This continued to be outweighed by expenditure, particularly on government capital projects.

Since net borrowing became positive in 2002, following the current budget moving from surplus into deficit, net debt as a proportion of annual GDP has risen steadily. Public sector net debt in September 2007 was 36.9 per cent of GDP, similar to September 2006. In the financial year 2006/07, net debt as a percentage of GDP was 36.8 per cent.

Figure 11
Total fixed investment

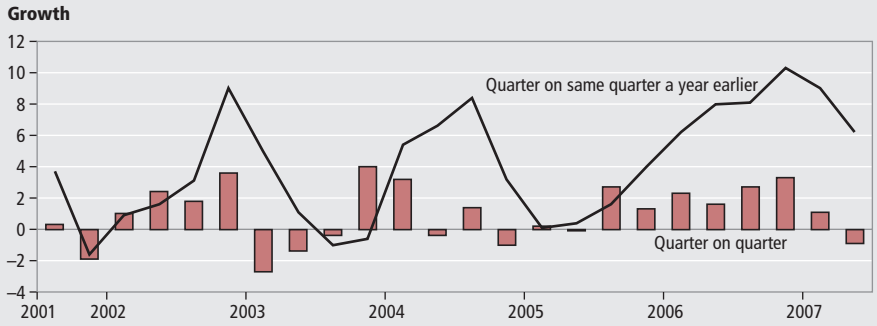
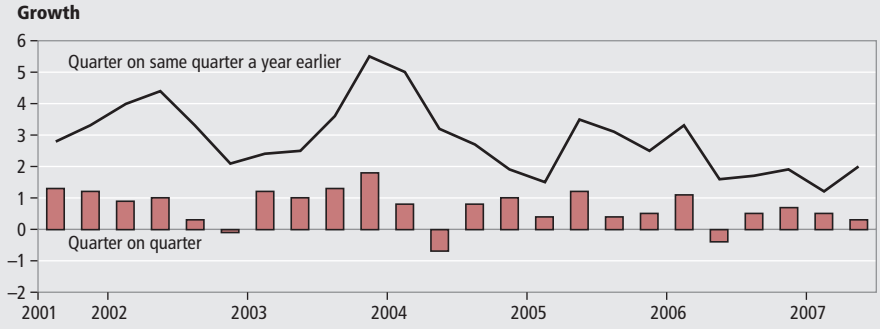


Figure 12
Government spending



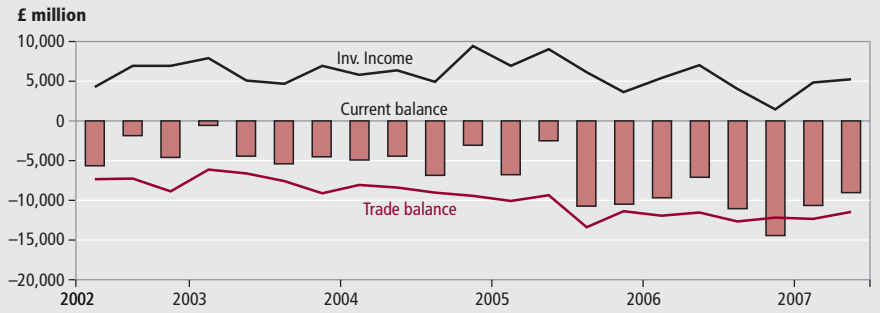
TRADE AND THE BALANCE OF PAYMENTS

Current account deficit narrows; goods deficit narrows

The publication of the latest quarterly Balance of Payments shows that the current account deficit narrowed in 2007 quarter two to £9.1 billion, from a deficit of £10.6 billion in the previous quarter (**Figure 13**). As a proportion of GDP, the deficit fell to 2.6 per cent of GDP from 3.1 per cent in 2007 quarter one. The narrowing in current account deficit in 2007 quarter two was due to a higher surplus on investment income and trade in services, and a lower deficit on trade in goods and current transfers. The surplus in income rose to £5.3 billion from £4.9 billion, while the surplus in the trade in services rose to £8.9 billion from £8.2 billion. The increase in income was driven by a rise in earnings on other investment abroad and on portfolio investment in debt securities, which outweighed a fall in earnings on direct investment abroad and on portfolio investment abroad in equity securities.

The run of current account deficits since 1998 reflects the sustained deterioration in the trade balance. The UK has traditionally

Figure 13
Balance of payments



run a surplus on the trade in services, complemented by a surplus in investment income, but this has been more than offset by the growing deficit in trade in goods partly due to the UK's appetite for cheaper imports.

Data for 2007 quarter two showed the UK continuing to have a large trade deficit in goods with levels of imports rising faster than exports, although the deficit narrowed in the latest quarter. Net trade therefore provided a broadly neutral contribution towards GDP growth in the second quarter. The goods trade deficit was £20.3 billion, down from the £20.6 billion in 2007 quarter one. In terms of growth, exports of goods fell by 0.9 per cent in 2007 quarter two whilst imports of goods fell by 0.7 per cent. Services exports rose 1.8 per cent whilst services imports rose by 0.4 per cent. Total exports rose just 0.2 per cent whilst total imports fell by 0.4 per cent.

According to the latest trade figures in August, the UK's deficit on trade in goods and services is estimated to have narrowed to £4.1 billion, from £4.2 billion in July. The trade in goods deficit was £6.9 billion, down from £7.4 billion in July. In terms of growth, total exports on a volume basis rose by 1.4 per cent whilst total imports fell by 1.9 per cent. In the three months ended August, the deficit on trade in goods and services widened to £12.3 billion, from a £12.2 billion deficit in the previous three months.

However, these figures are distorted by volatility in VAT Missing Trader Intra–Community (MTIC) Fraud and therefore needs to be treated with caution. According to the latest figures, the level of trade in goods excluding trade associated with MTIC fraud is estimated to have fallen to £0.1 billion in August, similar to the previous month and by £0.2 billion in the second quarter of 2007.

External surveys on exports show a fairly robust picture. The BCC reported that the export sales net balance fell by 1 point to plus 29 and the export orders balance remained unchanged at plus 26 in 2007 quarter three. The CBI in its 2007 quarter three Industrial Trends Survey reported export volumes holding up well with the balance of export orders at plus 6 from minus 5 in the previous quarter.

LABOUR MARKET

Labour market activity buoyant

The Labour market in the latest reference period showed a mixed but overall, a relatively strong picture – continuing the trend of fairly high levels of employment and low levels of unemployment seen throughout 2006 and in 2007. The robust labour market picture continues to be a reflection of fairly strong demand conditions in the UK economy.

The latest figure from the Labour Force Survey (LFS) pertains to the three-month period up to August 2007 and showed a mostly positive picture. The number of people in employment rose. The number of unemployed people as well as the claimant count fell. The number of vacancies increased. On the downside, there was a fall in the employment rate and the unemployment rate was unchanged. Average earnings, excluding and including bonuses rose. Overall however, average earnings remain subdued with weak real wage growth.

Looking at a detailed level, the increase in the employment level was mainly driven by a rise in people in self-employment, somewhat reversing the trend of the previous few months, where employment was being mainly generated by full time employees.

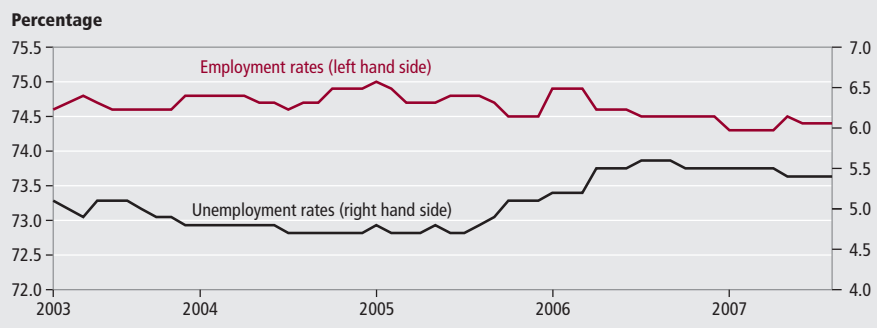
The current working age employment rate was 74.4 per cent, in the three months to August 2007, down 0.1 percentage points from the three months to May 2007 and down 0.3 percentage points from a year earlier. This may be a reflection of job growth not keeping pace with the growth in the working age population. The number of people in employment rose by 22,000 over the quarter, and up 82,000 over the year, to leave the employment level standing at 29.10 million in the three months to August 2007. The unemployment rate was 5.4 per cent, in the three months to August 2007, unchanged from the three months to May 2007 but down 0.2 percentage point from a year earlier (**Figure 14**). The number of unemployed people fell by 5,000, from the three months to May, and was down 47,000 from a year earlier, leaving the unemployment level currently standing at 1.65 million.

According to the LFS, in the period June to August 2007, the number of people in employment rose by 22,000. The increase was led by a rise in self-employment of 22,000, offset by a decrease in employees of 13,000. From another perspective, the number of people in full-time employment rose by 12,000, whilst people in part-time employment rose by 10,000.

Workforce jobs increases

According to employer surveys, there was an increase of 87, 000 jobs in the three months to June 2007. Most sectors showed

Figure 14
Employment and unemployment



increases in jobs over the quarter. The largest quarterly contribution to the increase came from finance and business services (up 40,000), followed by distribution, hotels and restaurants (up 33,000) and agriculture, forestry and fishing (up 20,000). This was offset by a continuing decrease in the manufacturing sector (down 15,000). The other sectors to show decreases were; education, health and public administration (down 8,000) and other services (down 1,000). Over the year, total workforce jobs increased by 280,000. Of the total, the largest contribution to the increase came from finance and business services (up 161,000) followed by construction (up 70,000) and distribution, hotels and restaurants (up 60,000). The manufacturing sector in contrast lost the largest number of jobs on the year (down 51,000 jobs), followed by transport and communication (down 19,000).

Claimant count level falls

The claimant count measures the number of people claiming the Jobseekers Allowance. The latest figures for September showed the claimant count level at 835, 800, down 12,800 on the previous month and down 120,900 on a year earlier. The claimant count rate in September 2007 was 2.6 per cent, unchanged from the previous month but down 0.4 percentage points from a year earlier.

Vacancies rise

The number of vacancies created in the UK continued to show a healthy demand position for the economy. There were 668, 800 job vacancies in the three months to September 2007, up 21,300 from the previous three months and up 71,100 from the same period a year earlier.

Inactivity level rises

The working age inactivity rate was 21.3 per cent in the three months to August 2007, up 0.1 percentage point from the three months to May 2007 and up 0.4 percentage points from a year earlier. In level terms, the number of economically inactive people of working age was up 41,000 over the quarter to leave the level standing at 7.97 million in the three months to August 2007. The largest inactivity increase was amongst those categorised as 'Student' (up 43,000) followed by the 'Retired' category (up 28,000). This was offset by those categorised as 'Looking after family/home' (down 30,000) followed by the 'Temp sick' category (down 6,000). On an annual basis, inactivity rose by 190,000, with the largest rises being amongst those categorised as 'Student' (up 111,000), followed by the 'Retired 'category (up 56,000) and those categorised as 'Temp sick' (up 16,000). This was offset by a decrease in those categorised as 'Long-term sick' (down 9,000).

Average earnings remain subdued

Average earnings growth continued to show a relative weak picture in August 2007- despite average earnings (including and excluding bonuses) increasing in the latest reference period. Average earnings (including bonuses) rose by 0.2 percentage point from the previous month to 3.7 per cent Average earnings growth (excluding bonuses) was up by 0.1 percentage point to 3.7 per cent in August compared to the previous month. In terms of the public and private sector split, the gap in wages widened in August with stability in public sector wage growth, offset by an acceleration in private sector wage growth. Average earnings (excluding bonuses) grew by 3.0 per cent in the public sector, unchanged from the previous month. Average earnings in the private sector in contrast rose by 0.2 percentage points to 3.9 per cent.

Overall, the numbers still point to a fairly buoyant labour market, although it is still loose compared to previous years, with employment levels at relatively high levels and unemployment at a fairly stable level. This is consistent with higher workforce participation rates, underpinned by robust GDP growth. Average earnings show stable but fairly modest growth, consistent with increased supply in the labour force.

PRICES`

Producer output prices buoyant; input prices rise

Industrial input and output prices are an indication of inflationary pressures in the economy. In 2007 quarter three, output prices exhibited signs of further, albeit slight, acceleration of growth from 2007 quarter two and therefore signs of continued inflationary pressures. Input prices also accelerated in the third quarter from the second quarter of 2007. This may suggest that firms were still attempting to maintain their profit margins, by passing on the higher price of their products to customers, after facing a profit squeeze of earlier quarters.

Input prices on average rose by around 2.5 per cent in 2007 quarter three. This compares with 1.0 per cent in 2007 quarter two. The core input price index, excluding food, beverages, tobacco and petroleum rose by 2.1 per cent in 2007 quarter three, a deceleration from growth of 3.0 per cent in the previous quarter. The quicker growth in headline input prices was mainly driven by a rise of home produced food material prices and crude petroleum prices which rose by 4.0 per cent and 8.2 per cent respectively in quarter three.

Output prices grew on average by 2.5 per cent in 2007 quarter three, a slight strengthening from growth of 2.4 per cent in the previous quarter, and as mentioned earlier may be an attempt by firms to re-build their profit margins. The underlying picture also suggests inflationary pressures. On the core measure which excludes food, beverages, tobacco and petroleum, producer output prices rose on average by 2.3 per cent in 2007 quarter three, up from 2.2 per cent growth in 2007 quarter two. The upward pressure on output prices was maintained partly by base metal and food product prices which grew by 3.1 per cent and 1.3 per cent respectively.

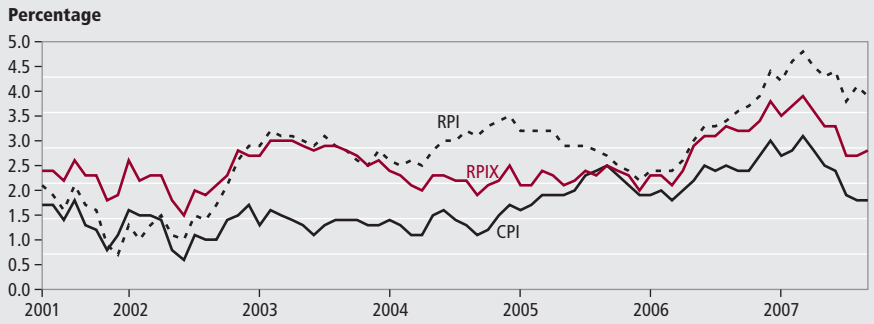
Consumer prices unchanged

Growth in the consumer price index (CPI) – the Government's target measure of inflation – was 1.8 per cent in September, unchanged from August and down from the March peak of 3.1 per cent; and was below Government's 2.0 per cent inflation target for the third consecutive month (**Figure 15**).

Large downward contributions to the change in the CPI annual rate came from: Housing and household services, due to gas and electricity bills which both fell as a result of the continued phasing in of recent tariff reductions. Over the same period last year, average gas and electricity bills rose. Another large downward contribution came from clothing and footwear, as prices overall rose by less than last September especially for men's outerwear. In particular, prices for winter coats fell this year, compared with sharp increases a year ago.

The largest upward effect on the CPI annual rate came from food and non-alcoholic beverages, where price increases were recorded for a number of dairy products including: Milk, cheese and eggs, due to widely publicised price increases for shop bought milk, particularly at

Figure 15
Inflation



supermarkets. The average price of a pint of milk rose by around 4 pence per pint in September, a record one month increase; and oils and fats, where average prices for both margarine and butter increased in September by over 15 per cent. A large, partially offsetting downward effect within food came from vegetables, due to price changes on some winter vegetables and tomatoes.

RPI inflation fell to 3.9 per cent in September, down from 4.1 per cent in August, mainly due to average mortgage interest payments. Average rates were largely unchanged in September, but rose a year ago, when most lenders passed on the quarter point rise in the Bank of England Bank rate announced in August 2006. Mortgage interest payments are excluded from the CPI.

Other factors influencing the RPI were similar to those affecting the CPI. RPIX inflation – the all items RPI excluding mortgage interest payments – was 2.8 per cent in September, up from 2.7 per cent in August.

Independent forecasts

October 2007

UK forecasts

The tables below supplement the Economic Review by providing a forward-looking view of the UK economy. The tables shows the average and range of independent forecasts for 2007 and 2008 and are extracted from HM Treasury's Forecasts for the UK Economy.

2007

	Average	Lowest	Highest
GDP growth (per cent)	*2.9*	*2.5*	*3.1*
Inflation rate (Q4, per cent)			
CPI	*2.0*	*1.7*	*2.4*
RPI	*3.8*	*2.9*	*4.4*
Claimant unemployment (Q4, million)	0.87	0.76	1.10
Current account (£ billion)	–43.5	–53.2	–35.0
Public Sector Net Borrowing (2007–08, £ billion)	34.4	30.6	40.0

2008

	Average	Lowest	Highest
GDP growth (per cent)	*2.0*	*–0.3*	*2.8*
Inflation rate (Q4, per cent)			
CPI	*2.0*	*1.5*	*2.5*
RPI	*2.6*	*1.5*	*4.6*
Claimant unemployment (Q4, million)	0.93	0.7	1.23
Current account (£ billion)	–45.9	–59.3	–32.0
Public Sector Net Borrowing (2008–09, £ billion)	33.8	22.4	40.2

Notes

Forecast for the UK economy gives more detailed forecasts, and is published monthly by HM Treasury. It is available on the Treasury's website at: www.hm-treasury.gov.uk/economic_data_and_tools/data_index.cfm

Selected world forecasts

The tables below supplement the Economic Review by providing a forward-looking view of the world economy. The tables show forecasts for a range of economic indicators taken from *Economic Outlook*, published by OECD (Organisation for Economic Co-operation and Development).

2007

	US	Japan	Euro area	Total OECD
Real GDP growth (per cent)	*2.1*	*2.0*	*2.5*	*2.6*
Consumer price (percentage change from previous year)	*2.6*	*–0.3*	*2.0*	*2.3*
Unemployment rate (per cent of the labour force)	*4.7*	*3.7*	*6.9*	*5.6*
Current account (as a percentage of GDP)	*–6.1*	*4.8*	*0.4*	*–1.5*
Fiscal balance (as a percentage of GDP)	*–2.8*	*–2.7*	*–0.8*	*–1.9*

2008

	US	Japan	Euro area	Total OECD
Real GDP growth (per cent)	*2.6*	*2.2*	*2.2*	*2.7*
Consumer price (percentage change from previous year)	*2.2*	*0.4*	*2.1*	*2.0*
Unemployment rate (per cent of the labour force)	*4.9*	*3.6*	*6.6*	*5.4*
Current account (as a percentage of GDP)	*–6.2*	*5.4*	*0.4*	*–1.5*
Fiscal balance (as a percentage of GDP)	*–2.8*	*–3.2*	*–0.7*	*–1.9*

Notes

The OECD *Economic Outlook* is published bi-annually. Further information about this publication can be found at www.oecd.org/eco/Economic_Outlook

Key indicators

The data in this table support the Economic review by providing some of the latest estimates of Key indicators.

Seasonally adjusted unless otherwise stated

	Source CDID	2005	2006	2007 Q1	2007 Q2	2007 Q3	2007 Jul	2007 Aug	2007 Sep
GDP growth – chained volume measure (CVM)									
Gross domestic product at market prices	ABMI	1.8	2.8	0.8	0.8	0.8	..	..	..
Output growth – chained volume measures (CVM)									
Gross value added (GVA) at basic prices	ABMM	1.9	2.8	0.8	0.8	0.8	..	..	..
Industrial production	CKYW	–2.0	0.0	–0.2	0.7	0.2	–0.1	0.1	..
Manufacturing	CKYY	–1.2	1.4	–0.5	0.8	0.2	–0.2	0.4	..
Construction	GDQB	1.5	1.1	0.8	0.7	0.8	..	..	..
Services	GDQS	2.9	3.6	0.9	0.9	1.0	..	..	..
Oil and gas extraction	CKZO	–10.5	–9.1	1.1	1.1	..	0.5	–3.8	..
Electricity, gas and water supply	CKYZ	–0.4	–2.5	1.2	–0.4	1.0	0.2	–0.1	..
Business services and finance	GDQN	4.4	5.3	1.0	1.7	1.7	..	..	..
Household demand									
Retail sales volume growth	EAPS	2.0	3.3	0.4	1.4	1.7	0.7	0.7	0.6
Household final consumption expenditure growth (CVM)	ABJR	1.5	2.0	0.7	0.8	..	..	..	..
GB new registrations of cars (thousands)1	BCGT	2,444	2,340	678	573	..	175	76.2	..
Labour market[2,3]									
Employment: 16 and over (thousands)	MGRZ	28,674	28,895	28,981	29,074	..	29,097	..	..
Employment rate: working age (%)	MGSU	74.7	74.6	74.3	74.4	..	74.4	..	..
Workforce jobs (thousands)	DYDC	31,042	31,409	31,602	31,689	..	..	..	..
Total actual weekly hours of work: all workers (millions)	YBUS	918.6	923.7	927.1	934.9	..	935.5	..	..
Unemployment: 16 and over (thousands)	MGSC	1,426	1,657	1,700	1,654	..	1,655	..	..
Unemployment rate: 16 and over (%)	MGSX	4.7	5.4	5.5	5.4	..	5.4	..	..
Claimant count (thousands)	BCJD	861.7	944.7	916.3	877.1	847.2	857.1	848.6	835.8
Economically active: 16 and over (thousands)	MGSF	30,100	30,552	30,681	30,728	..	30,752	..	..
Economic activity rate: working age (%)	MGSO	78.5	78.9	78.8	78.8	..	78.7	..	..
Economically inactive: working age (thousands)	YBSN	7,933	7,843	7,939	7,946	..	7,969	..	..
Economic inactivity rate: working age (%)	YBTL	21.5	21.1	21.2	21.2	..	21.3	..	..
Vacancies (thousands)	AP2Y	616.8	594.7	636.8	647.5	668.8	656.6	665.5	668.8
Redundancies (thousands)	BEAO	126	145	145	120	..	120	..	..
Productivity and earnings annual growth									
GB average earnings (including bonuses)3	LNNC	..	..	4.4	3.4	..	3.5	3.7	..
GB average earnings (excluding bonuses)3	JQDY	..	..	3.6	3.4	..	3.6	3.7	..
Whole economy productivity (output per worker)	A4YN	..	..	2.8	2.7	..	..	..	..
Manufacturing productivity (output per job)	LOUV	..	..	..	..	..	3.4	3.4	..
Unit wage costs: whole economy	LOJE	..	..	2.4	1.2	..	..	..	..
Unit wage costs: manufacturing	LOJF	..	..	..	..	..	0.8	0.2	..
Business demand									
Business investment growth (CVM)	NPEL	15.7	–4.3	–0.5	0.4	..	..	..	..
Government demand									
Government final consumption expenditure growth	NMRY	2.7	2.1	0.5	0.3	..	..	..	..
Prices (12–monthly percentage change – except oil prices)									
Consumer prices index[1]	D7G7	2.1	2.3	2.9	2.6	..	1.9	1.8	1.8
Retail prices index[1]	CZBH	2.8	3.2	4.5	4.4	3.9	3.8	4.1	3.9
Retail prices index (excluding mortgage interest payments)	CDKQ	2.3	2.9	3.7	3.4	2.7	2.7	2.7	2.8
Producer output prices (excluding FBTP)[4]	EUAA	2.1	2.3	2.6	2.3	2.2	2.2	2.3	2.2
Producer input prices	EUAB	11.7	9.5	–0.7	1.1	2.5	0.6	0.7	6.4
Oil price: sterling (£ per barrel)	ETXR	30.36	35.93	29.95	34.05	36.93	37.22	35.47	38.09
Oil price: dollars ($ per barrel)	ETXQ	55.05	66.11	58.53	67.64	74.67	75.71	71.36	76.92

Seasonally adjusted unless otherwise stated

	Source CDID	2005	2006	2007 Q1	2007 Q2	2007 Q3	2007 Jul	2007 Aug	2007 Sep
Financial markets									
Sterling ERI (January 2005=100)	BK67	100.4	101.2	104.6	104.1	104.1	105.0	104.3	103.0
Average exchange rate /US$	AUSS	1.8197	1.8423	1.9545	1.9869	2.0212	2.0338	2.0111	2.0185
Average exchange rate /Euro	THAP	1.4629	1.4670	1.4916	1.4732	1.4705	1.4821	1.4762	1.4515
3-month inter-bank rate	HSAJ	4.57	5.26	5.56	5.93	6.18	6.00	6.55	6.18
Selected retail banks: base rate	ZCMG						5.75	5.75	5.75
3-month interest rate on US Treasury bills	LUST	3.92	4.89	4.91	4.68	3.62	4.82	3.91	3.62
Trade and the balance of payments									
UK balance on trade in goods (£m)	BOKI	–68,789	–77,563	–20,605	–20,346	..	–7,415	–6,853	..
Exports of services (£m)	IKBB	115,182	124,586	33,231	33,986	..	11,104	10,965	..
Non-EU balance on trade in goods (£m)	LGDT	–31,912	–45,587	–11,451	–10,724	..	–4,421	–3,902	..
Non-EU exports of goods (excl oil & erratics)[5]	SHDJ	119.8	118.0	115.2	115.3	..	116.1	122.3	..
Non-EU imports of goods (excl oil & erratics)[5]	SHED	116.8	124.4	126.5	128.3	..	138.0	130.8	..
Non-EU import and price index (excl oil)[5]	LKWQ	101.2	103.9	104.6	104.5	..	102.9	103.4	..
Non-EU export and price index (excl oil)[5]	LKVX	100.1	101.5	101.9	101.9	..	101.2	101.8	..
Monetary conditions/government finances									
Narrow money: notes and coin (year on year percentage growth)[6]	VQUU	3.1	5.1	4.1	4.8	..	4.3	4.6	..
M4 (year on year percentage growth)	VQJW	11.3	13.3	13.0	12.9	..	13.0	13.5	..
Public sector net borrowing (£m)	–ANNX	40,778	30,632	–2,055	15,813	9,849	–5,851	8,826	6,874
Net lending to consumers (£m)	RLMH	19,724	13,077	2,480	2,485	3,677	1,212	1,114	1,350

External indicators – non-ONS statistics

		2007 Mar	2007 Apr	2007 May	2007 Jun	2007 Jul	2007 Aug	2007 Sep	2007 Oct
Activity and expectations									
CBI output expectations balance	ETCU	21	18	18	25	10	13	17	10
CBI optimism balance	ETBV		16			–2			–13
CBI price expectations balance	ETDQ	18	14	26	18	17	17	19	14

Notes:

1 Not seasonally adjusted.
2 Annual data are for April except for workforce jobs (June), claimant count (average of the twelve months) and vacancies (average of the four quarters).
3 Monthly data for vacancies and average earnings are averages of the three months ending in the month shown. Monthly data for all other series except claimant count are averages of the three months centred on the month shown.
4 FBTP: food, beverages, tobacco and petroleum.
5 Volumes, 2003 = 100.
6 Replacement for series M0 which has ceased publication.

For further explanatory notes, see Notes to tables on page 63.

FEATURE

UK environmental accounts: air emissions and energy use

Ian Gazley
Office for National Statistics

SUMMARY

The Office for National Statistics' air emissions data show that between 1990 and 2005, total UK greenhouse gas emissions on a UK residents basis fell 9.3 per cent from 808.3 million tonnes of carbon dioxide equivalent to 733.4 million tonnes. However, much of this reduction took place in the period between 1990 and 1999. Since 1999, emissions have remained broadly stable although there has been 20.5 per cent growth in economic activity. In contrast, the rate that energy consumption has increased over the whole period is relatively stable: between 1990 and 1999 it was up 5.1 per cent and between 1999 and 2005 up 5.5 per cent.

This article is divided into three parts: the first sets out various definitions used in the compilation of the air emissions and energy use accounts; the second part moves on to an analysis of the latest data set (consistent with data published in July 2007); and in the third part, some conclusions are offered regarding the trends that have emerged.

Climate change and sustainable development attract global interest. There is a growing consensus that the rise in concentrations of greenhouse gases in the atmosphere has led to changes in the global climate system. Therefore, the level and source of these emissions are of interest to policy makers and analysts. Emissions of other pollutants, such as those that lead to acid rain, may affect air quality, health or other general environment factors, are also of interest to policy makers.

The Office for National Statistics' (ONS) air emissions accounts provide a breakdown of emissions of atmospheric pollutants and greenhouse gases by 93 industries, starting from 1990. These estimates are largely determined indirectly by using scientifically agreed factors to extrapolate from known fuel use information. The factors are derived from measurements made regarding the particular content of an emissions source, for instance the carbon content of fossil fuels. ONS energy accounts provide information regarding the volume and mix of fuels that are used in the economy. The result is a set of tables that provide information on which industries are producing which pollutants. It is then possible to compare these data with economic data to establish links between production and emissions.

Air emissions and energy use accounts form part of a suite of accounts known as Environmental Accounts. The Environmental Accounts are a tool to analyse the links between the environment and the economy at European Union, national, regional and industry level. They help to assess the extent our current production and consumption patterns are degrading natural resources and the effects of economic policy measures. As a complement to environmental statistics, Environmental Accounts allow an analysis in more depth of environmental concerns as the different modules are broken down by industry (in the form of a National Accounting Matrix including Environmental Accounts (NAMEA) at country level. The NAMEA is a framework in which different types of statistical data are consistently organised, bringing together economic and environmental information that come from different parts of the statistical system.

This article is divided into three parts: the first part sets out various definitions used in the compilation of the air emissions and energy use accounts; the second part moves on to an analysis of the latest data set (consistent with data published in July 2007); and in the third part, some conclusions are offered regarding trends that have emerged in the data.

What are air emissions?

When fuel is converted into energy, different gases and materials are produced which disperse into the atmosphere: these are known as air emissions. Such emissions include greenhouse gases and substances that are directly toxic, such as heavy metals. These pollutants can be grouped according to their contribution to environmental themes such as climate change and acid rain. Each year the Environmental Accounts present estimates of pollutants directly emitted into the atmosphere by industry under four different themes: greenhouse gas

emissions, emissions leading to acid rain, heavy metals and other pollutants.

Methods

Units of measurement

To aggregate the greenhouse gases covered in the accounts, a weighting based on the relative global warming potential of each gas is applied, using the effect of carbon dioxide over a 100-year period as reference. A similar process is used to aggregate emissions that lead to acid rain, according to their acidification potential. Energy use is measured in tonnes of oil equivalent (toe), which enables different fuels to be compared and aggregated. A tonne of oil equivalent should be regarded as a measure of energy content rather than a physical quantity.

Atmospheric emissions and energy use data sources

The industry breakdown of atmospheric emissions is supplied to ONS by AEA Energy & Environment (formerly Netcen) and is primarily based on information compiled for their National Atmospheric Emissions Inventory (NAEI) and their Greenhouse Gas Inventory. AEA Energy & Environment compiles the NAEI and the Greenhouse Gas Inventory, on behalf of the Department for Environment, Food and Rural Affairs (Defra) and the devolved administrations.

Atmospheric emissions are estimated by multiplying detailed information on fuel consumption by emissions factors and then adding releases unrelated to fuel use, such as methane arising from landfill. Therefore, there is a clear link between the energy used in the economy and the emissions produced by that economy. The NAEI data are used to identify the main processes and industries responsible for the atmospheric emissions. These are then allocated to individual industries using information from a variety of sources. For example, emissions from diesel combustion by heavy goods vehicles are allocated to industries using vehicle mileage information from the Department for Transport. The allocation process also uses expenditure data, for example, emissions arising from the use of various industrial coatings are allocated to relevant industries in proportion to each sector's expenditure on paints, varnishes and similar coatings, printing ink and mastics, based on ONS National Accounts Input-Output Supply and Use Tables.

Data for estimating fuel consumption by industrial sectors are collected by the Department for Business, Enterprise & Regulatory Reform and underlie the figures given in the *Digest of UK Energy Statistics*.

Concepts

National accounts consistent emissions

There are a number of formats for the reporting and recording of atmospheric emissions data. These include those used by Defra for reporting greenhouse gases under the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, and for reporting air pollutant emissions to the United Nations Economic Commission for Europe (UNECE). Differences between the National Accounts measure, published by ONS, and those used for reporting under the UNFCCC and the Kyoto Protocol, following the guidance of the Intergovernmental Panel on Climate Change (IPCC), are described below.

The ONS Environmental Accounts measure greenhouse gas emissions on a UK residents basis – they include all emissions generated by UK households' and companies' transport and travel at home and abroad. They exclude emissions generated by non-residents' travel and transport in the UK. National Accounts define the economy in terms of institutional units that have a centre of economic interest in the UK. National Accounts adjustments are made for the following vehicles: aircraft, ships, cars, lorries and coaches. The methodology for deriving these adjustments is explained in more detail in *Adjustments to the UK's atmospheric emissions and energy accounts to bring them on to a National Accounts "residents" basis*[1] (ONS 2002) and the *Greenhouse gas emissions from transport Report*[2] (ONS 2004).

By applying the principle of residency, it is possible to focus attention on those responsible for emissions rather than the physical source of the emissions. Furthermore, this approach allows for comparisons of emissions and material flows against mainstream National Accounts measures such as gross domestic product (GDP) and gross value added. Eurostat also requires National Accounts consistent atmospheric emissions for inclusion in their NAMEA tables. The National Accounts measure also includes emissions of CO_2 from biomass.

Greenhouse gas emissions reported following IPCC guidance for UNFCCC and Kyoto Protocol purposes are reported on a territory basis. They therefore include emissions from within an individual country but exclude emissions from international transport. 'Net' greenhouse gas emissions reported under the UNFCCC include the total of all emissions and then net off removals from changes in land use and forestry.[3] Reporting of air pollutant emissions to the UNECE is also on a 'territorial' basis.

The measurement of greenhouse gas emissions used to monitor progress against the UK's Kyoto Protocol target of a 12.5 per cent reduction by the period 2008–2012 differs slightly from the UNFCCC net greenhouse gases total because it uses a

Table 1
Reconciliation of UK greenhouse gas emissions between UK residents and territory basis

Million tonnes of CO_2 equivalent

	1990	1995	2000	2002	2003	2004	2005
UK residents basis	**808.3**	**753.7**	**732.5**	**721.1**	**730.1**	**734.8**	**733.4**
less							
Bunker emissions[1]	22.6	27.1	36.3	34.6	35.1	39.4	41.3
CO_2 from biomass[2]	3.0	5.2	6.6	7.5	8.4	9.4	9.2
Cross-boundary adjustment[3]	13.0	12.9	17.4	23.8	25.7	27.5	27.3
plus							
Crown dependencies	0.3	0.3	0.3	0.3	0.2	0.2	0.2
Land use change and forestry[4]	2.9	1.0	–0.4	–1.1	–1.2	–1.9	–2.0
Intergovernmental Panel on Climate Change (including net CO_2 emissions/removals)	773.0	709.7	672.0	654.3	660.0	657.0	653.8
Adjustment for 'Kyoto' total	–2.7	–1.0	–0.5	–0.1	–0.2	0.4	0.3
Kyoto basket total reported	**770.3**	**708.7**	**671.6**	**654.2**	**659.8**	**657.3**	**654.1**
Kyoto base year	**775.2**						

Notes:

1 IPCC memo item, emissions from international aviation and shipping bunkers.
2 Emissions arising from from wood, straw, biogases and poultry litter combustion for energy production.
3 Emissions by UK residents abroad less emissions made by foreign residents in the UK.
4 Emissions from deforestation, soils and changes in forest and other woody biomass.

Source: Office for National Statistics; Department for Environment, Food and Rural Affairs

narrower definition of land use change and forestry, and in addition includes emissions from a number of Overseas Territories. This measure is used in the UK's climate change sustainable development indicator published by Defra.

Therefore, Environmental Accounts emissions data differ from estimates published by Defra under the UK's Kyoto Protocol obligations, although it is possible to reconcile the two data sets. **Table 1** reconciles data on both bases, consistent with latest published data.

Greenhouse gas emissions by industry and by activity

Greenhouse gas emissions shown in the Environmental Accounts cover all the emissions associated with a particular industry and not solely the emissions from the primary economic activity of that industry. For example, greenhouse gas emissions from the road freight industry not only comprise emissions from the primary source, heavy goods vehicles used for road haulage, but also include emissions from light goods vehicles, cars and other equipment used by that particular industry. Identifying emissions on an industry basis produces different levels of emissions and different rates of change when compared with greenhouse gas estimates compiled on an activity basis. For instance, freight activity is undertaken by a number of industries, such as retail and wholesale trade, in addition to the road freight industry. The different sectors of the economy are broken down by 93 industries, each with a specific Environmental Accounts (EA) code (see Appendix **Table A1**).

Trends in greenhouse gas emissions, 1990–2005

The greenhouse gases included in the atmospheric emissions accounts are those covered by the Kyoto Protocol:

- carbon dioxide (CO_2) comes mainly from the combustion of fossil fuels
- methane (CH_4) is produced when organic matter is broken down in the absence of oxygen and comes from sources such as animals and organic waste
- nitrous Oxide (N_2O) is released in some industrial processes and from agricultural fertilisers, and
- hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6) are artificial fluids that were widely used as refrigerants, in aerosols and in solvents.

Between 1990 and 2005, total UK greenhouse gas emissions on a UK residents basis fell 9.3 per cent from 808.3 million tonnes of carbon dioxide equivalent to 733.4 million tonnes (**Figure 1**). However, much of this reduction took place in the period between 1990 and 1999. Since 1999, emissions have remained broadly stable, although there has been 20.5 per cent growth in economic activity. Levels of emissions are related to the type and quantity of fuels used in the economy. Year-on-year changes in the levels of emissions are subject to a broad range of short-term factors, including fuel prices and the weather, and should be interpreted with caution.

Between 2004 and 2005, greenhouse gas emissions from the non-household sector increased by 0.6 per cent. This recent rise is due to a 3.0 per cent increase in emissions from the transport and communications sector and a 1.5 per cent increase in emissions from the electricity, gas and water supply industries.

However, these increases have been offset by decreases in emissions from other sectors, in particular the household sector, which in 2005 accounted for 21.3 per cent of all emissions and saw a year-on-year fall of 2.9 per cent. This fall was largely driven by a reduction in emissions related to household heating and cooking fuels. Since 1999, there has been a period of relative stability in greenhouse gas emissions, up slightly by 0.8 per cent compared with a 10.0 per cent fall between 1990 and 1999. Emissions of greenhouse gases have remained stable in recent years despite rising economic growth and energy use. **Figure 2** illustrates these trends.

A list of links to published data sets of breakdowns of emissions by sector is shown under Note 4.

Electricity, gas and water supply

Greenhouse gas emissions from the electricity, gas and water supply companies (EA 51–57) fell 13.2 per cent from 216.9 million tonnes in 1990 to 188.2 million tonnes in 2005 as electricity generators increased their use of natural gas as opposed to coal (**Figure 3**). Greenhouse gas emissions from electricity generation (EA codes 51–55) constituted 24.5 per cent of all greenhouse gas emissions in 2005, lower than the 25.6 per cent share in 1990, but higher than the lowest recorded figure of 20.2 per cent in 1997. The level of emissions depends to a large extent on the variety of fuel being used to generate electricity. Recent rises in emissions reflect increasing use of coal for electricity generation.

Figure 1
Greenhouse gas emissions, energy use and economic growth

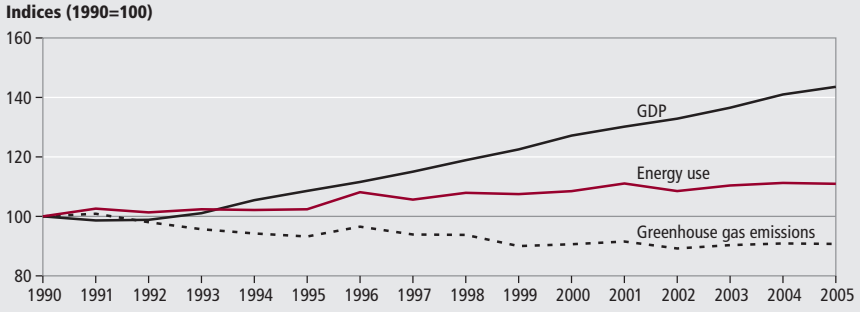


Figure 2
Greenhouse gas emissions: by sector

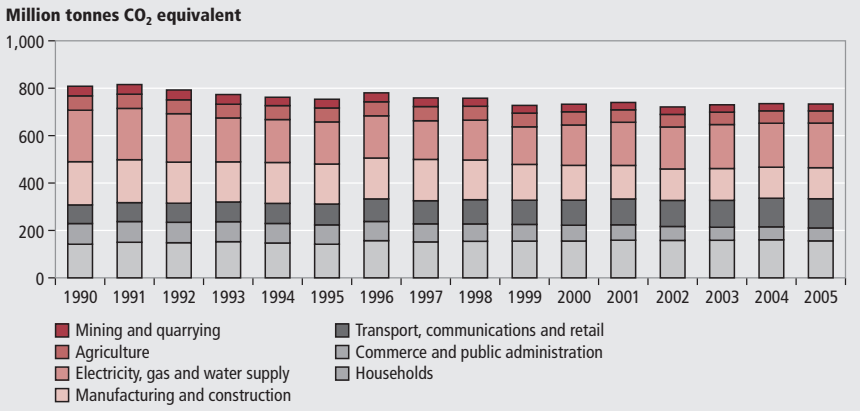


Figure 3
Greenhouse gas emissions: by electricity generation source

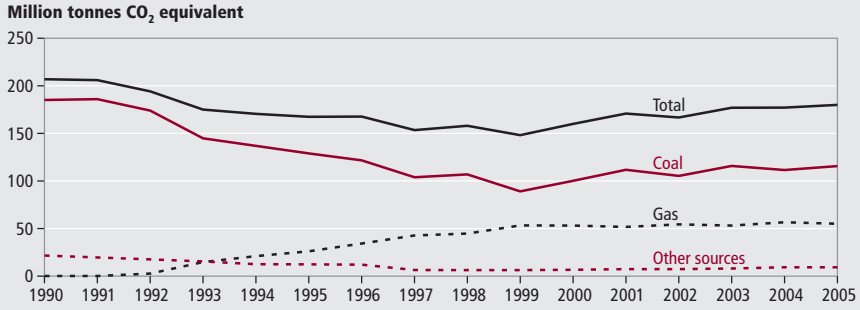


Figure 4
Greenhouse gas emissions – other sectors

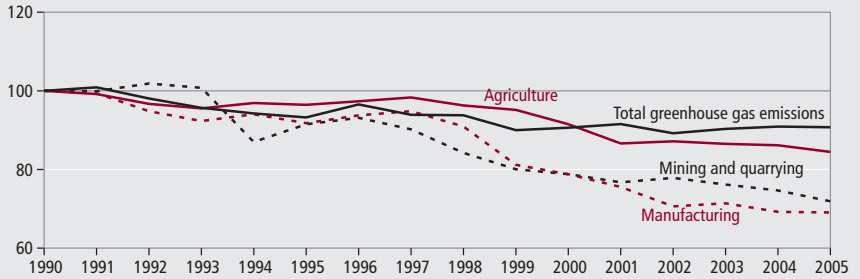


Figure 5
Greenhouse gas emissions – UK households sector

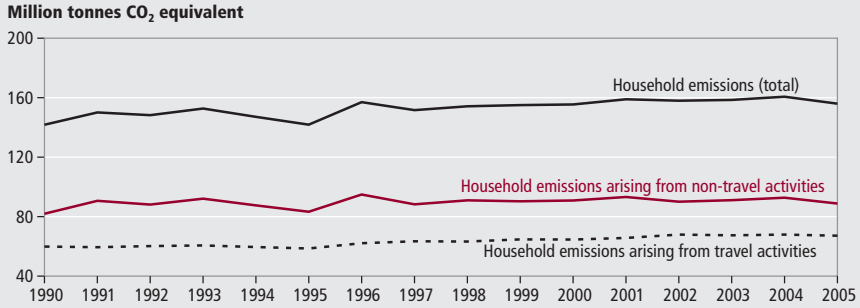
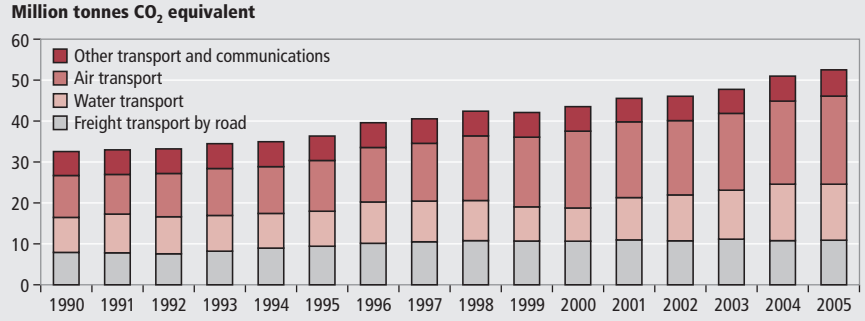


Figure 6
Greenhouse gas emissions – transport and communications sector



Other sectors

Greenhouse gas emissions from the manufacturing industries (EA 8–49) fell from 173.4 million tonnes in 1990 to 119.8 million tonnes in 2005, a fall of 30.9 per cent (**Figure 4**). Emissions from agriculture (EA 1–3), mining and quarrying (EA 4–7) and construction (EA 58) show falls over the same period, reflecting a shift from coal and oil use to more energy-efficient fuels such as natural gas.

UK households sector

UK households (EA 92–93) were responsible for the direct emission of 156.0 million tonnes of greenhouse gases in 2005, down 2.9 per cent on a year earlier (**Figure 5**). However, emissions from this sector are currently 10.0 per cent higher than in 1990. Greenhouse gas emissions from households' travel, largely emissions from private vehicles (EA 93), were 67.1 million tonnes in 2005 compared with 67.9 million tonnes in 2004, while emissions from other sources such as heating and cooking (EA 92) amounted to 88.8 million tonnes, 4.2 per cent lower than in the previous year. In 2005, greenhouse gas emissions from households constituted 21.3 per cent of all greenhouse gas emissions compared with 17.5 per cent in 1990.

Transport sector

Year on year, greenhouse gas emissions from transport and communications (EA 63–72) increased 4.4 per cent between 2004 and 2005 (**Figure 6**). Greenhouse gas emissions from the transport and communications sector were 61.3 per cent higher in 2005 than in 1990. The transport and communications sector was responsible for emitting the equivalent of 104.5 million tonnes of greenhouse gases in 2005 compared with 64.8 million tonnes in 1990.

Emissions from the air transport industry rose 6.1 per cent between 2004 and 2005, following growth of the industry. Over the same period, the number of flight kilometres by UK operators increased by 7.4 per cent. Since 1990, emissions from the aviation industry have more than doubled, reflecting a 112.1 per cent rise in flight kilometres over the same period. As a proportion of total greenhouse gas emissions, their share has increased from 2.5 per cent to 5.8 per cent.

Over the same period, the proportion of greenhouse gas emissions attributed to the shipping industry has increased from 2.1 per cent in 1990 to 3.7 per cent in 2005 (**Figure 7**). This rise reflects increases in the number of UK-owned ships following the introduction of the UK tonnage tax in 2000. Shipping companies qualify for tonnage tax if they operate ships which are strategically and commercially managed in the UK and, as companies moved into tonnage tax, UK-owned ship tonnage increased. Between end-2000 and 2005, gross tonnage of UK-owned trading ships increased by 60.7 per cent.

Between 1999 and 2005, emissions from the road freight industry remained relatively stable at between 21.2 and 22.2

Figure 7
Water transport emissions and ship tonnage

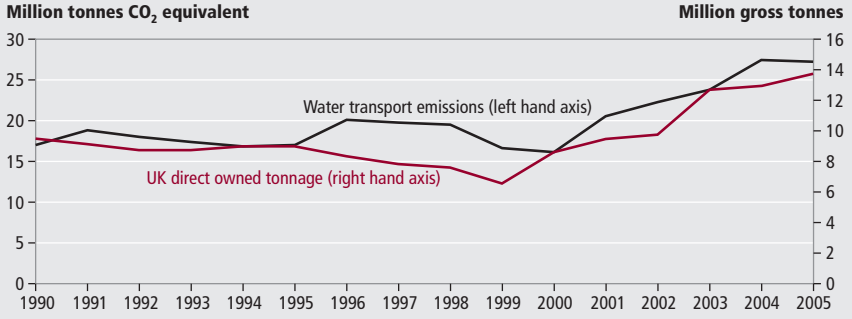


Table 2
Greenhouse gas emissions from the UK transport industry

Million tonnes of CO_2 equivalent

	1990	1995	1997	1999	2000	2001	2002	2003	2004	2005
EA code and industry										
63 Railways	1.8	1.7	1.9	2.0	2.0	2.1	2.1	2.1	2.2	2.4
64 Buses and coaches	5.4	5.1	4.9	4.5	4.2	4.0	4.3	4.4	4.5	4.6
65 Tubes and trams	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.1	0.1	0.1
66 Taxis and minicabs	1.2	1.6	1.7	1.8	1.9	1.9	1.9	1.9	2.1	2.3
67 Road freight	15.8	18.8	20.9	21.3	21.2	21.8	21.4	22.2	21.5	21.7
68 Transport via pipeline	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
69 Water transport	17.0	17.0	19.8	16.6	16.1	20.6	22.3	23.8	27.4	27.2
70 Air transport	20.4	24.7	28.0	33.8	37.3	36.8	36.1	37.4	40.4	42.8
Total transport industry	62.0	69.4	77.7	80.7	83.4	87.8	88.6	92.0	98.3	101.1
Percentage of total UK emissions	*7.7*	*9.2*	*10.2*	*11.1*	*11.4*	*11.9*	*12.3*	*12.6*	*13.4*	*13.8*
UK households' vehicles[1]	59.9	58.6	63.4	64.7	64.6	65.7	67.9	67.4	67.9	67.1
Percentage of total UK emissions	*7.4*	*7.8*	*8.4*	*8.9*	*8.8*	*8.9*	*9.4*	*9.2*	*9.2*	*9.2*
Other emission sources	686.4	625.7	617.9	582.2	584.5	586.5	564.6	570.7	568.6	565.2
Percentage of total UK emissions	*84.9*	*83.0*	*81.4*	*80.0*	*79.8*	*79.3*	*78.3*	*78.2*	*77.4*	*77.1*
Total UK emissions *of which*	**808.3**	**753.7**	**759.1**	**727.5**	**732.5**	**740.0**	**721.1**	**730.1**	**734.8**	**733.4**
Road transport[2]	111.8	114.7	122.2	123.9	123.4	123.5	126.2	126.2	127.5	128.1
Percentage of total UK emissions	*13.8*	*15.2*	*16.1*	*17.0*	*16.8*	*16.7*	*17.5*	*17.3*	*17.3*	*17.5*

Notes:

1 Includes emissions from LGV vehicles attributed to the household sector.
2 Greenhouse house gas emissions from road transport comprise emissions from all road transport sources ie cars, heavy goods vehicles, light goods vehicles, motorcycles, buses, coaches, etc. across all 93 EA industries.

Source: ONS Environmental Accounts

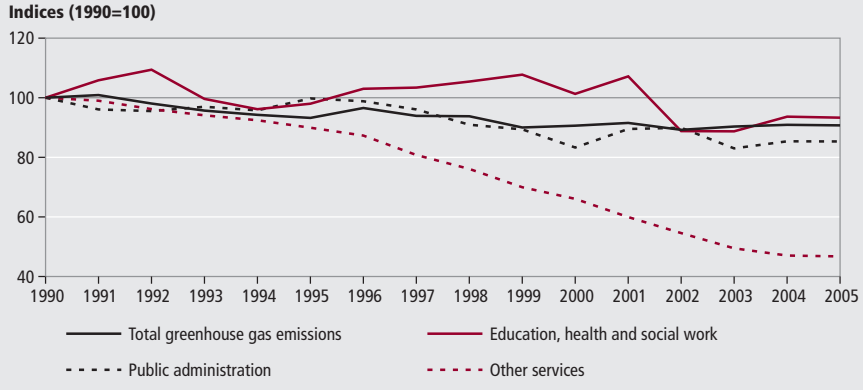
million tonnes of CO_2 equivalent, although in the period between 1990 and 1999 there was a 35.0 per cent rise in emissions from this industry.

There have also been smaller, less significant increases in emissions from other industries within the transport sector, including railways and taxis.

Emissions from tubes and trams have fallen by approximately 85 per cent since the 1990s.

Table 2 shows emissions from the transport industry broken down into different transport types.

Figure 8
Greenhouse gas emissions – services and public sector



Services and public sector

Overall, emissions of greenhouse gases from public administration (EA 81–82) have fallen 14.7 per cent since 1990 (**Figure 8**). Fewer emissions associated with the activities of military aircraft and the navy led to a 22.4 per drop in emissions from defence activities. Emissions related to non-defence activities in the public sector remained broadly stable over the same period.

Emissions from education, health and social work (EA 83–84) fell by 6.7 per cent between 1990 and 2005, largely because of fewer emissions from education.

There was a decline in emissions attributed to other services (EA 85–91), from 58.1 million tonnes of oil equivalent (mtoes) to 27.2 mtoes between 1990 and 2005. This was driven by a 60.0 per cent fall in emissions related to the incineration activities of the solid waste industry (EA 86).

Trends in emissions of gases that lead to acid rain, 1990–2005

The term 'acid rain' describes the various chemical reactions that acidic gases and particles undergo in the atmosphere. The gases may be transported long distances before being deposited. When deposited, hydrogen ions may be released, forming dilute acids, which damage ecosystems and buildings. The gases covered are:

- sulphur dioxide (SO_2), produced when coal and some petroleum products are burnt. SO_2 is an acid gas that can cause respiratory irritation, damage ecosystems and buildings and contribute to acid rain
- nitrogen oxides (NO_x), arising when fossil fuels are burnt under certain conditions. High concentrations are harmful to health and reduce plant growth
- ammonia (NH_3), largely emitted from spreading animal manure and some fertilisers. It can lead to acidification, nitrification and eutrophication in the environment

Emissions of chemicals that can cause acid rain fell by 53.8 per cent between 1990 and 2005, from 6.9 million tonnes to 3.2 million tonnes (**Figure 9**). Between 2004 and 2005, most sectors of the economy saw falls in their emissions, resulting in an overall decrease of 5.1 per cent. However, the rate of decline in emissions from acid rain chemicals was

Figure 9
Emissions of acid rain precursors

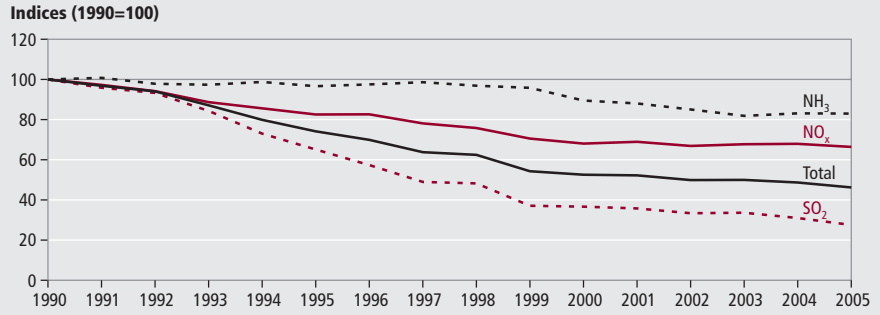


Figure 10
Emissions of acid rain per unit of output

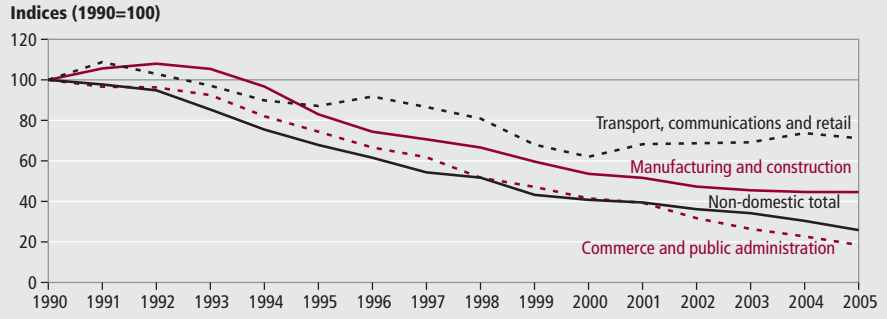
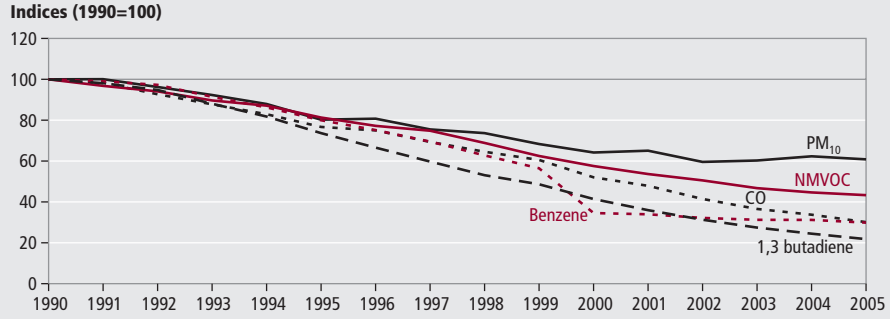


Figure 11
Emissions of other pollutants



slower in the period between 1999 and 2005 (14.9 per cent) than in the earlier period between 1990 and 1998 (45.7 per cent). The non-domestic sector (EA 1–90) is responsible for the majority of acid rain emissions in the UK. Since 1990, emissions from these industries have fallen by 52.9 per cent, from 6.3 million tonnes to 2.9 million tonnes (**Figure 10**). The largest fall was in the electricity, gas and water industry (EA 51–57) where emissions fell by 80.5 per cent over the same period, from 3.3 million tonnes to 0.7 million tonnes largely as a result of the adoption of cleaner technology.

Between 2004 and 2005, the largest fall in emissions was again in the electricity, gas and water industry (15.1 per cent). Emissions from transport and communications industry fell by 1.2 per cent, the first time there has been a fall in emissions from this industry since 2000. In 2005, emissions from households (EA 91–92) were 61.3 per cent lower than in 1990 and 10.2 per cent down on 2004, mainly reflecting falling emissions from the use of vehicles because of cleaner technology such as catalytic converters.

Trends in emissions of other atmospheric pollutants, 1990–2005

These pollutants affect the quality of the air we breathe and may have a negative impact on human health, for instance as carcinogens or causes of respiratory illness. Included in this category of atmospheric pollutants are:

- carbon monoxide (CO), formed by the incomplete combustion of fuel, particularly in transport and heating. CO can effect human health and lead to formation of ozone in the troposphere
- particulant matter (PM_{10}), fine particles produced mainly by road transport, coal fuel and various industrial processes, as a result of fuel combustion and surface erosion. Leading to poor air quality, it has been linked to premature mortality from respiratory diseases
- non-methane volatile organic compounds (NMVOCs), produced across a range of industries and having a role in the photochemical production of ozone
- benzene emissions, a result of evaporation and combustion of petroleum. The main source of benzene is road transport and it is a known carcinogen
- 1, 3 butadiene emissions, produced as a result of the combustion of petroleum and during the manufacture of synthetic rubber, nylon and latex paints. They are regarded as a cause of cancer in humans

Emissions of all these atmospheric pollutants have fallen since 1990, largely driven by the adoption of cleaner technologies (**Figure 11**). Fewer emissions of benzene and 1, 3 butadiene because of households' use of vehicles have led to falls of 70.1 per cent and 78.2 per cent, respectively. Emissions of CO, mainly from the production of electricity from coal and by road transport, fell by 69.9 per cent between 1990 and 2005. Emissions of NMVOCs, mainly produced by the chemical industries, fell by 56.7 per cent over the same period. Emissions of PM_{10} fell 39.2 per cent following the introduction of cleaner technology for the burning of coal.

Households were significant contributors of emissions of these pollutants. However, emissions of PM_{10}, benzene and 1, 3 butadiene from the transport and communications sector are increasingly significant. The majority of emissions of NMVOCs are a result of the activities of the manufacturing sector. Emissions of CO arise mainly from the manufacturing and household sectors which, in 2005, accounted for 23.0 per cent and 50.4 per cent, respectively.

Trends in emissions of heavy metals, 1990–2005

Heavy metals are natural constituents of the Earth's crust and many heavy metals in certain forms and appropriate

concentrations are essential to life. However, there is concern that some may cause damage to ecosystems of environmental and economic importance and may have harmful effects on human health. Combustion and industrial processes are the predominant anthropogenic sources of emissions of heavy metals into the atmosphere.[5]

Between 1990 and 2005, emissions of heavy metals have fallen, although the size of the reduction varies significantly (see **Table 3**).

Lead shows the largest fall, down 95.8 per cent between 1990 and 2005. This fall is driven by emissions from the household sector where the introduction of lead-free fuels for vehicles has resulted in a fall from 1,662,000 tonnes in 1990 to 5,000 tonnes in 2005. In 2005, the sector responsible for the most lead emissions (71.4 per cent) was manufacturing.

There were also large falls in mercury (79.5 per cent), chromium (75.6 per cent) and cadmium (72.5 per cent), driven mainly by lower levels of emissions from the manufacturing sector.

Arsenic, copper and zinc fell to a lesser extent by 66.1 per cent, 55.7 per cent and 53.9 per cent, respectively. The reduction in emissions from arsenic was driven by falls from the electricity, gas and water supply industries. The fall in emissions from copper followed lower emissions from the electricity, gas and water supply and manufacturing sectors. However, emissions of copper from the household sector rose between 1990 and 2005, largely due to households' use of vehicles. The fall in emissions from zinc was driven by lower emissions from the manufacturing sector. Although most sectors showed some reduction, the household sector was broadly stable.

Selenium and nickel showed the smallest drop in emissions between 1990 and 2005, falling 43.3 per cent and 35.5 per cent, respectively. Although most sectors showed falls, emissions of nickel from the transport and communications industries increased by 66.4 per cent, from 136,000 tonnes in 1990 to 227,000 tonnes in 2005, compared with an overall reduction from 465,000 tonnes to 300,000 tonnes. Manufacturing and the electricity, gas and water supply industries contributed 81.4 per cent of selenium emissions in 1990; in 2005, this proportion had fallen to 68.7 per cent. In 1990, the proportions of emissions from the transport and communications industries and households were 4.5 per cent and 8.9 per cent, respectively, while in 2005 these proportions stood at 11.4 per cent and 12.5 per cent.

Table 3
Reductions in emissions of heavy metals, 1990 to 2005

Heavy metal	Percentage reduction in emissions since 1990
Lead	*95.8*
Mercury	*79.5*
Chromium	*75.6*
Cadmium	*72.5*
Arsenic	*66.1*
Copper	*55.7*
Zinc	*53.9*
Selenium	*43.3*
Nickel	*35.5*

Trends in energy consumption, 1990–2005

In 2005, total energy consumption, including nuclear and hydroelectric power and imports of electricity, was slightly lower at 244.8 mtoes compared with 245.4 mtoes a year earlier. Since 1990, total energy consumption has risen 11.0 per cent.

Between 1990 and 2005, the consumption of carbon fuels rose 10.9 per cent while greenhouse gas emissions fell 9.3 per cent, due to changes in fuel use – the combustion of natural gas rather than coal and the introduction of integrated pollution prevention and control measures (**Figure 12**).

In contrast to greenhouse gas emissions, the rate that energy consumption has increased over the whole period is relatively stable: between 1990 and 1999 it was up 5.1 per cent and between 1999 and 2005 up 5.5 per cent.

Energy consumption, including electricity, by non-household sectors of the UK economy increased by 10.6 per cent between 1990 and 2005, while output (GDP) rose by 43.6 per cent in real terms. As a result, energy intensity (energy consumed per unit of output) decreased by 22.9 percentage points over the same period.

The use of carbon fuels such as coal, oil and gas fell from 226.0 mtoes in 2004 to 225.0 mtoes in 2005, a decrease of 0.4 per cent. The largest direct users of carbon fuels were the electricity, gas and water supply industries which accounted for 27.0 per cent of carbon fuel consumption in 2005 and consumed 60.7 mtoes in 2005, up 0.7 per cent on 2004.

The next largest sector was UK households (26.4 per cent) which consumed 59.3 mtoes of carbon fuels in 2005. In 2005, the household sector accounted for 34.1 per cent of energy use (once electricity transformation and distribution losses are allocated to the final consumer). This was 3.4 per cent lower than in 2004 and broadly offset by a 3.2 per cent year-on-year increase in carbon fuel use by the transport and communications industry.

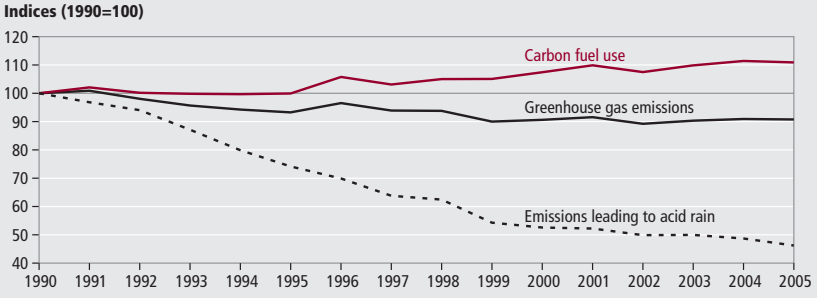
Energy from other sources such as nuclear, hydroelectricity, wind and imported electricity rose 2.1 per cent between 2004 and 2005, and is now 11.9 per cent higher than in 1990. Imports of electricity in 2005 were 11.0 per cent higher than in 2004, while energy derived from nuclear fuel and hydroelectricity remained broadly stable, up 1.2 per cent and 0.7 per cent, respectively. Between 2004 and 2005, energy from wind power increased by 50.3 per cent, from 0.2 to 0.3 million tonnes of oil equivalent.

The total amount of energy derived from renewable sources rose 12.2 per cent between 2004 and 2005. Energy from renewable sources such as biomass (for example, wood, manure and crops), hydro and wind power amounted to 4.6 mtoes in 2005 and accounted for 1.9 per cent of all energy used. Since 1990, the amount of energy from renewable sources has more than doubled from 1.9 mtoes to 4.6 mtoes.

Conclusion

Generally, levels of atmospheric emissions have fallen during the period 1990 to 2005

Figure 12
Air emissions and carbon fuel use



while energy use and economic growth have continued to rise. This suggests that emissions and energy intensities of production are improving and policies to reduce the level and alter the mix of fuels used in the economy are resulting in fewer emissions. However, progress is mixed. Following an initial fall in the 1990s, emissions of greenhouse gases have remained stable since 1999. A similar if less marked pattern is evident in emissions of acid rain precursors, while emissions of other atmospheric pollutants show a steady falls throughout the period. Emissions of heavy metals provide a more mixed story: all are down on 1990 levels but emissions of nickel and selenium were higher in 2005 than in 1999.

Notes

1 See www.statistics.gov.uk/about/methodology_by_theme/environmental_accounts/downloads/atmospheric_emissions_energy_use.pdf

2 See www.statistics.gov.uk/ downloads/theme_environment/transport_report.pdf

3 Defra publishes more detailed emissions data on this basis.

4 Published data sets are available as follows:

Greenhouse gas emissions (93 industries) at www.statistics.gov.uk/statbase/expodata/spreadsheets/d5695.xls

Acid rain precursors (93 industries) at www.statistics.gov.uk/statbase/expodata/spreadsheets/d5541.xls

Heavy metals (93 industries) at www.statistics.gov.uk/statbase/expodata/spreadsheets/d5696.xls

Other pollutants (93 industries) at www.statistics.gov.uk/statbase/expodata/spreadsheets/d5697.xls

Energy consumption at www.statistics.gov.uk/statbase/expodata/spreadsheets/d5542.xls

5 See UNECE Protocol on Heavy Metals at www.unece.org/env/lrtap/full%20text/1998.Heavy.Metals.e.pdf

CONTACT

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APPENDIX A

Table A1

Environmental Accounts industry classifications

Environmental accounts code	Industrial sector	SIC(92)	IO codes	Agg_ sectors	NACE
1	Agriculture, hunting and related service activities	1	1	AB	1
2	Forestry, logging and related service activities	2	2	AB	2
3	Fishing, operation of fish hatcheries and fish farms	5	3	AB	5
4	Mining of coal, lignite and peat	10	4	C	10
5	Extraction of crude petroleum and natural gas	11	5	C	11
6	Mining of metal ores	13	6	C	13
7	Other mining and quarrying	14	7	C	14
8	Manufacture of food products and beverages	15	8–19	D	15
9	Manufacture of tobacco products	16	20	D	16
10	Textiles	17	21–27	D	17
11	Manufacture of wearing apparel; dressing and dyeing of fur	18	28	D	18
12	Leather tanning, luggage and footwear	19	29–30	D	19
13	Timber, wood products excluding furniture; cork and straw	20	31	D	20
14	Pulp, paper and paper products	21	32	D	21
15	Publishing, printing and production of recorded material	22	33–34	D	22
16	Coke oven products	23.1	35	D	23
17	Refined petroleum products	23.2		D	
18	Processing of nuclear fuel	23.3		D	
19	Industrial gases, dyes, pigments	24.11, 24.12	36	D	24
20	Other inorganic chemicals	24.13	37	D	
21	Other organic basic chemicals	24.14	38	D	
22	Fertilisers and nitrogen compounds	24.15	39	D	
23	Plastics, synthetic rubber, primary form	24.16, 24.17	40	D	
24	Pesticides, agrochemicals	24.2	41	D	
25	Paints, varnishes, printing ink, etc.	24.3	42	D	
26	Pharmaceuticals and botanical products	24.4	43	D	
27	Soap and detergents, cleaning and toilet preparations	24.5	44	D	
28	Chemical products n.e.s.	24.6	45	D	
29	Man-made fibres	24.7	46	D	
30	Rubber products	25.1	47	D	25
31	Plastic products	25.2	48	D	
32	Glass and glass products	26.1	49	D	26
33	Ceramic goods	26.2, 26.3	50	D	
34	Structural clay products	26.4	51	D	
35	Cement, lime and plaster	26.5	52	D	
36	Articles of concrete, stone, other non-metallic mineral products	26.6–26.8	53	D	
37	Iron and steel	27.1–27.3	54	D	27
38	Non-ferrous metals excluding aluminium	27.41, 27.43–27.45	55	D	
39	Aluminium	27.42		D	
40	Casting of metals	27.5	56	D	
41	Fabricated metal products, except machinery	28	57–61	D	28
42	Machinery and equipment	29	62–68	D	29
43	Office machinery and computers	30	69	D	30
44	Electrical machinery and apparatus	31	70–72	D	31
45	Radio, television and comms	32	73–75	D	32
46	Medical, precision and optical instruments, watches and clocks	33	76	D	33
47	Motor vehicles, trailers and semi-trailers	34	77	D	34
48	Other transport equipment	35	78–80	D	35
49	Manufacture of furniture, toys, sports equipment, other products	36	81–83	D	36

Table A1 – *continued*

Environmental Accounts industry classifications

Environmental accounts code	Industrial sector	SIC(92)	IO codes	Agg_ sectors	NACE
50	Recycling	37	84	D	37
51	Electricity production – gas	40.1	85	E	40
52	Electricity production – coal			E	
53	Electricity production – nuclear			E	
54	Electricity production – oil			E	
55	Electricity production – other			E	
56	Gas distribution; steam and hot water supply	40.2, 40.3	86	E	
57	Water supply	41	87	E	41
58	Construction	45	88	F	45
59	Garages, car showrooms	50	89	GH	50
60	Wholesaler trade and commission trade except motor vehicles	51	90	GH	51
61	Retail and repair trade, except motor vehicles	52	91	GH	52
62	Hotels and restaurants	55	92	GH	55
63	Railways	60.1	93	I	60
64	Buses and coaches	60.21/1, 60.23	94	I	
65	Tubes and trams	60.21/2		I	
66	Taxis operation	60.22		I	
67	Freight transport by road	60.24		I	
68	Transport via pipeline	60.3		I	
69	Water transport	61	95	I	61
70	Air transport	62	96	I	62
71	Supporting and auxiliary transport activities, travel agencies	63	97	I	63
72	Post and telecommunications	64	98–99	I	64
73	Financial intermediation, except insurance and pension funds	65	100	JK	65
74	Insurance and pensions	66	101	JK	66
75	Activities auxiliary to financial intermediation	67	102	JK	67
76	Real estate activities	70	103–105	JK	70
77	Renting of machinery	71	106	JK	71
78	Computer and related actvities	72	107	JK	72
79	Research and development	73	108	JK	73
80	Other business actvities	74	109–114	JK	74
81	Public administration – not defence	75 not 75.22	115	L	75
82	Public administration – defence	75.22		L	
83	Education	80	116	MN	80
84	Health and veterinary services, social work	85	117–118	MN	85
85	Sewage and treatment of liquid waste	90	119	O	90
86	Solid waste			O	
87	Other sanitary services			O	
88	Activities of membership organisations	91	120	O	91
89	Recreational, cultural and sporting actvities	92	121	O	92
90	Other service activities; dry cleaning, hair dressing, funeral parlours	93	122	O	93
91	Private households with employed persons	95	123	O	95
	Extra-territorial organisations and bodies	99		O	
N	Natural world				
92	Consumer expenditure – not travel		126	Z	
93	Consumer expenditure – travel		126	Z	

FEATURE

Revisions to quarterly GDP growth and its components

Ross Meader
Office for National Statistics

SUMMARY

This article presents the results of the latest revisions analysis of gross domestic product (GDP), updating and developing the previous article, Robinson and Obuwa (2006) published in December 2006. Revisions to the estimates of quarterly GDP are analysed at different stages of the production process, and the reliability of initial estimates over two different time periods is assessed. An analysis of revisions to quarterly growth rates for the main components of the expenditure, production and income measures of GDP is also presented. More detailed analysis of the components can be found in the appendices to this article on the National Statistics website at www.statistics.gov.uk/cci/article.asp?id=1888

The quality of gross domestic product (GDP) estimates can be assessed using a variety of measures. Of these, revisions analysis examines the reliability of an early estimate in predicting the value of a later estimate. Revisions analysis does not measure accuracy, which relates to how close the estimate is to the underlying 'true' value. It is possible that a reliable estimate (in that it is revised only very slightly over time) could be very inaccurate (in its closeness to the underlying 'true' value), and vice versa.

Reliability (measured through revisions analysis) is only one aspect of quality and should be considered as part of a wider range of indicators of quality that address issues such as timeliness and coherence. Quality reports provide information on different elements of quality (including reliability) and include both static and dynamic quality information specific to a release. More information on quality reports is available at www.statistics.gov.uk/about_ns/economicstatistics_qualityreports.asp

Revisions to GDP are of wide interest to data users, who are concerned that current estimates will be revised and therefore change the economic inferences that can be drawn. The Bank of England recently analysed GDP revisions within the August 2007 Inflation Report.

The analysis in this article includes revisions made up to and including the 2007 *Blue Book*, although the time span used runs over ten years, from 1995Q1 to 2004Q4. This year's *Blue Book* contained fewer revisions than in previous years. The reasons for this and the implications are described in **Box 1**.

For most of the analyses, seasonally adjusted data and chained volume measures (CVM) (or constant prices) are used. For the income components of GDP, the analysis uses seasonally adjusted data but at current prices, not chained volume measures, due to the nature of how the data are collected and the difficulty of deflating the components.

Key conclusions

The key findings from the 2007 GDP revisions analysis are:

- the initial estimate of quarterly GDP growth is, on average, 0.15 percentage points below the latest estimate. This is statistically significant, but is reduced from the figure of 0.18, calculated following last year's *Blue Book* data set. This reflects lower revisions in the last year, due to the reasons given in Box 1
- within the compilation process for GDP, the largest mean revision is seen to happen post Blue Book 2 (BB2). The month 1 (M1) estimate of quarterly GDP is the best indicator of the month 3 (M3) estimate. The results also indicate that the M3 estimate is a good indicator of the Blue Book 1 (BB1) estimate, with the least reliable stage being BB2 to latest
- the reliability assessment indicates an overall improvement in the second time period for GDP, with improved reliability at all stages except M1 to M3
- for output components, the largest mean revisions are in agriculture, at 0.40 percentage points. The first

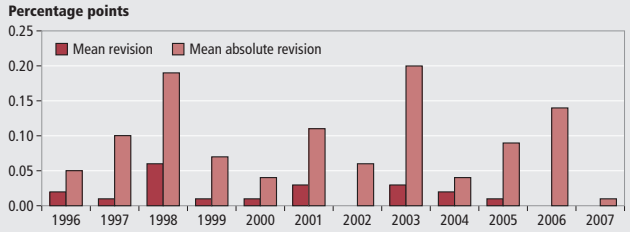
Box 1

Modernising the National Accounts and revisions

In the year since the last revisions article was written in Robinson and Obuwa (2006), the Office for National Statistics (ONS) has been heavily engaged in modernising its statistical systems. Full details are presented in Beadle (2007), but there are a number of implications for revisions work. In particular, revisions made in this year's *Blue Book* were smaller than usual, due to its reduced scope.

Figure 1 illustrates mean revisions to quarterly GDP growth, comparing the data published in each year's *Blue Book* with the data published in the previous quarter's Quarterly National Accounts First Release. For each year, revisions are averaged over the period from 1992Q1 up to each year's *Blue Book* date (published in either June or September).

Figure 1
Revisions made exclusively at *Blue Book* to GDP growth



It highlights the minimal revisions made in the 2007 *Blue Book*, when the mean absolute revision since 1992 was 0.01 per quarter. This compares with as much as 0.20 in September 2003, when annual chain linking was introduced, and 0.19 in September 1998, when the new European System of National Accounts (ESA95) was implemented. Average revisions in the 2007 *Blue Book* were zero, which has only happened twice since 1996.

In particular, the following revisions did not take place:

- previously planned methodological improvements – with the exception of own account software, these have been postponed until 2008. This includes major changes to GDP, caused by implementing financial intermediation services indirectly measured (FISIM), as well as a number of other smaller revisions. In previous *Blue Book*s, methodological improvements have been a major cause of revisions. Changes to own account software had a big effect on GDP levels but a minimal impact on growth rates and were the only cause of revisions to data before 2005

- annual supply and use balancing – the process of reconciling annual estimates of production, expenditure and income in current prices through the Input-Output Supply and Use framework was not done this year. For the revisions period used, this only affects 2004, which would normally have been through a second annual supply and use balancing process

- benchmarking to annual surveys – while some benchmarking was carried out, some of the new data from annual surveys (in particular the annual business inquiry) and administrative data sources were not incorporated. Of the benchmarked data that were incorporated, this was not done using Input-Output Supply and Use

- re-referencing the base year and annual chain linking – the base year was not advanced to 2004. Although this only affects the level of each CVM series, it has an impact on growth rates in recent years

It is expected that revisions following modernisation will be higher than usual as postponed methodology and annual benchmarking are taken on, although some of these may be offsetting.

Revisions are just one aspect of quality. While measuring quality through revisions can be problematic in the short term, National Accounts are monitoring quality closely during this transitional period.

estimate of agriculture is also the least reliable, with total services the most reliable

- total services has the lowest mean absolute revision but the largest impact on gross value added (GVA), due to its proportion. Within total services, transport, storage and communication has the largest mean revision at 0.43 percentage points. Government and other services has the most reliable first estimate, while transport, storage and communication has the least reliable
- within expenditure, gross fixed capital formation (GFCF) has the largest mean revision, at 1.16 percentage points. Mean revisions to exports and imports are relatively large, at 0.77 and 0.61 percentage points, respectively. Of all the expenditure components, the household final consumption expenditure (HHFCE) first estimate is the most reliable
- of the income components, financial corporations has the largest mean revision, at 4.71 percentage points. Compensation of employees has the most reliable first estimate

Approaches to measuring GDP

GDP can be measured using three theoretical approaches:

- production (or output)
- expenditure, and
- income

The production (or output) approach measures the sum of the value added created through the production of goods and services within the economy; the expenditure approach measures the total expenditure on all finished goods and services produced within the economy; and the income approach measures the total income generated by the production of goods and services in the economy.

The components of each approach to measuring GDP are estimated through sample surveys and administrative sources. In the short run, forecasts and models can be used to estimate growth for the later months of the quarter, for which data have not yet been collected. These forecasts are replaced with the actual data when they become available. A single estimate is then derived through a balancing process and published as the official estimate of GDP. For more details on the balancing process see Box 2 in Robinson (2005).

GDP framework

The production of quarterly GDP in the UK follows a number of stages. The main stages of the production process are outlined below. Analysis of the availability of actual data at each stage has been covered in previous *Economic Trends* articles by Mahajan (2004) and Skipper (2005).

- **M1** – the first estimate of GDP quarterly growth is published around 25 days after the end of the quarter in the GDP Preliminary Estimate First Release. This preliminary estimate is based on about 40 per cent 'actual' data and is driven by the production approach to GDP
- **M2** – the second estimate is published around 55 days after the end of the quarter in the UK Output, Income and Expenditure First Release. This is based on about 60 per cent of actual output data, as well as early estimates of the expenditure and income estimates (about 60 per cent actual data)
- **M3** – the third estimate is published around 85 days after the end of the quarter in the Quarterly National Accounts First Release. This is based on about 80 per cent of actual data encompassing fuller survey data for components of production, expenditure and income. This release includes updated data for the estimate in the current quarter as well as updated estimates for earlier quarters
- **first estimate of annual GDP (BB1)** – annual GDP estimates are published in the *Blue Book*, usually in June. The quarterly data are updated again during the production of the first estimate of annual GDP, as data from new and more comprehensive annual data sources become available
- **second estimate of annual GDP (BB2)** – the second time an annual estimate is published in the *Blue Book*, Input-Output Supply and Use Tables are produced and used to reconcile the three measures of GDP for the first time. This was not carried out for the 2007 *Blue Book*, as detailed in Box 1
- **latest estimate** – the Input-Output Supply and Use balancing process is re-run in subsequent *Blue Books* using further benchmark data and any methodological improvements that are being implemented

In this article, revisions to quarterly GDP growth rates are analysed over the periods between:

- M1 and M3
- M3 and BB1 (the first time an annual estimate is published)
- BB1 and BB2 (the second time an annual estimate is published and the first time Input-Output Supply and Use is carried out), and
- BB2 and the latest estimate (post BB2)

For the analysis of quarterly GDP growth rates, the time series used runs from 1995Q1 to 2004Q4.[1] Taking the analysis only as far as 2004Q4 ensures that all the estimates have had at least three years to mature and have all been through two *Blue Books*.

Data in this article are comparable with the data used in the revisions analysis in GDP First Releases but the analysis is carried out over different time periods and so the summary statistics will not be the same. For consistency, revisions analyses in all ONS First Releases conform to a standard time period. In this article there is more flexibility in choosing the scope of the analysis. In addition, revisions here are analysed in relation to the stages of the compilation process, as outlined above. Analysis is based on a variety of statistical tools, and methods are outlined as follows:

- using time series graphs to chart the path and behaviour of revisions in different quarters covering the period 1995Q1 to 2004Q4
- analysing summary statistics like mean revision, mean absolute revision and root mean squared error (RMSE) to measure the size, scope and impact of revisions to GDP and its components. For more details on RMSE see Box 1 in Robinson and Obuwa (2006). In brief, it indicates how well the initial estimate predicts the end value. A low RMSE suggests that the initial value was a good estimator, where a value of zero suggests a perfect estimator
- splitting the analysis period in half and using the RMSE to assess whether the reliability of initial estimates has improved or worsened. It is worth noting that the second time period will have been through fewer post-BB2 revisions compared with the first period
- using weighted mean absolute revisions to assess the impact revisions to GDP components have on headline GDP. Weighted mean absolute revision is the product of mean absolute revision and proportion of GVA/GDP of each component.
- applying a statistical test to the mean revisions to test if they are statistically significantly different from zero. For details on testing for significance in revisions see Box 1 in Robinson (2005). The outcome of the test gives an indication of whether the revisions pattern may have occurred by chance rather than due to a systematic over- or underestimation of earlier estimates.

Analysis of revisions to quarterly GDP growth

Figure 2 plots the path of GDP from 1992Q1 at each of the *Blue Book*s going back to 1995. The thick red line represents the latest GDP quarterly growth rates. It

Figure 2
Historical path of GDP published in successive *Blue Books* 1995 to 2007

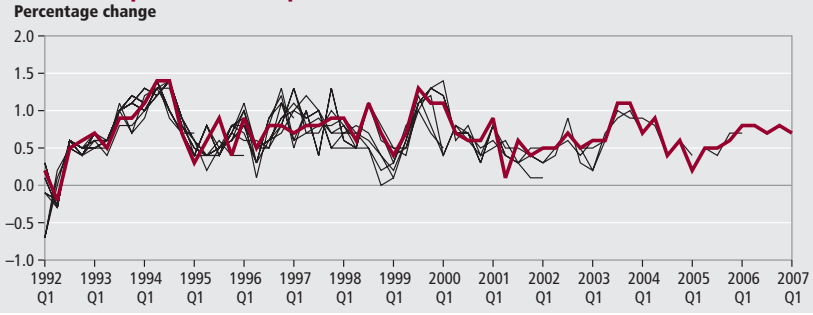


Figure 3
Total revisions to quarterly GDP growth, 1995Q1 to 2004Q4

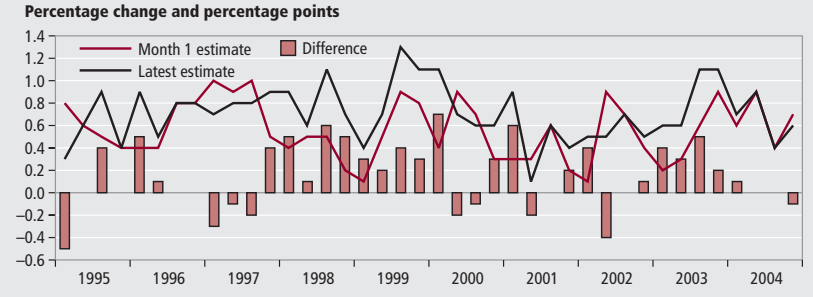
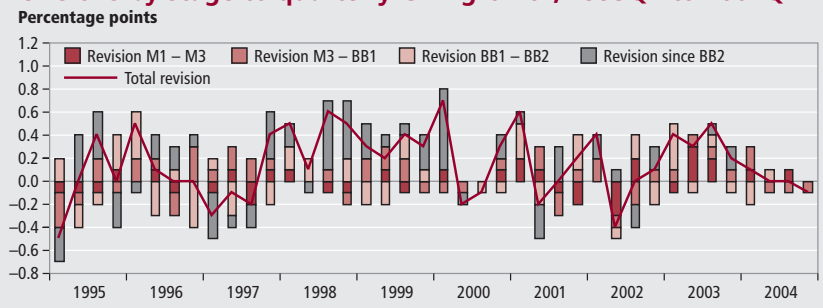


Figure 4
Revisions by stage to quarterly GDP growth, 1995Q1 to 2004Q4



demonstrates that although mean revisions have a tendency to be positive, downward revisions are also common.

Figure 3 shows GDP growth as the preliminary and the latest estimate (the *Blue Book* 2007 value) for any given quarter, with the total revision as the difference. Over the life cycle of a quarterly growth rate up to the latest estimate, it is evident the initial estimate tends to be revised upwards. Over the time period studied, the revisions to individual quarters range from –0.5 to +0.7 percentage points.

A recent paper released by the Organisation for Economic Co-operation and Development shows that the UK is one of a number of countries with significant upward revisions. However, the UK's revisions performance compares favourably with other countries in terms of the mean absolute revision.

Figure 4 shows the revisions for a given quarter broken down into the different stages of the production process. It shows that revisions can occur in either direction for each stage of the process. Revisions at M1 to M3 and BB1 to BB2 are fairly evenly distributed between positive and negative revisions, while revisions at M3 to BB1 and BB2 to latest are more likely to be positive. It also shows that offsetting revisions can be made for any given quarter at different stages of the process.

The revisions made at each stage of the process can, to some extent, be reconciled with the reasons for revisions given in Skipper (2007). In summary, the main causes of revisions are:

- later data or data replacing forecasts
- seasonal adjustment (either updates due to later data or annual changes to methodology)
- changes to adjustments (for instance, to help with balancing), or
- improvements to sources and methods

Table 1 gives more information about revisions by stage of the production process. It shows that the period from BB2 to latest is the greatest contribution to total revisions. For this period, revisions are positively biased, averaging 0.10 and the mean revision is significant. These revisions are primarily caused by methodological changes and/or changes to national accounting standards (rather than data changes).

The period from M3 to BB1 is also contributing positive revisions of 0.04 on average, mainly due to the incorporation of some annual data sources.

While these two stages have the largest mean revision, the mean absolute revision indicates that large revisions occur between BB1 and BB2, although positive and negative revisions are more equally balanced. The period between M1 and M3 contains the smallest revisions in terms of both the mean revision and the mean absolute revision.

It can be seen from the table that although the M1 estimate is a good indicator of the M3 estimate, with an RMSE value of 0.12, it is not such a good indicator for the latest estimate, as the total revisions RMSE value is 0.33.

Compared with the last time this analysis was carried out (following the 2006 *Blue Book*), revisions in all periods have decreased, with revisions between M3 and BB1 no longer significant.

Revisions reflect reliability of the estimates and are used by some analysts to assess data uncertainty. By splitting the time period used for analysis in half, an assessment can be made about whether the reliability has improved or worsened, by comparing the summary statistics for one period against the other. The first period is 1995Q1 to 1999Q4 and the second period 2000Q1 to 2004Q4.

Table 2 displays marked differences between the two periods. Only revisions between M1 and M3 are greater in the second period, shown by a higher mean absolute revision and RMSE. Table 2 also shows that revisions occurring later in the process perform comparatively better in the second period. M1 to M3 is the only period to show a switch in sign of the mean revision between the two periods.

Production (output) components

The production (or output) approach to GDP measures the sum of GVA, created through the production of goods and services within the economy. In theory, this is the total output less the intermediate consumption of goods and services used up in the production process. However, for short-term volume measurement, and in practice, this is done by using proxies for GVA. Examples of such proxies are deflated turnover and volume measures of production.

The production approach in volume terms actually measures GVA rather than

Table 1
Summary statistics for revisions to quarterly GDP growth, 1995Q1 to 2004Q4

Revisions period	Mean revision	Mean absolute revision	Variance	RMSE	Significant?
M1 to M3	0.01	0.09	0.02	0.12	No
M3 to BB1	0.04	0.13	0.02	0.15	No
BB1 to BB2	0.01	0.16	0.04	0.20	No
BB2 to latest	0.10	0.20	0.06	0.26	Yes
Total revisions	0.15	0.26	0.08	0.33	Yes

Table 2
Summary statistics for the reliability of GDP estimates, 1995–99 and 2000–04

	Mean revision		Mean absolute revision		RMSE	
Revisions period	1st period	2nd period	1st period	2nd period	1st period	2nd period
M1 to M3	–0.02	0.04	0.08	0.11	0.10	0.15
M3 to BB1	0.06	0.02	0.15	0.12	0.17	0.13
BB1 to BB2	0.00	0.02	0.20	0.13	0.23	0.17
BB2 to latest	0.12	0.08	0.27	0.14	0.31	0.22
Total revisions	0.16	0.14	0.27	0.11	0.34	0.32

Note:
1st period represents 1995Q1 to 1999Q4 and 2nd period 2000Q1 to 2004Q4.

GDP. GDP is GVA plus taxes on products less subsidies on products. Since it is not possible to split these taxes on products less subsidies on products by industry, the production approach measures GVA (not GDP) at industry level.

The main industry breakdowns used for the production approach in volume terms are:

- agriculture, forestry and fishing
- total production
- construction, and
- total services

The analysis for the main industry breakdowns covers the period 1996Q1 to 2004Q4 for the M3 estimates, with M2 estimates available from 1998Q4. For total services, M1 estimates are also available from 1998Q4.

Table 3 shows the summary statistics for revisions (first available period to latest) to growth rates for the main industry breakdown.

The largest mean revision is to agriculture at 0.40 percentage points, and the much larger mean absolute revision indicates that there have been both large positive and negative revisions over the time period. Out of the main output components, the RMSE indicates that the first estimate is the best indicator of the latest estimate for total services, with agriculture having the least reliable estimate. Although the mean revision to total production and total services is similar in size, the reliability of the services estimate is due the lower variance of revisions. None of the mean revisions are statistically significant.

All mean absolute revisions and RMSE values are slightly lower than when this analysis was last published in December 2006. This indicates that recent revisions have been smaller.

Figure 5 shows the mean absolute revision alongside the weighted mean absolute revision (using the percentage of GVA for each main component). Revisions to total services have the biggest impact on revisions to total GVA, despite having the smallest mean absolute revision.

Summary of revisions to production components

Analysis of revisions to quarterly growth rates for the main production components is available in Appendix A to this article on the National Statistics website at www.statistics.gov.uk/cci/article.asp?id=1888

A summary of the results is presented here. They focus on the results of the data reliability assessment which uses the same theory as for the GDP analysis – by splitting the sample of quarters in half, an assessment can be made about whether data reliability is improving or worsening over time. Periods chosen are the same length and contain complete years to avoid having an unequal number of *Blue Book* quarters, where revisions tend to be higher.

Agriculture

The total mean revision is smaller in the second period, although the mean absolute revision is larger. The RMSE shows that data reliability between the first and latest estimates over the two periods deteriorated considerably. This reflects decreased reliability at initial stages of the process, particularly M3 to BB1.

Total production

While the mean revision increased in the second period, the mean absolute revision decreased. The RMSE shows that data reliability between the first and latest estimates improved between periods, largely due to increased reliability of the BB2 estimate as an indicator of the latest estimate.

Construction

The negative total mean revision value grew in the second period, although the mean absolute revision is similar between the two quarters. The reliability of the first estimate as an indicator of the latest estimate decreased slightly, driven by the worsening reliability of the BB1 estimate as an indicator of the BB2 estimate.

Total services

The total mean revision is smaller in the second period, with the mean absolute revision similarly decreasing. The reliability of the first estimate as an indicator of latest estimate improved considerably, driven by enhanced reliability for the BB2 estimate in reflecting the latest value.

Total services sub-components

Since total services make up a large proportion of total GVA (74.4 per cent in 2003), an analysis has been carried out on the key sub-components of services.

The breakdown for total services is:

- distribution, hotels and catering
- transport, storage and communication
- business services and finance, and
- government and other services

The analysis for the services breakdown covers the period 1996Q1 to 2004Q4 for the M3 estimates, with M2 estimates available from 1998Q4. For distribution, hotels and catering, M1 estimates are also available from 1998Q4.

Table 4 shows the summary statistics for revisions to growth rates for the main services breakdown.

The largest mean revision is to transport, storage and communication, at 0.43 percentage points, and a relatively large mean absolute revision. The mean revision for government and other services is zero, but the mean absolute revision of 0.32 indicates that there have been positive and negative revisions in different quarters.

Of the key services sub-components, the RMSE indicates that the first estimate is the best indicator of the latest estimate for government and other services, with

Table 3
Summary statistics for the main output components, 1996Q1 to 2004Q4

Component	Percentage of GVA (based on 2003 values)	Mean revision	Mean absolute revision	Variance	RMSE	Statistically Significant?	Weighted mean absolute revision
Agriculture	*1.0*	0.40	1.98	9.86	3.17	No	0.02
Total production	*18.5*	0.20	0.62	0.48	0.72	No	0.11
Construction	*6.1*	0.04	0.93	1.29	1.14	No	0.06
Total services	*74.4*	0.16	0.29	0.11	0.37	No	0.22

Figure 5
Mean absolute revision and weighted mean absolute revision for the main output components, 1996Q1 to 2004Q4

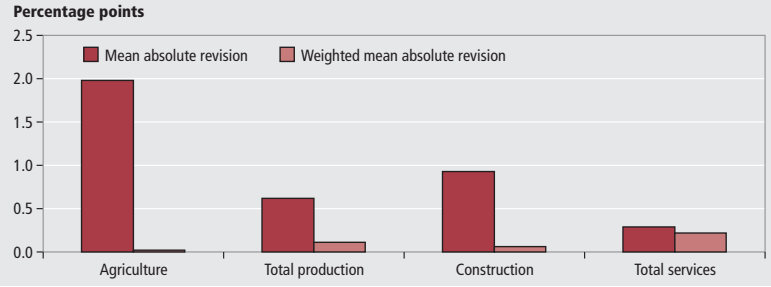


Table 4
Summary statistics for the main services sub-components, 1996Q1 to 2004Q4

Component	Percentage of GVA (based on 2003 values)	Mean revision	Mean absolute revision	Variance	RMSE	Statistically Significant?	Weighted mean absolute revision
Distribution, hotels and catering	*15.3*	0.28	0.59	0.45	0.73	Yes	0.09
Transport, storage and communications	*7.8*	0.43	0.83	0.99	1.08	Yes	0.06
Business services and finance	*27.7*	0.24	0.54	0.40	0.68	No	0.15
Government and other services	*23.5*	0.00	0.32	0.18	0.43	No	0.08

Figure 6
Mean absolute revision and weighted mean absolute revision for the main services sub-components, 1996Q1 to 2004Q4

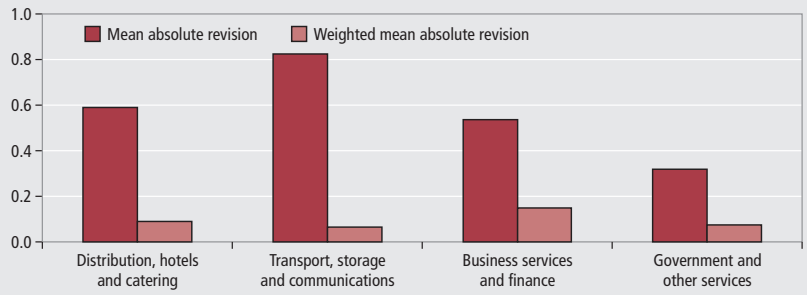


Table 5
Summary statistics for revisions to the main expenditure components of GDP, 1996Q1 to 2004Q4

Component	Percentage of GVA (based on 2003 values)	Mean revision	Mean absolute revision	Variance	RMSE	Statistically Significant?	Weighted mean absolute revision
HHFCE	*62.8*	0.01	0.41	0.29	0.53	No	0.26
NPISH	*2.4*	–0.41	0.95	1.27	1.20	No	0.02
GGFCE	*21.0*	–0.06	0.62	0.71	0.84	No	0.13
GFCF	*16.1*	1.16	2.19	6.10	2.73	Yes	0.35
Exports	*25.7*	0.77	1.46	3.55	2.03	Yes	0.38
Imports	*–28.4*	0.61	1.16	1.60	1.41	Yes	–0.33
Inventories	*0.4*	n/a	n/a	n/a	n/a	n/a	n/a

transport, storage and communication the least reliable.

The mean revision between the first and latest estimates is statistically significant for distribution, hotels and catering and transport, storage and communication.

Compared with last year's analysis, only government and other services displays an increase in the mean absolute revision and the RMSE value.

Figure 6 shows the mean absolute revision alongside the weighted mean absolute revision (using the percentage of GVA for each main component). Revisions to business services and finance are the biggest cause of revisions to total services.

Summary of revisions to services sub-components

Analysis of revisions to quarterly growth rates for the key services components is available in Appendix A to this article on the National Statistics website at www.statistics.gov.uk/cci/article.asp?id=1888

A summary of the results is presented here, focusing on the results of the data reliability assessment.

Distribution, hotels and catering
Data reliability overall has worsened in the second period compared with the first, driven by poorer reliability at the start of the process, between M3 and BB1.

Transport, storage and communications
Data reliability has improved overall and at each stage of the process when comparing the two periods. There were particularly large improvements in reliability for the BB2 estimate as an indicator of the latest estimate.

Business services and finance
Data reliability has improved overall as a result of improved reliability at each stage of the process, most noticeably for BB2 compared with the latest estimate.

Government and other services
Data reliability is better overall in the second period with a lower RMSE, driven by the reliability for BB2 in indicating the latest estimate.

Expenditure components

The expenditure measure of GDP calculates the total expenditure on final demand for UK-produced goods and services (also described as total domestic expenditure, adjusted for trade). The main components are:

- HHFCE – household final consumption expenditure
- NPISH – final consumption expenditure by non-profit institutions serving households
- GGFCE – general government final consumption expenditure
- GFCF – gross fixed capital formation
- changes in inventories
- exports of goods and services
- *less* imports of goods and services

The analysis of most expenditure components covers the period 1996Q1 to 2004Q4. Expenditure components are first published at M2 and so, for this analysis, the first revisions period investigated will be M2 to M3 rather than M1 to M3. Analysis for the NPISH component will cover the period 1998Q3 to 2004Q4. This is because NPISH was first published as a separate series in 1998Q3. M2 revisions for imports and exports are only available from 1998Q3 and 1998Q4, respectively.

Table 5 shows summary statistics for the revisions (first available estimate to latest) to growth rates of expenditure measure components of GDP. Revisions to growth rates of changes in inventories are not included. Analysis of growth rates to changes in inventories would not be meaningful because the underlying estimate is a flow and is published as levels rather than growth.

The largest mean revision is to GFCF, at 1.16 percentage points, with a much larger mean absolute revision. The comparatively large RMSE indicates that the first estimate at M2 is not a good indicator of the latest estimate.

Mean revisions to exports and imports are relatively large, with a high RMSE indicating that the first estimate for both components is not a good indicator of their respective latest estimates.

For the period covered, the mean revision to HHFCE is almost zero, at 0.01. The mean absolute revision of 0.41 percentage points shows that there were small positive and negative revisions, which cancelled each other out over the time period analysed. The comparatively low RMSE of 0.53 percentage points indicates that of all the expenditure components, the first HHFCE estimate is the

best indicator of the latest estimate.

Mean revisions to exports and imports are statistically significant largely due to trade associated with VAT Missing Trader Intra-Community (MTIC) fraud. The estimates of the impact of MTIC fraud on the trade statistics are volatile and difficult to predict. For more detailed analysis of this impact, see Ruffles et al (2003).

Table 5 also shows that mean revisions to GFCF are statistically significant. The statistical significance of GFCF and exports revisions comes despite comparatively large variances, indicating there are normally large revisions to these components. Mean revisions to HHFCE, NPISH and GGFCE are not statistically significant.

Compared with last year's analysis, GGFCE and total exports show a worsening of the mean absolute revision and RMSE; other components show an improvement.

The weighted mean absolute revision shows that revisions to HHFCE have a bigger impact on GDP compared with that made by revisions to GGFCE. The weighted mean absolute revision for NPISH of 0.02 shows the minimal impact revisions to this component has on overall GDP. This is highlighted in **Figure 7**, which shows mean absolute revisions alongside their weighted counterparts.

Although the mean absolute revision for GFCF is highest at 2.19, because of its smaller proportion of GDP, the overall impact is similar in size to that made by revisions to exports and imports, which both have lower mean absolute revisions. This is illustrated in Figure 7.

Summary of revisions to expenditure components

Analysis of revisions to quarterly growth in the expenditure components of GDP is contained in Appendix B to this article on the National Statistics website at <<add weblink>>. As with headline GDP, analysis is based on splitting the time period in half and assessing whether the reliability has improved or worsened. The first period is from 1997Q1 to 2000Q4 and the second period from 2001Q1 to 2004Q4 (for NPISH, the first period is from 1999Q1 to 2001Q4 and the second period from 2002Q1 to 2004Q4). A summary of the results is presented here.

HHFCE

The results show the total mean revision changed to a negative in the second period, with the mean absolute revision falling between the periods. The RMSE compared across the two time periods for total revisions shows that the reliability of the M2 estimate as an indicator for the latest estimate improved in the second period. This is due to smaller mean absolute revisions over the period from the second *Blue Book* published figure to the latest estimate for the second period.

NPISH

The total mean revision has a larger negative value in the second period, although the mean absolute revision is smaller. The RMSE shows that the reliability of the M2 estimate as an indicator for the latest estimate improved in the second period.

GGFCE

The total mean revision is little changed from the first period to the second period. There is also little difference in the mean absolute revision and RMSE between periods, although both are marginally improved in the second period.

GFCF

The total mean revision is larger in the second period compared with the first, with the mean absolute revision increasing likewise. The RMSE shows that the reliability of the M2 estimate as an indicator of the latest estimate worsened in the second period.

Inventories

In the second period, the total mean revision is larger, with the mean absolute revision showing a significant increase. The reliability of the M2 estimate as an indicator of the latest estimate worsened markedly in the second period.

Exports

The total mean revision (M3 to latest) is larger in the second period compared with the first, but the mean absolute revision decreased. The reliability of the M3 estimate as an indicator of latest estimate improved in the second period.

Imports

The total mean revision (M3 to latest) is larger in the second period compared with the first and the mean absolute revision also increased. The reliability of the M3 estimate as an indicator of latest estimate worsened in the second period.

Income components

The income approach to GDP measures the total income generated by the production of goods and services within the economy. It is broken down into categories according to who has earned the income. The main components are:

- compensation of employees (CoE) – primarily made up of wages and salaries
- public corporations – gross operating surplus of public non-financial corporations
- private non-financial corporations (PNFCs) – gross operating surplus of private non-financial corporations
- financial corporations – gross operating surplus of financial corporations
- other income – includes mixed income which covers the income of the self-employed
- taxes on products less subsidies on products

The gross operating surplus is made up of gross trading profits, rental and holding gains/losses of inventories.

Analysis of income components covers the period from 1998Q2 to 2004Q4, using seasonally adjusted current price data as opposed to chained volume data used for the output and expenditure components. M2 data for CoE is available from 1999Q1. M2 data for other income and taxes and products less subsidies is available from 1998Q3.

Table 6 shows summary statistics for the revisions to growth rates of components of the income measure of GDP.

The largest mean revision is to financial corporations, at 4.71 percentage points. A markedly larger mean absolute revision indicates that there have been both large positive and negative revisions over the period. The mean revision to public corporations is relatively large without regard to sign, and this too has a comparatively larger mean absolute revision.

Figure 7
Mean absolute revision and weighted mean absolute revision for the main expenditure components of GDP, 1996Q1 to 2004Q4

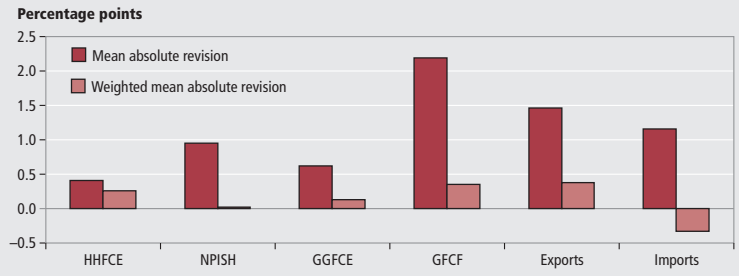


Table 6
Summary statistics for revisions to the main income components of GDP, 1998Q2 to 2003Q4

Component	Percentage of GVA (based on 2003 values)	Mean revision	Mean absolute revision	Variance	RMSE	Statistically Significant?	Weighted mean absolute revision
CoE	*55.6*	0.20	0.43	0.28	0.57	No	0.24
Public non-financial corporations	*7.0*	–2.03	8.32	149.93	12.41	No	0.05
Private non-financial corporations	*18.2*	0.25	2.10	6.09	2.48	No	0.38
Financial corporations	*3.6*	4.71	28.27	1,970.41	44.64	No	1.02
Other income	*9.2*	–1.56	4.87	31.85	5.86	No	0.45
Taxes on products *less* subsidies on products	*12.7*	–0.05	1.19	2.20	1.49	No	0.15

Figure 8
Mean absolute revision and weighted mean absolute revision for the main income components, 1998Q2 to 2004Q4

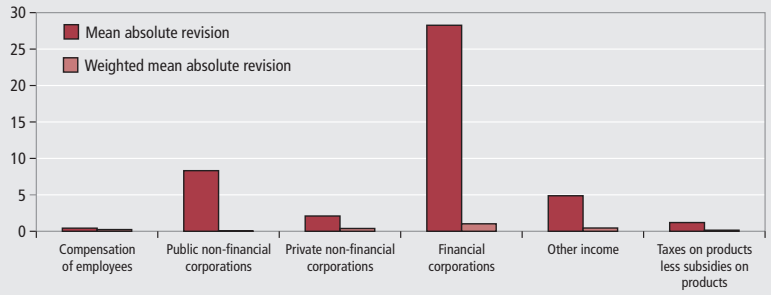
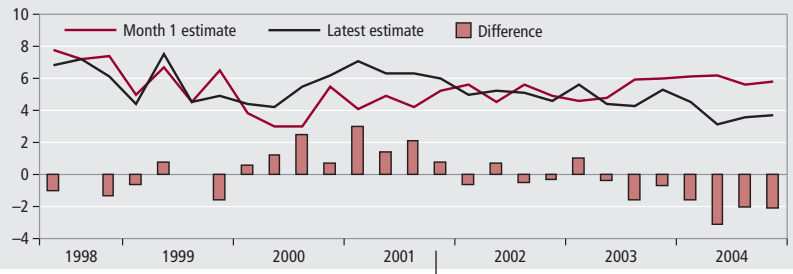


Figure 9
Total revisions to the savings ratio, 1998Q2 to 2004Q4



The first estimate is the best indicator of its latest estimate for CoE, shown by having the lowest RMSE value at 0.57. The first estimate for financial corporations is the least reliable indicator of its latest estimate.

Despite CoE being significant when last year's analysis was carried out, none of the components are significant. This is due to a decrease in the CoE mean revision. Of the six components, only CoE and private non-financial corporations have not improved since last year, based on the mean absolute revision and the RMSE.

In Table 6, the weighted mean absolute revision shows that revisions to financial corporations have the biggest impact on GDP, a reflection of the large mean absolute revision of this component. The table also shows that revisions to PNFCs and other income also have a notable impact on headline GDP. **Figure 8** illustrates the comparison between mean absolute revision and weighted mean absolute revision for all income components.

Also evident from Table 6 is the minimal impact revisions to CoE and taxes on products less subsidies have on headline GDP, despite together accounting for 68.3 per cent of the income measure. This is mainly due to the low mean absolute revisions of both components.

The savings ratio

The household savings ratio calculates household saving as a percentage of total gross household disposable income, adjusted for changes in net equity of households in pension funds. It is published quarterly within the *UK Economic Accounts*, which coincides with M3.

Revisions to the savings ratio are not significant. **Figure 9** shows that, during 2000 and 2001, there were eight successive positive revisions. However, the mean revision is negative, largely due to seven successive quarters of negative revisions at the end of the series. The mean absolute revision is 1.19.

Notes

1 Due to historical reasons and availability of data, the analyses of revisions to the quarterly growth rates for the components of each of the three measures could not be carried out in all cases for consistent time periods. Details of the time periods which were used for each of the three approaches are outlined just before the analysis.

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FEATURE

Civil Service employment statistics 2006

Donna Livesey, Craig Taylor and Pete Jones
Office for National Statistics

SUMMARY

This article presents a summary of annual Civil Service statistics for the year ending 30 September 2006, as published in July 2007. Previously produced by the Cabinet Office, responsibility for the collection and publication of these statistics is now with the Office for National Statistics (ONS). This transfer of responsibility was outlined in an 'In brief' article in the February 2007 edition of *Economic & Labour Market Review*. Quarterly Civil Service employment statistics are already published as part of the ONS Public Sector Employment First Release, and a work programme has been initiated to reconcile the annual and quarterly figures as much as possible. The annual Civil Service statistics provide a more detailed picture of characteristics of the Civil Service than do the quarterly figures.

The Office for National Statistics (ONS) publishes two key sources of Civil Service employment statistics:

- quarterly Civil Service employment statistics are published approximately 11 weeks after the end of each calendar quarter, as part of the Public Sector Employment First Release.[1] These timely statistics are based on a quarterly survey of all government departments and are the best source for measuring Civil Service workforce numbers over time.
- annual Civil Service statistics provide a more detailed picture of the characteristics of the Civil Service, for example, in terms of diversity, location and earnings. These statistics are based on the annual Mandate collection.

This article presents a summary of the Civil Service statistics for the year ending 30 September 2006, as published in July 2007.

Number of civil servants

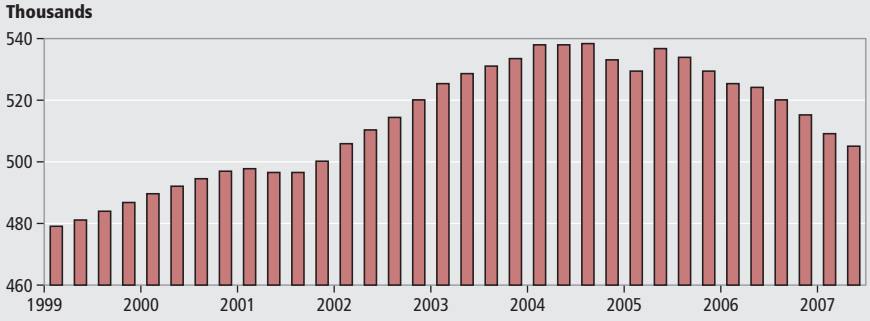
The latest published statistics are for 2007 Q2 (30 June) when Civil Service employment was 539,000 (505,000 on a full-time equivalent basis).

Figure 1 illustrates the trends in Civil Service employment since 1999 Q1. On a full-time equivalent basis, figures increased by 59,000 to 538,000 in 2004 Q1, before levelling off and then starting to fall in recent quarters.

Reconciliation with published quarterly statistics

This is the first year that ONS has been responsible for collecting and publishing both the annual and quarterly statistics. ONS initiated a work programme with departments to reconcile the figures between the two sources as much as

Figure 1
Civil Service employment – full-time equivalents



possible. The result of this can be seen below:

	Headcount	Full-time equivalent
2006 Q3 (Sept)	554,190	519,980
30 Sept 2006	553,560	518,670
Difference	–630 (0.1%)	–1,310 (0.3 %)

Since the main purpose of the annual survey is to take a deeper look at the characteristics of the Civil Service (for example, diversity, location and earnings), this slight discrepancy is not considered to impact on the quality of the annual statistics, which are fit for purpose.

The remainder of this article highlights some of the key statistics available about the Civil Service. For further analyses, refer to the main Civil Service Statistics 2006 publication.

Regional statistics

Distribution of civil servants by region

According to **Table 1**, in September 2006, 16.8 per cent of UK-based civil servants worked in London, 72.0 per cent worked outside London and the South East, with 9.7 per cent based in Scotland and 6.8 per cent in Wales.

The regional distribution of civil servants in the UK was broadly unchanged between 2003 and 2006. The largest decreases were in London (–1.4 per cent) and the South East (–0.5 per cent). The largest increases were in the South West and Yorkshire and The Humber, both increasing by 0.6 per cent.

Earnings and levels of responsibility

Levels of responsibility

Table 2 shows the numbers of employees by responsibility level.

The Senior Civil Service (senior management) accounts for 0.9 per cent of the workforce, with the largest proportion of employees working at junior administrative (Administrative Officer (AO) and Administrative Assistant (AA)) grades, 45.2 per cent.

Salary levels

Figure 2 shows proportions and numbers of employees at different salary levels. At 30 September 2006, the median gross salary (excluding overtime or one-off bonuses) was approximately £20,000.

One-quarter of employees earned £16,000 or less and one quarter earned £26,000 or more.

The proportion of median women's salaries to that of men has increased from 79.1 per cent in April 2005 to 81.0 per cent in September 2006.

Diversity statistics

All diversity statistics relate to civil servants counted on a headcount basis.

Gender

On 30 September 2006, 52.9 per cent of civil servants were women (**Figure 3**), virtually the same as the previous year.

At 30 September 2006, women made up the majority (61.5 per cent) of employees in junior administrative (AO/AA) grades.

Females fill the minority of middle and senior management posts. However, the proportion of women in the more senior grades has continued to increase, with the proportion of women in the Senior Civil Service increasing by 2.4 per cent to 29.8 per cent.

Table 1
Regional distribution of the Civil Service, 2006[1]

Numbers[2]

	Male	Female	Total	Percentage of UK- based civil servants
London and South East	73,600	68,290	141,880	*28.0*
London	43,090	42,000	85,090	*16.8*
South East	30,510	26,290	56,800	*11.2*
South West	29,780	22,990	52,770	*10.4*
West Midlands	16,030	17,270	33,310	*6.6*
North West	26,480	35,390	61,870	*12.2*
North East	14,390	20,000	34,400	*6.8*
Yorkshire and The Humber	19,060	20,190	39,250	*7.8*
East Midlands	11,490	12,680	24,170	*4.8*
East of England	14,700	15,010	29,710	*5.9*
Wales	15,710	18,540	34,280	*6.8*
Scotland	24,270	24,650	48,920	*9.7*
Northern Ireland	3,210	2,670	5,880	*1.2*
Unreported and elsewhere	7,660	4,600	12,260	

Notes:
1 As at 30 September.
2 Full-time equivalents, rounded to the nearest ten.
Source: Mandate and departmental returns

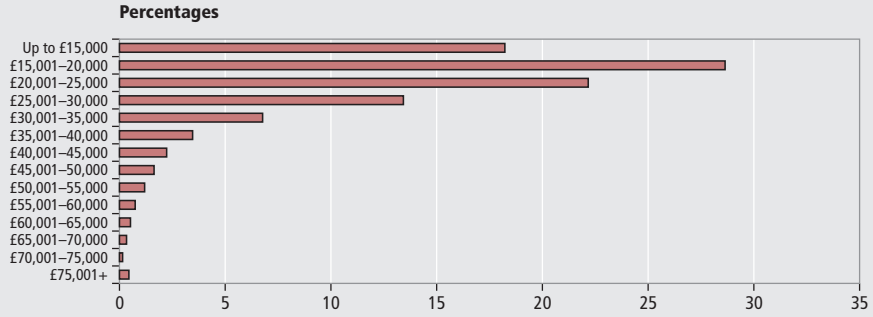
Table 2
Permanent employees: by responsibilty level and gender, 2006[1]

Numbers[2]

	Headcount						Full-time equivalent		
	Full-time employees			Part-time employees					
Responsibility level	Male	Female	Total	Male	Female	Total	Male	Female	Total
All non-industrial employees	**227,400**	**192,450**	**419,850**	**12,070**	**91,580**	**103,650**	**235,590**	**253,900**	**489,490**
SCS level	3,120	1,190	4,300	70	170	240	3,170	1,310	4,480
Grades 6/7	17,710	8,670	26,380	570	2,120	2,690	18,090	10,160	28,250
SEO/HEO level	50,040	30,040	80,070	1,450	7,780	9,230	51,080	35,650	86,740
EO level	54,740	48,480	103,220	2,310	23,440	25,760	56,440	64,990	121,420
AO/AA level	83,800	91,450	175,250	6,640	53,190	59,830	88,190	126,170	214,360
Unknown	17,990	12,620	30,610	1,030	4,880	5,900	18,620	15,630	34,250
All industrial employees	**15,950**	**2,540**	**18,500**	**250**	**660**	**910**	**16,120**	**2,960**	**19,070**

Notes:
1 As at 30 September.
2 Rounded to the nearest ten.
Source: Mandate and departmental returns

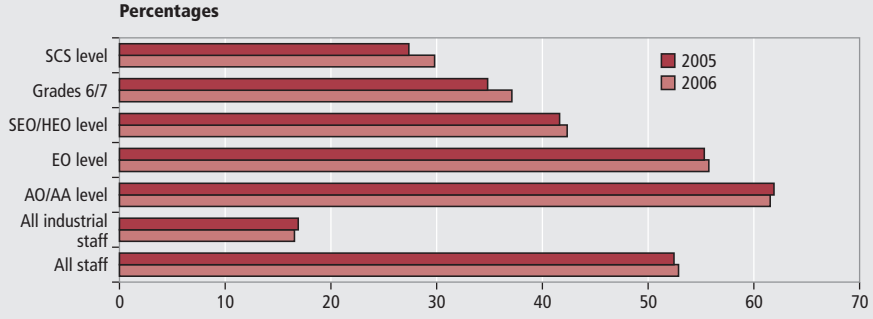
Figure 2
Non-industrial permanent employees: by gross salary band, 2006[1]



Note:
1 Full-time equivalents, as at 30 September.

Source: Mandate and departmental returns

Figure 3
Female employees as a percentage of employees: by responsibility level[1]



Note:
1 Permanent employees, as at 1 April 2005 and 30 September 2006.

Source: Mandate and departmental returns

Ethnic origin

On 30 September 2006, the proportion of employees from minority ethnic backgrounds was 8.4 per cent (**Table 3**). This was a slight increase from 8.1 per cent in April 2005.

As in previous years, employees from minority ethnic backgrounds continue to be more highly represented in the junior grades. On 30 September 2006, 9.6 per cent of employees in administrative (AO/AA) and Executive Officer grades were from an ethnic minority. This compares with 4.1 per cent for the Senior Civil Service.

Disability status

On 30 September 2006, the proportion of employees declared disabled was 4.4 per cent. This was a slight decrease from 4.5 per cent 18 months earlier.

Table 4 shows disabled employees by responsibility level. Employees with a declared disability continued to be more numerous in junior grades than at senior levels. On 30 September 2006, 4.9 per cent of employees in administrative grades declared themselves as disabled. This compares with 2.5 per cent for the Senior Civil Service.

Age

Table 5 shows the age distribution of the Civil Service workforce by responsibility level and gender. On 30 September 2006, the greatest concentration of employees continued to be in the middle age bands, with 56.4 per cent aged 30 to 49. In comparison, 15.5 per cent of employees were under 30 and 27.9 per cent of employees were 50 or over.

Development programme

When responsibility for the collection and publication of Civil Service statistics transferred to ONS in 2006, it was agreed with the Cabinet Office that no major changes to the survey would be implemented in the first year.

However, a development programme has been scheduled for the 2007 survey, with the aim of improving quality and efficiency. The key elements to this development programme are as follows:

- streamlining the survey specification to meet the latest requirements of key stakeholders while minimising the burden on government departments

Table 3
Ethnic origin of permanent employees: by responsibility level, 2006[1]

Numbers[2]

Responsibility level	White	Asian	Black	Chinese	Mixed	Other ethnic minority	Non-response	All employees	Ethnic minority as percentage of known ethnic origin
All non-industrial employees	**376,730**	**16,980**	**10,900**	**1,010**	**4,240**	**2,540**	**111,120**	**523,520**	***8.7***
SCS level	3,460	70	20	..	30	20	930	4,540	*4.1*
Grades 6/7	21,410	590	290	50	250	150	6,340	29,080	*5.9*
SEO/HEO level	66,210	2,130	1,470	180	760	430	18,130	89,310	*7.0*
EO level	94,040	4,690	3,290	240	1,040	690	25,000	128,990	*9.6*
AO/AA level	165,800	8,750	5,370	420	1,960	1,200	51,580	235,080	*9.6*
Unknown	25,800	740	470	120	200	50	9,140	36,520	*5.7*
All industrial employees	**13,800**	**70**	**120**	**10**	**60**	**70**	**5,280**	**19,410**	***2.4***
All employees	**390,520**	**17,050**	**11,020**	**1,020**	**4,300**	**2,620**	**116,400**	**542,930**	***8.4***

Notes:
1 As at 30 September.
2 Headcount, rounded to the nearest ten; numbers less than five are represented by "..".
Source: Mandate and departmental returns

- a comprehensive methodological review of the survey reviewing, for example, validation procedures and disclosure rules
- an early recommendation of this review has been to move from the use of two data collection instruments to a single method of collection. ONS is working with departments to implement this change for the 2007 survey, which will significantly improve the flexibility of the data set and improve the coverage for a range of variables
- development of processes and systems to bring the surveys in line with ONS best practice, make the infrastructure more robust and automate the processes as far as possible

More information

The full Civil Service Statistics 2006 publication is available from the National Statistics website at www.statistics.gov.uk/StatBase/Product.asp?vlnk=2899

Regular quarterly Civil Service employment statistics are published on the National Statistics website in the Public Sector Employment First Release.

Historical annual Civil Service statistics are available from the Cabinet Office website at www.civilservice.gov.uk/management/statistics/reports/2005/index.asp

Notes

1 See www.statistics.gov.uk/statbase/product.asp?vlnk=13615

CONTACT

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Table 4

Permanent disabled employees: by responsibility level, 2006[1]

Numbers[2]

Responsibility level	Declared disabled	All employees	Declared disabled employees as percentage of all employees
All non-industrial employees	**23,350**	**523,500**	***4.5***
SCS level	110	4,540	*2.5*
Grades 6/7	850	29,080	*2.9*
SEO/HEO level	3,650	89,300	*4.1*
EO level	6,410	128,980	*5.0*
AO/AA level	11,410	235,080	*4.9*
Unknown	920	36,520	*2.5*
All industrial employees	**770**	**19,410**	***4.0***
All employees	**24,120**	**542,900**	***4.4***

Notes:
1 As at 30 September.
2 Headcount, rounded to the nearest ten.
Source: Mandate and departmental returns

Table 5

Staff: by responsibility level, age and gender, 2006[1]

Numbers[2]

	Age distribution											
	16–19		20–29		30–39		40–49		50 and over		Unknown	
Responsibility level	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
All non-industrial staff	**1,740**	**2,350**	**28,410**	**38,860**	**46,020**	**61,800**	**65,310**	**83,910**	**65,410**	**57,910**	**300**	**120**
SCS level	0	0	10	..	260	150	940	440	1,350	440	..	..
Grades 6/7	0	0	500	590	2,600	2,660	5,410	3,540	7,030	2,090	10	10
SEO/HEO level	0	0	2,840	3,300	8,910	8,320	15,470	12,300	15,450	6,720	..	..
EO level	10	10	5,250	6,980	11,980	17,380	16,310	25,080	14,360	14,580	10	10
AO/AA level	1,540	2,320	18,050	27,220	19,440	32,140	22,750	41,350	22,850	33,330	..	..
Unknown	190	30	1,780	780	2,830	1,160	4,430	1,200	4,370	760	280	100
All industrial staff	**200**	**50**	**1,190**	**280**	**2,580**	**690**	**5,060**	**1,140**	**7,280**	**1,200**	..	..
All staff	**1,940**	**2,400**	**29,600**	**39,140**	**48,600**	**62,490**	**70,370**	**85,060**	**72,690**	**59,110**	**300**	**120**
Staff in age group as percentage of all staff	*0.4*	*0.5*	*6.3*	*8.3*	*10.3*	*13.2*	*14.9*	*18.0*	*15.4*	*12.5*	*0.1*	*0.0*

Notes:
1 As at 30 September.
2 Headcount, rounded to the nearest ten; numbers less than five are represented by "..".
Source: Mandate

TECHNICAL NOTE

Sources and definitions

There are two sources of annual Civil Service statistics:

- Mandate returns
- departmental returns

The Mandate returns account for approximately 85 per cent of Civil Service employment.

Mandate returns are comprehensive anonymised electronic data sets collected from departments and agencies, generally extracted directly from their HR systems. Some departments and agencies are unable to supply data to Mandate for technical reasons, and provide summary tables instead. These are called departmental returns.

The source of each table in this article is quoted. Please ensure the source is taken into account when interpreting the statistics.

Reference date

The reference date for these statistics is 30 September 2006. The previous survey was conducted on 1 April 2005.

Civil Service

The estimates of Civil Service employees count all home Civil Service employees. Civil Service estimates exclude the Northern Ireland Civil Service, the Diplomatic Service and other Crown servants, for example, employees of non-departmental public bodies.

Headcount

Headcount estimates are based on the number of employees with an employment contract who are on the pay roll and are being paid by the organisation. Employees can be permanent, on a fixed-term contract or employed on a casual basis. Self-employed, contract workers and agency workers are excluded.

Full-time and part-time

Full-time employees are those who are contracted to work 37 hours per week (36 in London). Part-time employees are those who work less than the normal contracted hours.

Full-time equivalents

Full-time equivalents are based on converting part-time employees' hours into a full-time employees' equivalent and provides a better indicator of total labour input than a simple headcount.

Permanent and temporary/casual

Permanent employees are employees with a contract with no agreed expiry date or a fixed term contract of more than 12 months. Temporary/casual employees are those with a fixed term contract of 12 months or less or employed on a casual basis.

Responsibility levels

Since 1 April 1996, all departments and agencies have had delegated responsibility for the pay and grading of their employees, except for those in the Senior Civil Service (SCS).

The concept of broad 'responsibility levels' is therefore used, in which departmental grades have been assigned to levels broadly equivalent (in terms of pay and job weight) to the former Service-wide grades.

Senior management
SCS – Senior Civil Service

Other management grades
Grade 6
Grade 7
SEO – Senior Executive Officer
HEO – Higher Executive Officer
EO – Executive Officer

Administrative grades
AO – Administrative Officer
AA – Administrative Assistant

Gross salary

Gross salary is the annual salary inclusive of basic pay (including consolidated performance pay and allowances) but excluding bonuses.

The quality of information on pay has been affected by two issues:

- delegated pay and grading, partly because of different arrangements for paying and reporting on certain allowances and bonuses in different departments and agencies. Revisions to departmental pay structures are implemented along with pay settlements and can make short-term trends in salary levels difficult to interpret

- timing of the survey. The survey was conducted on 30 September 2006. At this point in time some departments had implemented their annual pay awards and others had not. Departments were asked where possible to report salary information prior to the 1 August pay award (to allow for better comparisons with April 2005). Approximately one quarter of departments and agencies were not able to do this. This should not impact analysis within the current year, for example, comparing male and female median salaries, but care should be taken when making annual comparisons

Diversity

Statistics are published regarding the gender, ethnic origin, disability status and age of the Civil Service workforce. All diversity data relate to civil servants counted on a headcount basis.

The percentage of employees who are disabled is calculated on the basis of those who are declared disabled. It is therefore possible the percentage may be understated. This is because declared non-disabled, declared disabled and not declared are all valid responses to the survey.

Ethnic minority is presented as a percentage of known ethnic origin.

FEATURE

Using the FRS to examine employment trends of couples

Antonia Simon and Elizabeth Whiting
Department for Work and Pensions

SUMMARY

This article presents findings on the demographic characteristics and employment trends of couples. The Family Resources Survey (FRS) has been used to explore changes over time (between 1994/95 and 2005/06) for couples with and without dependent children, and differences in gross income and benefit receipt between work-rich couples (where both partners work), work-poor couples (where both partners are inactive or unemployed) and single-earner couples (where only one partner is employed). The FRS is used as it is the most detailed source of data on household income and benefit receipt. The article finds there has been a growth in the number of work-rich couples over time. However, the employment rate for partnered women with dependent children still lags behind those without children. Over time, gross real-term income has increased for all couples, but this increase has been greatest for work-rich couples.

Since the 1970s, women's participation in the workplace has increased. This has led to a decrease in the traditional male 'breadwinner role' and a rise in the so-called 'work-rich' two-earner families (Pahl 1984; Berthoud 2007). The Government is committed to halving child poverty by 2010 and ensuring 'every child has the best start in life' (DWP 2006, p 29). Increased participation in employment, particularly among mothers, decreases the likelihood of children living in poverty and of them becoming disadvantaged adults (Ermich *et al* 2001). However, increased participation in the workforce creates growing pressures on women to combine work and family life (Crompton 2002). Increased employment and the growing number of older people with disabilities also create demands on services, as fewer women are available for informal care (Simon *et al* 2005; Mooney *et al* 2003). Nevertheless, reducing the proportion of working-age adults not in employment, who rely heavily on benefits, is central to the government target of achieving 'Opportunity for All' (DWP 1999).

Previous analysis of employment rates of men and women, conducted using the Labour Force Survey (Walling 2005), the Millennium Cohort Study (Dex and Ward 2007) and the General Household Survey (Berthoud 2007), have reported on the rise in two-earner couples. They have demonstrated that women in couples mirror the employment rates of their partners. Much of this analysis has concentrated on comparing women in couples with dependent children with lone parents (see, for example, Walling 2005). This article contributes to the existing research by examining changes in the characteristics and employment trends of couples with dependent children compared with couples without dependent children. The time series analysis presented here is based on cross-sectional data and uses the Family Resources Survey (FRS) between 1994/95 and 2005/06 (see the technical note for more information about the survey).

This article firstly looks at couples as a unit (see **Box 1** for definitions). It explores the differences between work-rich couples (where both partners in a couple are in employment), work-poor couples (where both partners in a couple are unemployed or inactive) and single-earner couples (where only one person is employed). This includes analysis of couple income and benefit receipt. Gross income for survey years before 2005/06 has been adjusted for inflation. The analyses reveal that gross income has increased in real terms since 1994/95 for all couples. However, the income gap between work-rich and work-poor couples has also widened over time. As expected, income-related benefit receipt is higher within work-poor couples who have dependent children. The article then examines individuals within couples. This analysis reveals that the gap in employment between men and women in couples has narrowed over time. However, employment for women in couples with dependent children still lags behind that of partnered women with no dependent children, especially if they have three or more children.

Box 1
Definitions

Couples are 'two adults (partners) who are married or in a civil partnership (spouses), or are living together as such (cohabitees)' (DWP 2007). Couples can have dependent children or no children.
Couple unit comprises two adults who are married or living as married, along with any dependent children.
Dependent children are 'all those aged 16 or an unmarried 16 to 18 year-old in full-time non-advanced education' (DWP 2007).
Employment status is derived in the FRS from the individual's self-assessment of whether they work full or part time.
Economic status is the classification used for employment status of the couple unit (as defined by the head of household). 'Full-time work is classified as 31 hours or more, not on the basis of the respondent's assessment of whether they work full or part time' (DWP 2007).
Income related benefit/tax credit receipt is a grouping of Social Security benefits that take into account the income received by an individual or couple. These benefits include Council Tax Benefit, Housing Benefit, Income Support, Pension Credit and Jobseeker's Allowance. It should be noted that definitions and entitlements of each of these benefits are likely to have changed over time.
Non-income-related benefit receipt is a grouping of social security benefits that do not take into account the income received by an individual or couple. These benefits include Disability Living Allowance, Statutory Maternity Pay, Child Benefit, Attendance Allowance, Lone Parent Benefits, Retirement Pension, Incapacity Benefit and Statutory Sick Pay. It should be noted that definitions and entitlements of each of these benefits are likely to have changed over time. For this analysis, Child Benefit was removed for all years in order to make a more appropriate comparison between couples with and without dependent children.
Partnered men/women are men/women in couples (married or cohabiting).
Participation rates are the proportion of women and men (in couples) who are in employment.
Single-earner couples are couples where only one partner is in employment. This definition is derived from the individual's self-assessment of whether they work full or part time (rather than on hours of work – which made no noticeable difference on the trends reported here).
Work-rich couples are couples where both partners are employed. This definition is derived from the individual's self-assessment of whether they work full or part time (rather than hours of work – which made no noticeable difference on the trends reported here). It is consistent with ILO definitions.
Work-poor couples are couples where both partners are unemployed or inactive. This definition is derived from the individual's self-assessment of whether they work full or part-time (rather than hours of work – which made no noticeable difference on the trends reported here). It is consistent with ILO definitions.

Key concepts and definitions used in this article are shown in Box 1. It should be noted that all estimates presented in this article from analysis of the FRS are subject to sampling errors. This may mean that certain estimates will differ from the overall trends.

Overall comparisons of couples

The FRS showed that couples were less likely to be married in 2005/06 than they were in 1994/95. Between 1994/95 and 2005/06, the proportion of married couples decreased from 92 to 84 per cent for those with children and from 85 to 77 per cent for those without children. The average age of couples with children also increased over this time. The average age of partnered men with children was 40 in 2005/06, compared with 38 years in 1994/95, and for partnered mothers the average age was 38 in 2005/06, compared with 36 in 1994/95. Partnered women were also having children later in life: 31 per cent of partnered mothers aged 35 to 44 years in 2005/06 had a dependent child aged 0 to 4 years, compared with 12 per cent of mothers in this age group in 1994/95.

According to the FRS in 2005/06, 94 per cent of couples with dependent children had at least one partner in employment and 66 per cent had both partners in employment. This represents an increase from 1994/95, where 89 per cent of couples with dependent children had at least one partner in employment and 57 per cent had both partners in employment. In 2005/06, fewer couples without dependent children had at least one partner working (89 per cent) but a similar proportion had both partners in employment (67 per cent). Again, this is an increase from 1994/95, where 84 per cent of working-age couples without dependent children had at least one partner working and 58 per cent had both partners in employment. These figures are similar to those found by Walling (2004) using the LFS who found that 'the majority of working-age couples with dependent children had at least one parent in employment (94 per cent) and over two-thirds had both parents in employment (68 per cent)' (p 277).

Previous research revealed that working-age men and women in couples are likely to mirror the employment patterns of their partners (Walling 2005; Berthoud 2007). In the FRS, among men in couples in 2005/06, just over a third of those working full time had partners who were also working full time, about a third of those working part time had partners who were also working part time and 62 per cent of those who were inactive also had partners who were inactive (**Table 1**). The FRS shows this has been a consistent pattern since 1994/95.

Table 1
Employment status of males in couples: by status of their female partners, FRS 2005/06

Percentages

	Partnered males			
	Full-time employed	Part-time employed	Unemployed	Inactive
Partnered females				
Full-time	*33*	*32*	*18*	*20*
Part-time	*41*	*31*	*22*	*17*
Unemployed	*2*	*1*	*8*	*1*
Inactive	*24*	*35*	*52*	*62*
Total	***100***	***100***	***100***	***100***

Figure 1
Proportion of work-rich, work-poor and single-earner couples

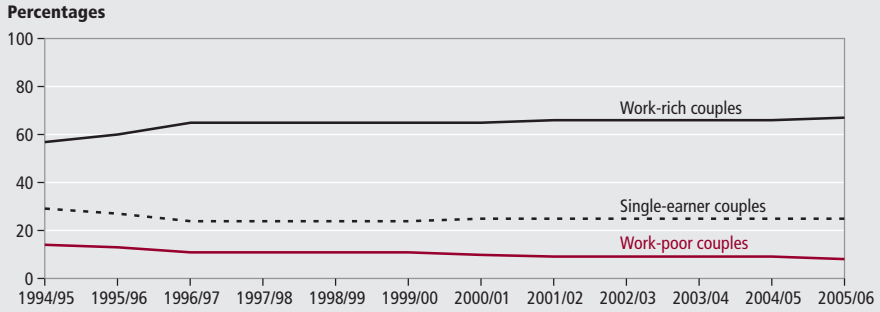


Table 2
Average gross total weekly income[1] of work-rich, work-poor and single-earner couples

£

	Work-rich couples		Work-poor couples		Single-earner couples	
	Couples with children	Couples without children	Couples with children	Couples without children	Couples with children	Couples without children
1994/95	777	752	287	314	616	546
1995/96	787	770	289	314	598	519
1996/97	805	765	258	291	594	516
1997/98	782	772	263	292	627	550
1998/99	819	817	262	302	653	570
1999/2000	829	828	278	294	650	553
2000/01	910	890	297	319	787	585
2001/02	889	914	302	326	733	728
2002/03	917	867	296	318	725	596
2003/04	911	859	295	333	739	638
2004/05	928	899	310	335	731	617
2005/06	952	914	303	334	727	635

Note:
1 The gross income for previous years has been inflated to 2005/06 prices using the national GDP deflator formula.
Source: Family Resources Survey (1994/95 to 2005/06)

Table 3
Gap in gross weekly income (in real terms) between work-rich and work-poor couples

£

	Income gap between work-rich and work-poor couples with children	Income gap between work-rich and work-poor couples with no children	Income gap between work-rich couples with children and without children	Income gap between work-poor couples with children and without children
1994/95	490	438	25	–27
1995/96	499	456	17	–25
1996/97	547	474	40	–33
1997/98	519	480	10	–29
1998/99	557	514	2	–40
1999/2000	551	534	1	–16
2000/01	598	571	20	–7
2001/02	587	588	-25	–24
2002/03	621	549	50	–22
2003/04	616	526	52	–38
2004/05	618	564	29	–25
2005/06	649	580	38	–31
Change in income gap between 1994/95 and 2005/06[1,2]	159	142	-	-

Notes:
1 The figure of £159 was arrived at by subtracting £490 (gross income gap between work-rich and work-poor couples with children in 1994/95) from £649 (gross income gap between work-rich and work-poor couples with children in 2005/06). This difference is statistically significant.
2 The figure of £142 was arrived at by subtracting £438 (gross income gap between work-rich and work-poor couples with no children in 1994/95) from £580 (gross income gap between work-rich and work-poor couples with no children in 2005/06). This difference is statistically significant.
Source: Family Resources Survey (1994/95 to 2005/06).

Work-rich and work-poor comparisons

When examining income and benefit receipt for couples, three main types of couple can be compared: those where both partners in a couple are in employment (termed 'work-rich' by Berthoud (2007), those where both partners in a couple are unemployed/ inactive (work-poor) and those couples where only one partner is in employment (single-earner couples).

The increase in work-rich couples reported in previous research (Walling 2005; Berthoud 2007) can also be evidenced in the FRS between 1994/95 and 2005/06. As shown in **Figure 1**, the proportion of couples classified as work-rich has increased over the past ten years (particularly noticeable between 1994/95 and 1996/97), while at the same time the proportion of work-poor couples has gradually declined. The proportion of single-earner couples also gradually declined between 1994/95 and 1999/2000 but has levelled off in more recent years.

Couples' income

Table 2 presents the average gross weekly income for work-rich, single-earner and work-poor couples between 1994/95 and 2005/06. It can be seen that gross total income, which includes earnings from employment and benefit receipt, has risen in real terms since 1994/95 for all types of couple. Work-rich couples have the highest average gross total weekly income and work-poor couples have the lowest average gross total income (with the single-earner couples in between).

The gap in gross total income, between work-rich and work-poor couples, has widened in real terms since 1994/95. As **Table 3** shows, the gap in gross total income between work-rich and work-poor couples with dependent children increased from £490 in 1994/95 to £649 in 2005/06. This represents an increase of £159 in real terms. Similarly, the gap in gross total income also increased over time between work-rich and work-poor couples with no children (from £438 in 1994/95 to £580 in 2005/06). This represents a real increase of £142. These gaps in gross weekly income are statistically significant. The explanation for the increase in this gap is that although work-poor couples have seen their gross income from non-employment sources (such as state support) increase in real terms, work-rich couples have seen their gross income grow even more.

To a lesser extent, the gross income gap has also widened in recent years within

work-rich couples, between those with dependent children and those with no children. Table 3 shows that in all years (except 2001/02) average gross total income in real terms was slightly higher for work-rich couples with dependent children than for work-rich couples with no children. Between 1994/95 and 2001/02, the gap in gross income appeared to be closing, but over the last four years it has reversed and the gap in 2005/06 is higher than it was in 1994/95.

By contrast, within work-poor couples, those without dependent children have slightly larger average gross incomes compared with work-poor couples with dependent children (Table 2). The gross income gap (in real terms) within work-poor couples (with and without children) appeared to narrow slightly in the middle of the time period, but by 2005/06 it was broadly back to where it was in 1994/95 (Table 3).

Couples' benefit receipt

Three-quarters of non-employed families (work-poor) attribute more than half their family income to benefits (Berthoud 2007, p 4). In the FRS, benefit receipt can be examined both for income-related benefits/tax credits and non-income-related benefits (see Box 1 for definitions).

Figures 2 and **Figure 3** show the proportion of work-rich, work-poor and single-earner couples who are in receipt of income-related and non-income-related benefits. Figure 2 shows that a greater proportion of work-poor couples received income-related benefits/tax credits (such as Income Support or Housing Benefit) than either work-rich or single-earner couples. This has been a consistent pattern in the FRS since 1994/95.

Figure 2 shows that within work-poor couples (both with and without dependent children), the proportion in receipt of income-related benefits increased in the early part of the time series, but has since fallen back to its 1994/95 levels.

In addition to income related benefits/tax credits, work-poor couples also tend to be in greater receipt of non-income-related benefits (such as Statutory Sick Pay and Incapacity Benefit) than either single-earner or work-rich couples (especially evident for those with dependent children) (Figure 3). However, the gap within work-poor couples in receipt of non-income-related benefit has narrowed over time. For work-poor couples, the gap in receipt of non-income-related benefits between those with and those with no children decreased from 23 per cent in 1994/95 to 6 per cent in 2005/06.

It should be noted that almost all couples with dependent children are in receipt of Child Benefit. Therefore, couples with dependent children are nearly all in receipt of non-income-related benefits. This makes it difficult to compare couples with dependent children and those without, as one is not comparing 'like with like'. In order to make more equal comparisons between couples with and without children, it was necessary to remove Child Benefit from the analysis of non-income-related benefits (as shown in Figure 3).

Figure 2
Proportion of couples in receipt of income-related benefits

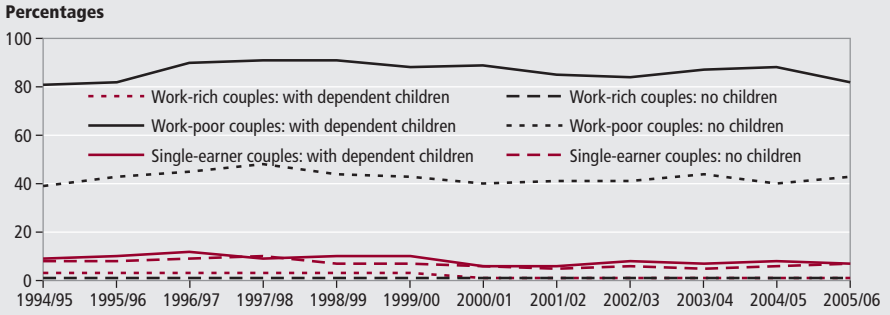
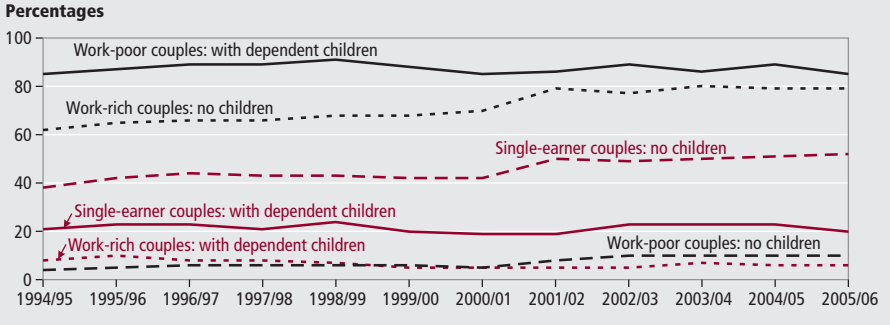


Figure 3
Proportion of couples in receipt of non-income-related benefits



Employment trends of individuals in couples

Having examined couples as units, the article now turns to discussing employment for individuals within couples.

The polarisation between work-rich and work-poor couples has been created by two trends in the 1970s and 1980s: the rise of women, particularly mothers, in employment and the decrease of men and disabled people in employment (Berthoud 2007). The rise in female employment has continued into the 1990s and 2000s, as can be evidenced in the FRS. The proportion of partnered women with no children in employment increased from 70 per cent in 1994/95 to 80 per cent in 2005/06 and the proportion of partnered women with dependent children in employment increased from 59 per cent in 1994/95 to 70 per cent in 2005/06 (**Figure 4**). Partnered women with dependent children remain more likely to work part-time hours than partnered women with no dependent children. For example, in 2005/06, the FRS recorded 39 per cent of partnered women with dependent children were in part-time employment compared with 23 per cent of partnered women with no children.

The FRS shows that, since 1994/95, partnered women without children have had very similar employment rates to those of partnered men (especially to partnered men with no children). Although the proportion of partnered women with children in employment has also increased over time, the employment rate for this group has remained consistently behind that of partnered women with no children.

The proportion of partnered men with no children in employment has increased over time since the rate in the 1970s and 1980s (Berthoud 2007). However, opposite to the trend for partnered women, the rate of employment for partnered men with no children consistently lags behind that for partnered men with dependent children. For example, in 1994/95, 73 per cent of

Figure 4
Employment rates for partnered males and females

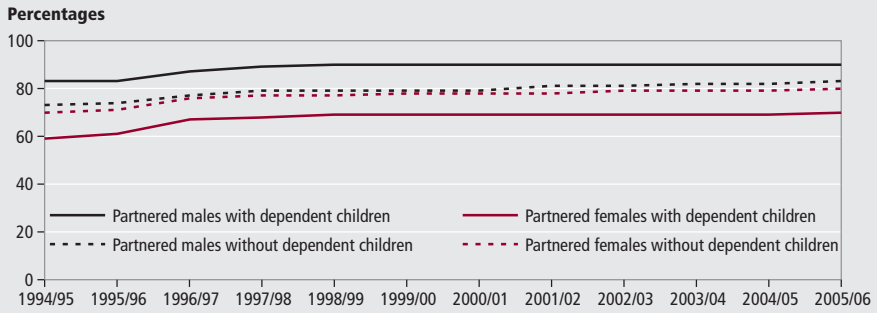


Figure 5
Unemployment/inactive rates for partnered males and females

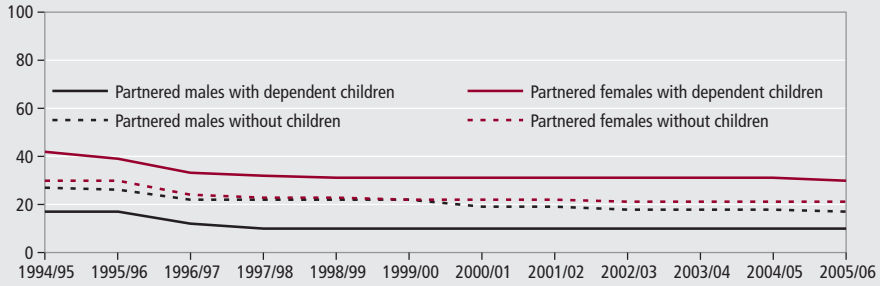


Figure 6
Employment rates for partnered males: by number of dependent children

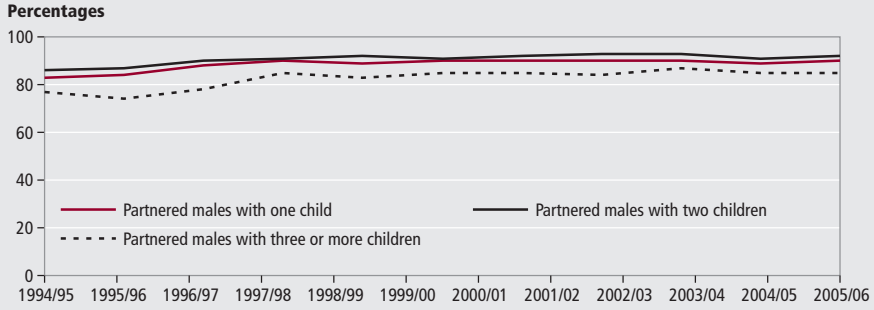
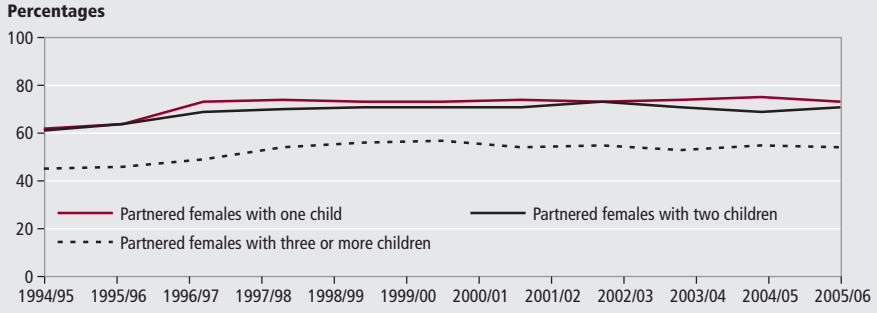


Figure 7
Employment rates for partnered females: by number of dependent children



partnered men with no dependent children were in employment compared with 83 per cent of partnered men with dependent children. This gap narrows slightly over time so that by 2005/06, 83 per cent of partnered men with no dependent children were in employment compared with 90 per cent of partnered men with dependent children.

Alongside these trends has been a decrease since 1994/95 in the proportion of partnered women and men who are inactive or unemployed (**Figure 5**).

The impact of age and number of children

The age and number of children in families has also had an impact on the employment rate for couples. Although employment has increased for partnered men and women, partnered male employment rates are consistently lower if they have three or more children compared with only one child (**Figure 6**). And as **Figure 7** shows, this is even more the case for partnered women.

As might be expected, the FRS shows partnered mothers with older children have higher employment rates than partnered mothers with younger children. For example, in some years, there were almost twice as many partnered females with children aged 16 to 18 in employment compared with partnered females with children aged 0 to 4 (**Figure 8**). However, the FRS also indicates there has been a large growth between 1994/95 and 2005/06 in the proportion of partnered mothers with pre-school age children in employment.

These findings echo those from earlier research on the impact of birth and length of absence from work following childbirth on women's work behaviour. For example, that conducted by Macran *et al* (1996), comparing the Medical Research Council's (MRS) National Survey of Health Development with the National Child Development Study (NCDS) data. This study found that the cohort of mothers aged 33 in 1991 entered motherhood later and returned to employment sooner than the previous generation of mothers aged 32 in 1978. A more recent report by the Institute of Social and Economic Research (ISER 2006) which showed that 'in the UK, 50 per cent of mothers were already working by the time the child is two years old' (p 5) commented that the length of time mothers take before returning to work is dependent not just on the qualifications and skills of mothers but on their rights to parental leave. This report also found that women

Figure 8
Proportion of partnered females employed: by age of their youngest child
Percentages

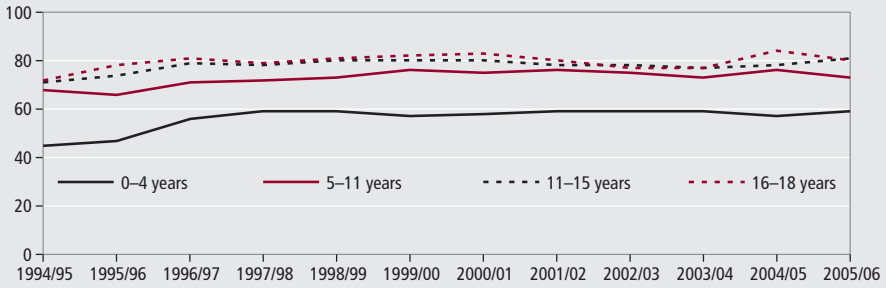
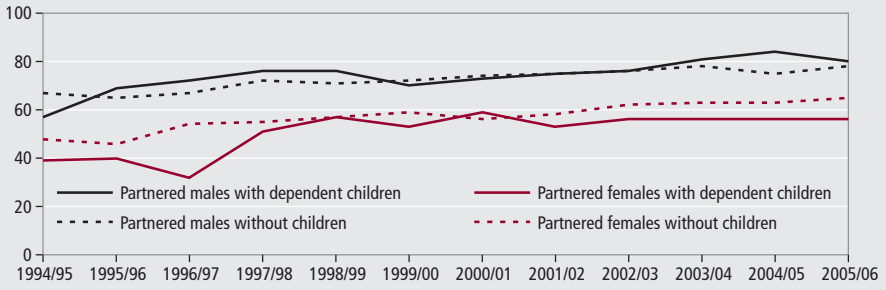


Figure 9
Proportion of partnered females and males aged 55 to 59/64 in employment
Percentages



returned to work faster in countries that had the shortest parental leave entitlement and less job protection (such as preservation of pension rights) and maternity benefits. Therefore, working arrangements that benefit the family, such as parental leave, childcare provision and flexible working, help to offset any likely disadvantages of absence following childbirth.

The rise in older workers

Employment increased between 1994/95 and 2005/06 for all age groups. However, most noticeable in terms of the age of couples, is the rise of employment in partnered women (aged 55 to 59) and men (aged 55 to 64) (**Figure 9**). The proportion of employed partnered women and men aged 55 to 59/64 with children increased by 17 per cent and 23 per cent respectively between 1994/95 and 2005/06. The proportion of employed partnered women and men aged 55 to 59/64 without children also increased between 1994/95 and 2005/06, by 17 per cent and 9 per cent, respectively.

It is difficult to determine from the FRS data whether partnered mothers are choosing to delay childbirth for the sake of their careers or whether employment before pregnancy means partnered mothers are more likely to return to paid employment following childbirth. To determine this would require a longitudinal analysis that examined the employment choices of a cohort of mothers pre and post childbirth. One such cohort study recently conducted by Dex and Ward (2007), found that the 'vast majority of mothers having their first baby around the Millennium were employed when pregnant' and that the 'majority returned to work within 9 to 10 months of the child's birth' (p 24). Taking this together with the evidence that a greater proportion of partnered women aged 55 to 59 are working, suggests that partnered mothers (for whatever reason) are returning to work sooner and staying in work for longer.

Conclusion

The availability of 12 years' worth of FRS data (1994/95 to 2005/06) enable trends over time to be observed among couples, including their characteristics, rates of employment, income and benefit receipt.

Previous research has shown that employment rates for partnered women increased in the 1970s and 1980s (Berthoud 2007 *et al*). Analysis of the FRS shows that this growth has continued into the 1990s and 2000s, especially for partnered women with dependent children. However, participation rates for partnered women with dependent children still lag behind those for partnered women with no children, especially if partnered mothers have three or more children.

Partnered women appear to be having children at a later age but are returning to work quicker than previous cohorts of women (Macran 1996) and staying in work for longer. In line with these findings, the FRS shows that there has been a growth since 1994/95 in the number of partnered women with pre-school age children in employment.

In parallel with the growth in female employment in recent decades, the FRS shows there has been a steady increase in the number of work-rich couples and a decrease in the proportion of work-poor couples. These trends have created gender equality within some couples: female employment almost matches that of their male partners in couples with no children.

Since 1994/95, real gross income has increased for all types of couple. However, this increase has been greater for work-rich couples. This indicates that families are better off when both partners in a couple are in employment. In addition, the proportion of work-poor couples in receipt of income-related and non-income-related benefit has increased over time (relative to work-rich couples). Taken together, these findings reinforce the principle that policies designed to increase employment have increasing economic benefit, but also that policies aimed at ensuring that those at the bottom of the income distribution are not worse off in real terms (for example above inflation increases in state benefit rates) are also working.

ACKNOWLEDGEMENTS

Material from the Family Resources Survey is Crown Copyright, has been made available by ONS through the Data Archive and has been used with permission. Neither ONS nor the Data Archive bears any responsibility for the analysis or interpretation of the data reported here.

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TECHNICAL NOTE

The Family Resources Survey (FRS) is the data source for this article. The FRS has been a regular survey of the Department of Work and Pensions (DWP) since 1993/94. It is a cross-sectional annual data set. Therefore the time series findings presented in this article are not based on longitudinal data. They are based on comparisons of different survey time points.

The FRS collects data on income, state support receipt and related topics from a sample of about 28,000 households in the United Kingdom each year. The survey results are published annually online (www.dwp.gov. uk/asd/frs/). The FRS is a hierarchical data set, with information supplied about household characteristics (such as composition and tenure type), each adult (including individual employment status and benefit receipt) and each child living in the household. Each household may consist of a number of benefit units, with each benefit unit (and household) consisting of a number of adults and/or children.

It is not possible to analyse the first year's data of the FRS (1993/94) because of its unreliability. However, the article reports on 12 years' worth of FRS data, to explore the year or year trends of couples between 1994/95 and 2005/06 (the most recent data release). Data are presented at the benefit unit level and the adult level. Data have been scaled to the total population using a grossing variable in the FRS called gross3. Analyses have been restricted to working age couples only – for men, those aged between 16 (who are not in full-time education) and 64 years and for women, those aged between 16 (who are not in full-time education) and 59 years.

The analysis reported in this article uses the International Labour Organisation (ILO) definition of employment status. It should be noted that in 1996/97, the ILO definition changed to include full-time and part-time working status, which means it is not possible to compare full-time and part-time employment of individuals in the FRS using the ILO definition for earlier years (before 1996/97). When comparing changes over time in the FRS, users must be careful to take account of changing categorisation of key variables such as ILO employment status.

FEATURE

Regional economic indicators

November 2007

with a focus on rural and urban differences in the English regions

Claire Swadkin, Barbara Louca and Dev Virdee
Office for National Statistics

SUMMARY

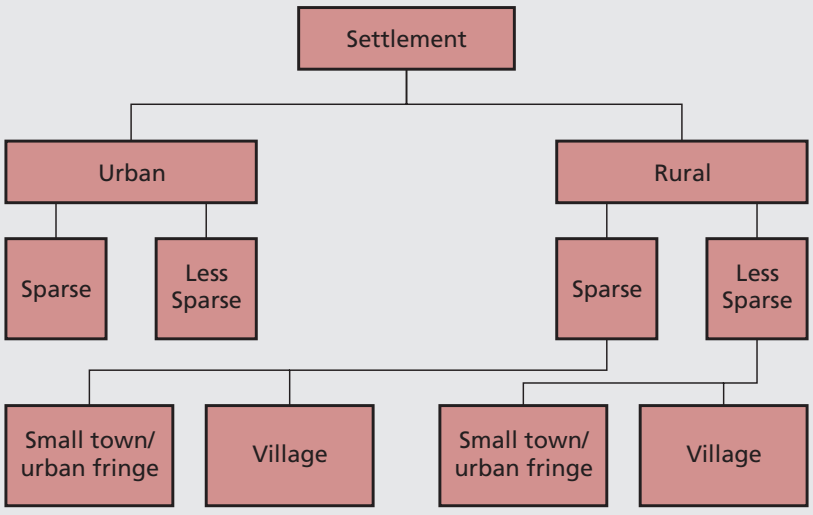
This quarter, regional economic indicators (REI) focuses on patterns of rural and urban differences in the English regions. Data on benefit claimant counts, education attainment and the Index of Multiple Deprivation are analysed using the rural and urban classification. This is followed by the regular Headline Indicators which cover the nine Government Office regions of England, Northern Ireland, Scotland and Wales. These 12 areas comprise level 1 of the European Nomenclature of Units for Territorial Statistics (NUTS) for the UK. The term 'region' is used for convenience in this article. The headline indicators present an underlying picture of regional economic performance, productivity (including an update to 2005 of the productivity analysis published in the February article) and welfare. Labour market data and indicators of the main drivers of productivity are also included.

Focus on the rural and urban differences in the English regions

The Rural and Urban Definition for England and Wales (Defra, 2004) is based on the numbers of people living in certain areas. Settlements with a population over 10,000 are regarded as urban. These settlements are differentiated by whether they are 'sparse' or 'less sparse', based on the population density for a local area with a radius of up to 30 kilometres. Rural settlements are further defined over a much smaller area (only up to 1,600 metres from a given point) to classify them as town/urban fringe or village. **Figure 1** shows the categories derived using this approach.

For the purpose of this analysis, various datasets from the Neighbourhood Statistics (NESS) website have been categorised by the rural and urban classifications, to identify any differences in the situation between the different types of areas. The NESS datasets relate to small areas, collectively known as Super Output Areas (SOA), a stable statistical geography developed as part of the Neighbourhood Statistics programme. Lower Super Output Area (LSOA) and Middle Super Output Area (MSOA) are the two levels at which SOAs have been defined. Within the rural and urban classification described above, each SOA has been classified to one of the rural and urban categories. It should be noted that in some categories of the classification and within some regions, a

Figure 1
The Rural and Urban Definition for England and Wales



particular category of MSOA may only contain a few areas whereas other categories may contain a large number. This could impact on the significance and reliability of averages for the different classifications. For this reason, the data on a regional basis has been collapsed to just three types of areas: urban, town/fringe and village.

Rural and urban patterns of benefit claimants

Government benefits are an important contributor to household incomes. Benefit claimant counts for the following datasets were analysed: Income Support, Job Seeker's Allowance, Incapacity Benefit and Child Benefit at LSOA level from 2001 to 2005. The urban/rural classification was assigned to the LSOA level data and the average claimant count calculated for each rural and urban classification by LSOA. The data patterns observed remained stable over the time period, and therefore only data for the latest year are presented here.

In all regions the data for Income Support, Job Seeker's Allowance and Incapacity Benefit followed similar patterns; more claimants were consistently found in urban areas, fewer in town/fringe, and the lowest level of claimants in rural areas. The only exception was in the North East where the average number of Incapacity Benefit claimants in town/fringe areas was slightly higher than in urban areas. Although these data support regional influences identified in other publications (that is that the lowest levels of claimants are found in the South East) any conclusions must be made with care, because the calculations of the averages are influenced by regional sizes.

The average Child Benefit claimants were different among regions. **Figure 2** shows that in most regions, average claimant counts were higher in urban areas than rural areas. The exceptions were the South West and the East Midlands, although in the latter this pattern of higher average counts in rural areas only applied to those classified as village areas, not town/fringe. The average claimant count in town/fringe areas in Yorkshire and The Humber was also higher than urban areas, although the count in village areas was lower. In the North West the lowest average count of Child Benefit claimants was in the town/fringe areas, and although the same pattern occurred in the East Midlands and the South East, this trend was most apparent in the North West. The low claimant counts in London in the areas classified as rural may reflect the fact that there are very few such areas in London.

Figure 2
Average count claiming Child Benefit: by NUTS1 region and the Urban and Rural Classification, 2005

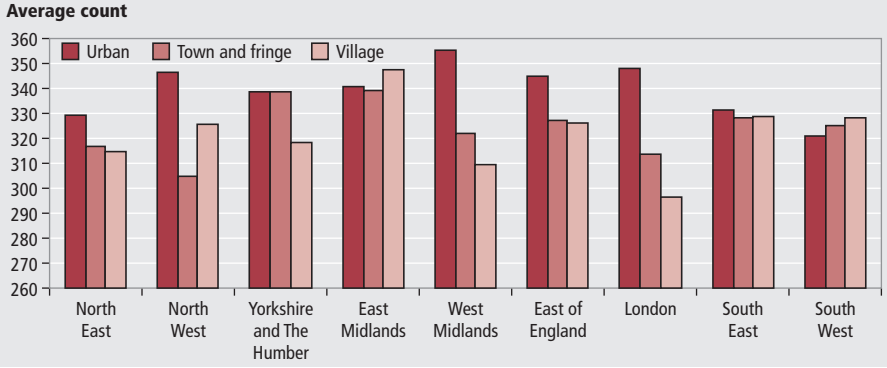
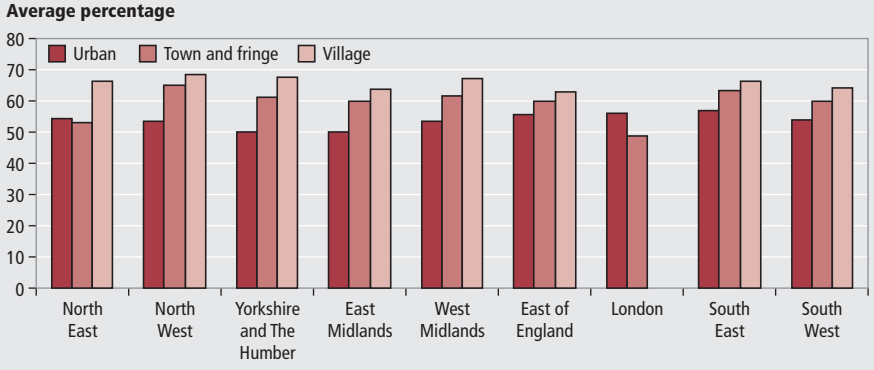


Figure 3
Education attainment: by NUTS1 region and the Urban and Rural Classification: average percentage achieving five or more A* to C at GCSE



Rural and urban patterns of education attainment by English region

The analysis of education attainment by the urban/rural classification was based on MSOA level data, due to data suppression at the LSOA level. At MSOA level, there is no classification of village in London. Across England, the highest percentage of pupils achieving five or more A* to C grades (or equivalent) were found in villages and the lowest percentage in urban areas, particularly sparse urban areas.

Similar patterns were found at the regional level as shown in **Figure 3**. London and the North East were the only regions where urban areas had a greater percentage of pupils achieving five or more A* to C grades at GCSE than in town/fringe rural areas. Yorkshire and The Humber had the lowest average percentage in an urban area at 49.9 per cent, but high attainment in both types of rural areas compared to the other regions. In the South East, urban areas achieved the highest average percentage at 56.8 per cent. It was also among the highest achieving regions for both classifications (town/fringe and village) of the rural definition. The North West had the highest average percentages for areas under the rural definition; 64.9 per cent in town/fringe classified areas and 68.5 per cent in villages.

Rural and urban differences in the Index of Multiple Deprivation by English region

The Index of Multiple Deprivation 2004 (IMD 2004) is a measure of multiple deprivation at the small area level. The model of multiple deprivation which underpins the IMD 2004 is based on the idea of distinct dimensions of deprivation which can be recognised and measured separately. These are experienced by individuals living in an area. The overall IMD is conceptualised as a weighted area level aggregation of these specific dimensions of deprivation. There were seven domains on which the IMD 2004 was based relating to a range of factors: income, employment, health and disability, education, skills and training, barriers to housing and services, living environment and crime.

For the purpose of this analysis, IMDs at LSOA level were assigned to their relevant urban or rural categories. The average IMD score was calculated for all the LSOAs

Figure 4
Average Index of Multiple Deprivation score of Lower Super Output Areas: by Urban and Rural Classification

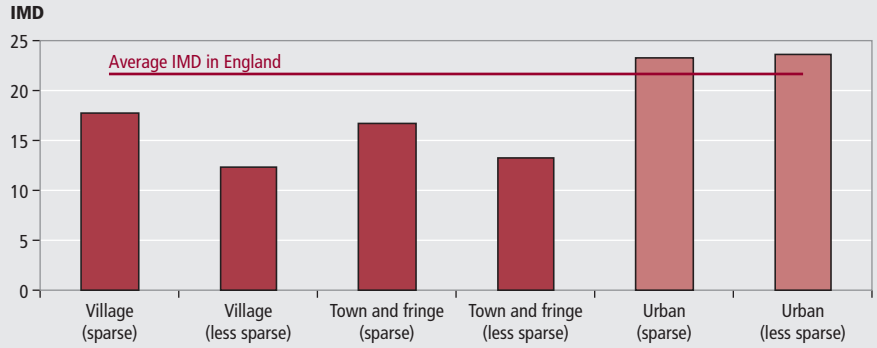
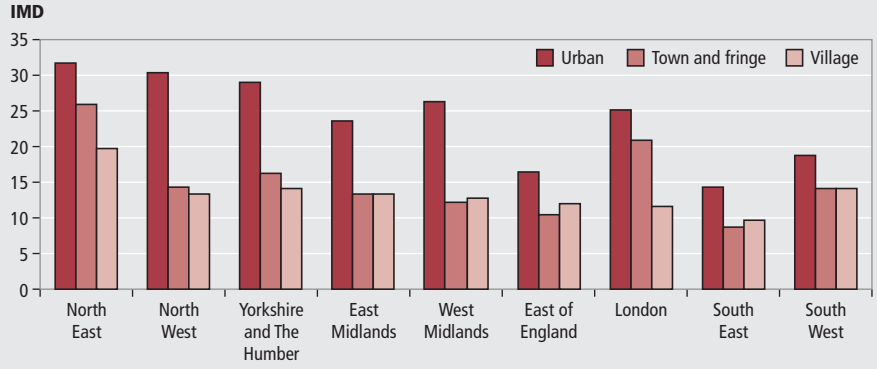


Figure 5
Average Index of Multiple Deprivation Score for LSOAs: by NUTS1 region and the Urban and Rural Classification



within each category and presented in **Figure 4**. The average score for the whole of England (21.66) is also shown. It is clear that the LSOAs in the urban areas had average IMD scores greater than this English average, suggesting the LSOAs in urban areas are more deprived. The LSOAs in the villages (less sparse) and town/fringe (less sparse) categories have lower scores of IMD than the sparse areas in the respective regions. This definition of deprivation suggests LSOAs in less sparse areas are less deprived.

Within individual regions, a similar pattern follows. **Figure 5** shows how in all regions the areas classified as urban had higher IMD scores than the rural areas. In five regions (the East Midlands, the West Midlands, the East of England, the South East and the South West) the LSOAs in villages had higher average deprivation scores than in the town/fringe areas.

Regional overview

Key figures on a regional basis indicate that:

- In 2005 London remained the region with the highest gross value added (GVA) per hour worked, 21.4 percentage points above the UK average. Northern Ireland had the lowest GVA per hour worked index measure, at only 80.7 per cent of the UK average.
- London and the South East had the highest levels of Gross Disposable Household Income (GDHI) per head, at £15,885 and £14,941, respectively, but among the lowest annual percentage growth rates, at 3.2 per cent and 3.6 per cent, respectively. The North East (£11,356) and Wales (£11,851) had the lowest GDHI per head.
- The South East had the highest employment rate in the second quarter of 2007, at 78.6 per cent; London had the lowest rate, at 69.7 per cent, compared with the UK employment rate of 74.4 per cent.

Headline indicators

This section presents a selection of regional economic indicators that provide an overview of the economic activity of UK regions. The productivity indicator has been updated in light of the revised regional GVA per hour worked estimates published in July 2007. The analysis that decomposed the differences of regional GVA per head from the UK average, into five explanatory variables (published in the February edition of this article) has been extended to 2005.

Regional performance

The February edition of this article presented the newly published (in December 2006) data on economic performance in terms of headline workplace based nominal GVA and GVA per head for the UK regions. It should be noted that nominal figures do not take account of inflation or regional differences in prices. The data demonstrated little change in 2005 from the previous year in the distribution of GVA among the regions. London and the South East continued to account for the largest share of UK GVA (19.1 per cent and 14.6 per cent, respectively) while Northern Ireland (2.3 per cent) and the North East (3.4 per cent) had the smallest.

Table 1 shows that all regions experienced growth in nominal GVA in 2005, although this growth was considerably lower than that seen in 2003 and 2004. In 2005, overall UK growth was only 4.1 per cent compared with 5.9 per cent in the preceding two years. London, the North East and the East Midlands had the highest annual percentage growth (at 4.4 per cent) in 2005. The North East region had one of the smallest absolute values of GVA, but in 2005 the year-on-year growth in this region was comparable with the region that had by far the largest value of GVA (London). This shows that even the regions with the smaller economies are capable of growth rates comparable with the larger regions.

Due to the wide variations in geographical size among the regions, comparisons are more usefully expressed in terms of GVA per head of population, rather than absolute values. In 2005, GVA per head for the UK was £17,677. London was the region with the highest GVA per head in 2005 at £27,088, well above (by 53 per cent) the UK average. GVA per head for the South East was also above the UK average (by 7 per cent), at £18,976 per head. Wales and the North East had the lowest GVA per head, at £13,813 and £14,048, respectively. Despite these figures being less than 80 per cent of the UK average, annual growth in these regions was relatively high, at 3.9 and 3.7 per cent, respectively. Scotland and the East Midlands also had high annual growth rates in 2005.

Labour productivity

Labour productivity indicators provide the most effective comparisons of regional economic performance. The GVA per

Table 1
Headline workplace-based gross value added at current basic prices: annual nominal growth of absolute GVA and GVA per head: by NUTS1 region

Percentages

		United Kingdom	UK less extra-regio and statistical discrepancy	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	Wales	Scotland	Northern Ireland	Extra-regio[1]
GVA annual percentage growth	2003	5.9	6.1	5.6	5.4	5.9	7.1	5.2	6.9	6.4	5.8	6.7	6.0	6.0	6.1	–1.1
	2004	5.9	6.0	6.1	5.7	5.7	6.7	5.5	6.5	6.3	5.5	6.5	5.9	5.9	6.1	1.9
	2005	4.1	3.9	4.4	3.7	3.7	4.4	3.8	3.9	4.4	3.3	4.0	3.9	4.1	3.8	16.9
GVA per head annual percentage growth	2005	3.4	3.3	3.9	3.4	3.2	3.7	3.2	3.0	3.1	2.6	3.4	3.7	3.7	3.0	N/A

Note:

1 Extra-regio is the contribution to economic activity that cannot be allocated to any region.

Source: Office for National Statistics

Figure 6
Comparison of regional economic indicators: by NUTS1 region, 2005

Figure 7
GVA per hour worked: by NUTS1 region

head measure, although accounting for different regional sizes, is affected by commuting. It can be artificially inflated because the numerator (GVA) includes the activity of the residents (who work and live there) and also the in-commuters, whereas the latter are excluded from the population denominator. This is illustrated in **Figure 6** in the case of London where the commuting problem is overcome by the labour productivity indicators (GVA per filled job and GVA per hour worked) which use workplace based measures for both the numerator and denominator. This more accurately apportions output against a measure of all those who contribute to producing that output, demonstrating how the choice of indicator can greatly affect perceptions of the relative positions of regions. Figure 6 shows that, when using GVA per hour worked, there are significantly fewer and smaller differences in regional economic performance than when making comparisons based on other indicators. GVA per hour worked additionally takes into account any variations in labour market structures across the regions, such as the proportions of full-time and part-time workers or job share availability. It is for these reasons that GVA per hour worked is the preferred indicator of productivity.

Figure 7 shows the regional GVA per hour worked productivity indices on a time series basis. The regions that improved their productivity relative to the UK average between 2001 and 2005 were London, the East of England, the South West and Scotland. This chart does suggest that since 2001 there has been some widening in the regional productivity differences between the highest and lowest performing regions. Productivity in London was the highest in all years and by 2005 was above the UK average by 5 percentage points more than it was in 2001 (although there was a small decline in 2005 compared with 2004). The opposite occurred in the region with lowest productivity; Northern Ireland, where the productivity gap as measured against the UK average, widened by 8 percentage points across the same period.

In terms of the annual change in the GVA per hour worked indicator, five regions experienced declining productivity against the UK average in 2005: the East Midlands, London, the South East, Scotland and Northern Ireland. However these declines were of less than 2 percentage points except in the East Midlands where productivity declined by nearly 4 percentage points against the UK average in 2005. This has been attributed to an unusually large increase in total hours worked in the East Midlands without a corresponding increase in GVA. Even though total hours worked increased in other regions too, generally these were significantly smaller.

Table 2
Headline gross disposable household income per head at current basic prices: by NUTS1 region

£ per head

	United Kingdom[1]	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	England	Wales	Scotland	Northern Ireland
2000	10,906	9,261	9,979	9,964	9,972	9,949	11,681	13,439	12,509	10,806	11,124	9,433	10,168	9,270
2001	11,588	9,810	10,560	10,514	10,628	10,547	12,509	14,223	13,320	11,508	11,819	10,070	10,800	9,819
2002	11,930	10,147	10,874	10,834	11,008	10,854	12,909	14,495	13,652	11,868	12,151	10,456	11,199	10,176
2003	12,409	10,576	11,304	11,306	11,559	11,303	13,376	15,039	14,104	12,367	12,630	10,932	11,682	10,668
2004	12,773	10,920	11,673	11,687	11,993	11,670	13,722	15,396	14,424	12,718	12,990	11,322	12,047	11,086
2005[2]	13,279	11,356	12,186	12,197	12,522	12,133	14,198	15,885	14,941	13,258	13,494	11,851	12,554	11,564
Percentage change 2000 to 2005	*21.8*	*22.6*	*22.1*	*22.4*	*25.6*	*22.0*	*21.5*	*18.2*	*19.4*	*22.7*	*21.3*	*25.6*	*23.5*	*24.7*

Notes:

1 UK less Extra-Regio.
2 Provisional.
Source: Office for National Statistics

Figure 8
Headline gross disposable household income per head indices: by NUTS1 region

Welfare

Regional Gross Disposable Household Income (GDHI) up to 2005 was published in March 2007. The estimates are published at current basic prices and so do not take into account inflation effects or regional price differences. GDHI measured in absolute terms (£ million) does not take into account the population distribution both within and across regions. For more reliable comparisons of income distributions, the residence based measure of GDHI per head can be used as an indicator of the welfare of people living in a region. **Table 2** shows these data from 2000 to 2005. In 2005, London (£15,885), the South East (£14,941) and the East of England (£14,198) were the only regions where GDHI per head was greater than the UK average. However, Table 2 also shows that London and the South East were the regions which had the lowest percentage growth of this indicator between 2000 and 2005 (18.2 and 19.4 per cent, respectively). The three regions that had a level of GDHI lower than £12,000 per head (the North East, Wales and Northern Ireland) had among the largest improvements over this five-year period (at 22.6, 25.6 and 24.7 per cent growth, respectively). The East Midlands also saw large growth in its GDHI per head indicator between 2000 and 2005 (at 25.6 per cent).

Figure 8 illustrates this pattern of regional GDHI per head in index form between 2000 and 2005. The horizontal axis represents the UK average of 100 and on this basis comparisons between regions can be made over time without bias from their relative regional sizes. The three regions with GDHI per head above the UK average are clearly identifiable. Also evident is the decreased gap by which these regions performed above the UK average. Similarly, improvements against the UK average are evident in some of the regions with lower household income, particularly the East Midlands and the devolved administrations. This does suggest that there has been a reduction in the regional disparities in terms of this indicator of welfare.

Data from the Annual Survey of Hours and Earnings on median gross weekly earnings have previously been presented here. The new data for 2007 were due to be published on 7 November 2007 and were therefore unable to be included in this article. They will be reintroduced in future articles. The newly published regional earnings data are available at www.statistics.gov.uk/ashe.

Drivers of productivity

The following indicators represent the drivers of productivity as identified by HM Treasury and the Department for Business, Enterprise and Regulatory Reform (BERR) (formally the Department of Trade and Industry (DTI)). Research and Development (R&D) statistics provide an indicator for innovation; VAT statistics on net registration change and business survival rates are indicators for enterprise; and regional trade in export goods is regarded as a suitable indicator for competition. Statistics on the qualifications of the working age population provide an indicator of skills available within the regions, as does information on the percentage of pupils achieving five or more grades A* to C at GCSE or equivalent level.

Innovation

Innovation is a necessary, although not sufficient, condition for economic success and therefore is recognised as an important driver of productivity. Innovation can mean either the invention of new and more valuable products or services, or the development of new processes that increase efficiency. R&D is an input to the innovation process and is defined by the Organisation for Economic Co-operation and Development (OECD, 2002) as 'creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society and the use of the stock of knowledge to devise new applications'.

Statistics on Business Expenditure on Research and Development consistent with these internationally agreed standards were

Table 3
Expenditure on research and development performed in UK businesses: by NUTS1 region, 2005

	United Kingdom	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	Wales	Scotland	Northern Ireland
Expenditure (£ million)	13,410	158	1,887	350	1,019	735	3,316	630	3,163	1,201	231	584	136
Annual percentage change	*4.6*	*3.3*	*8.3*	*0.6*	*6.1*	*–4.8*	*22.7*	*–20.5*	*–1.6*	*–7.4*	*2.2*	*18.2*	*17.2*

Source: Office for National Statistics

published in November 2006. **Table 3** shows that the East of England and the South East had the highest business expenditure on R&D in 2005 and were the only regions where expenditure was higher than £3 billion. Northern Ireland, the North East and Wales remained the regions with the lowest R&D expenditure. The East of England had the highest percentage growth in 2005, at 23 per cent. Scotland and Northern Ireland were the regions with the next highest growth in 2005, at 18 and 17 per cent, respectively, despite being ranked low when comparing their absolute expenditure on R&D with other regions.

R&D as a percentage of GVA is a measure commonly used in international comparisons and can further explain the trends shown above. **Figure 9** shows that the East of England was the region with the highest share of R&D expenditure in terms of GVA (3.5 per cent in 2005) and that this has been the case since 2001. The large percentage growth of absolute expenditure in 2005 in this region, identified above, could now be attributed to a recovery from the relatively low level of R&D expenditure in 2004, evident in Figure 9.

London had the lowest R&D expenditure as a percentage of GVA in 2005, at just 0.3 per cent. This may reflect the choice businesses make over locating their R&D or the impact of regional industry composition. Although there appeared to be low levels of R&D in London, there may not be low levels of innovation. London has a large concentration of service industries; in 2005 they accounted for 87 per cent of total headline GVA there, which may not be R&D intensive if, for example, they rely heavily on human capital. If innovation occurred in other forms it would not be captured by the R&D measure. This also puts into context the large decline of 20.5 per cent in R&D expenditure in London in 2005, identifiable in Table 3.

Figure 9 also shows that there has been a steady decline of R&D expenditure in terms of GVA since 2001 in the South East. This reinforces the decline in absolute expenditure in the South East evident in Table 3. The South East was, however, one of the five regions in 2005 with a level of R&D expenditure in terms of GVA greater than the UK average of 1.3 per cent; the other four regions were the North West, the East of England, the East Midlands and the South West.

Enterprise

Indicators of enterprise are published by the Small Business Service (SBS) of BERR. VAT registrations and deregistrations are the best official guide to the pattern of business start-ups and closures. They are an indicator of the level of entrepreneurship and the factors that influence the pattern of business start-ups, such as economic growth, which encourages new ventures and creates demand for business. These data were expected to be updated in 2007 but were not available at the time of finalising this article. The most recent data are available on the SBS website.

Figure 9
Business expenditure on R&D as a percentage of headline workplace based GVA: by NUTS1 region

An alternative indicator is the business survival rate. Data on the proportion of businesses that remained registered for VAT three years after their initial registration were updated in February 2007. **Figure 10** shows the regional business survival rates for two different years of initial registration, 1995 and 2002, illustrating the percentage still trading three years later. For the most recent year, the region with by far the highest rate of business survivals was Northern Ireland (78.5 per cent) and the regions with the lowest were London (66.9 per cent) followed by Scotland (70.3 per cent), the North East (70.4 per cent) and the West Midlands (70.6 per cent).

Figure 10 shows there were improvements in business survival rates in all regions over the time period, although the extent of these did differ by region. Across the UK, between 1995 and 2002, business survival rates improved by 5.7 percentage points. The largest improvement (8.4 percentage points) was in the North West, closely followed by the North East (7.9 percentage points). By contrast, in Northern Ireland, the improvement over the time period was only 0.3 percentage points. However, Northern Ireland was identified above as the strongest region in terms of business survival rates, even though there was only a small increase between the two years. There was a decline in survival rates in Northern Ireland in the first half of this period and an improvement in the second half, whereas all other regions showed a consistent rise over the whole period, although from a lower base. The larger improvements in other regions could be due to many factors, but the figures do not suggest significant overall regional differences in the ability of new businesses to survive.

Competition

HM Revenue & Customs (HMRC) publishes regional trade statistics on export trade in goods by statistical value, which provide an indicator of competition. Trade in goods by definition excludes intangibles and services. The statistical value of export trade is calculated as the value of the goods

Figure 10
Three-year survival rates of VAT-registered enterprises, by year of initial registration: percentage still trading: by NUTS1 region

plus the cost of movement to the country's border. New data for the second quarter of 2007 were published in September 2007, presented here in **Table 4.**

The total value of UK exports for the 12 months ending June 2007 dropped by 13 per cent compared to the 12 months ending June 2006. The value of UK exports to the EU decreased by 17 percent over this period. The only UK region that increased was Northern Ireland where exports rose by 9 per cent. The value of UK exports to countries outside the EU decreased by 7 per cent. UK exports from 7 regions decreased in the year ending June 2007 compared to the year ending June 2006. The only regions that increased were the devolved administrations of Wales, Scotland and Northern Ireland and the North East and Yorkshire and The Humber.

In terms of the latest quarter's data (2007 quarter 2) compared to the previous quarter, most regions saw a decline in the value of exports to the EU, except for the North West and Scotland which increased by one and two per cent respectively. For comparison, in quarter 2 of 2006 the value of exports to the EU generally increased, decreases were only seen in the South East and the South West (three and two per cent respectively).

The value of exports to countries outside the EU in quarter 2 of 2007 generally saw an opposite trend; they only decreased in London (and only by one per cent). In Yorkshire and The Humber and the North East the value of exports to countries outside the EU in the second quarter of 2007, increased by a quarter.

Figure 11 shows the value of export goods as a percentage of headline workplace based regional GVA. This basis of interpreting the results is more useful than looking at the absolute numbers because it takes into account the differing sizes of regional economies. In 2005, the North East was the region where exports accounted for the highest percentage of GVA (23 per cent), although this had declined since 2003. A possible explanation could be the higher annual growth in GVA in 2005 than in exports. In all other regions in 2005, annual export growth was larger than annual GVA growth. The region where exports accounted for the smallest percentage of GVA (12 per cent) in 2005 was the South West, although this was a slightly larger proportion than in previous years. The most significant drop was in Scotland, where exports in 2005 accounted for 9 percentage points less in terms of GVA than they did in 2001.

Skills

The skills of workers are important to productivity as they define the capabilities that the labour force can input to the production process. It is useful to be able to analyse skills from two perspectives: the qualifications of the current working age population and the qualifications of young people representing the future capabilities of the labour force. The following data are available on the ONS Regional Snapshot webpages.

The latest data on the highest qualifications of the working age population (males aged 16 to 64 and females aged 16 to 59) are based on spring 2006 Labour Force Survey data.

Table 4
UK regional trade in goods – statistical value of exports: by NUTS1 region

£ million

		United Kingdom[1]	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	Wales	Scotland	Northern Ireland
EU exports[2]														
2005	Q3	29,408	1,304	2,653	1,672	2,315	1,973	2,536	2,600	4,449	1,454	1,246	1,662	697
	Q4	32,267	1,369	2,789	1,728	2,416	2,139	2,883	2,642	4,938	1,701	1,306	1,629	746
2006	Q1	42,239	1,363	3,480	2,138	2,877	2,740	3,367	4,344	5,347	1,785	1,482	1,701	782
	Q2	46,100	1,449	4,774	2,292	3,248	3,652	3,510	5,576	5,185	1,748	1,517	1,858	814
12 months ending June 2006		150,014	5,485	13,696	7,830	10,856	10,504	12,296	15,162	19,919	6,688	5,551	6,850	3,039
2006	Q3	31,854	1,285	3,063	1,580	2,483	2,677	2,647	2,181	4,295	1,587	1,368	1,709	804
	Q4	31,086	1,398	2,566	1,694	2,152	2,171	2,793	2,164	4,708	1,641	1,307	1,694	835
2007[3]	Q1	31,388	1,312	2,712	1,724	2,283	2,239	3,134	2,207	4,555	1,711	1,438	1,564	836
	Q2	30,236	1,277	2,746	1,640	1,946	2,200	2,960	1,992	4,524	1,542	1,324	1,598	834
12 months ending June 2007		124,564	5,272	11,087	6,638	8,864	9,287	11,534	8,544	18,082	6,481	5,437	6,565	3,309
Non-EU exports														
2005	Q3	23,995	816	2,260	1,232	1,786	1,770	2,049	4,528	3,784	1,094	839	1,739	429
	Q4	25,866	826	2,560	1,404	1,966	2,093	2,434	4,417	4,219	1,179	859	1,663	477
2006	Q1	22,745	703	2,502	1,145	1,788	1,803	1,999	3,846	3,570	939	865	1,613	431
	Q2	24,312	701	2,633	1,247	1,830	1,797	2,058	4,147	3,965	1,071	952	1,766	483
12 months ending June 2006		96,918	3,046	9,955	5,028	7,370	7,463	8,540	16,938	15,538	4,283	3,515	6,781	1,820
2006	Q3	21,910	713	2,301	1,254	1,742	1,534	1,826	3,137	3,655	1,074	981	1,624	460
	Q4	23,575	848	2,421	1,313	1,791	1,579	2,022	3,939	3,531	1,113	947	1,495	505
2007[3]	Q1	21,173	807	2,261	1,247	1,621	1,479	1,777	3,484	3,112	917	839	1,683	469
	Q2	23,093	1,009	2,484	1,565	1,654	1,608	2,002	3,460	3,235	992	956	1,991	521
12 months ending June 2007		89,751	3,377	9,467	5,379	6,808	6,200	7,627	14,020	13,533	4,096	3,723	6,793	1,955

Notes:

1 UK figure includes trade that cannot be allocated to a region.
2 EU data refers to EU25 up to 2006Q4 and EU27 from 2007Q1.
3 Data are provisional.

Source: HM Revenue and Customs

Figure 11
Value of total export goods as a percentage of headline workplace-based GVA: by NUTS1 region

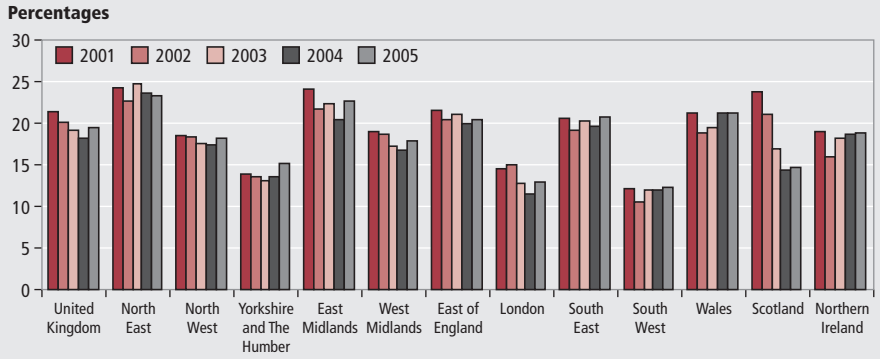


Figure 12
Working age population with no qualifications: by NUTS1 region, spring 2006

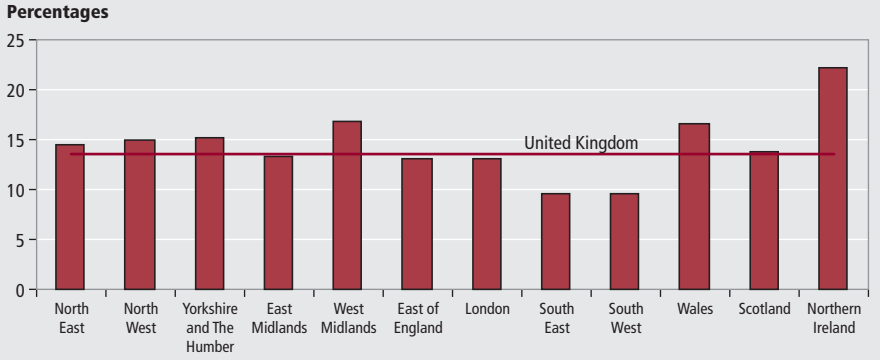
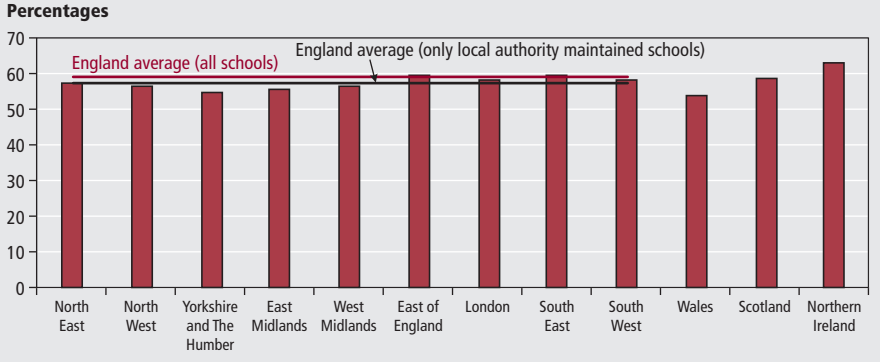


Figure 13
Pupils achieving five or more grades A*–C at GCSE level or equivalent: by NUTS1 region, 2005/06



The characteristics of the local economies will dictate what labour skills are required and thus affect the comparability of these data. **Figure 12** shows the percentage of the working age population who have no qualifications, by region, against the UK average. Northern Ireland has the highest proportion with no qualifications (8.6 percentage points above the UK average), whereas the opposite is the case in the South East and the South West (4.1 percentage points lower than the UK average). This does not necessarily mean that these regions have the most qualified working age population, but does indicate where there is a larger proportion of the working population with no qualifications. This may be due to the skill requirements dictated by the regional economies or it could mean that a significant number of those with qualifications have migrated out of these regions.

Data on the percentage of pupils achieving five or more grades A* to C at GCSE level or equivalent in each region in 2005/06 are illustrated in **Figure 13**. Equivalent level qualifications are defined in Notes and Definitions on the ONS Regional Snapshot webpages. The regional breakdown for these data in England is only available for pupils at Local Authority maintained schools, although information for the devolved administrations is based on all schools. Given this it is possible to calculate two averages for England as a whole: one based on just local authority maintained schools and one for all schools, as is presented in Figure 13. This shows that the average is higher when calculated on all schools, reflecting the likely higher results obtained by pupils in non-Local Authority establishments. Within Local Authority maintained schools in English regions, London, the East of England, South East and the South West performed above the England average for these schools, while Yorkshire and The Humber was the lowest region in England. Within the devolved administrations, based on data that include all schools, Northern Ireland had the highest proportion of pupils achieving five or more A* to C grades at GCSE or equivalent, and Wales had the lowest.

The labour market

Table 5 shows the seasonally adjusted employment rate, the number of people of working age in employment, expressed as a proportion of the population, from the Labour Force Survey (LFS).

In quarter two (April to June) of 2007, the UK employment rate was 74.4 per cent, down 0.1 percentage points from a year ago but up 0.1 percentage point from quarter one (January to March) of 2007. Regional rates varied from 78.6 per cent in the South East to 69.7 per cent in London.

Five regions had an increase in the employment rate over the year. Scotland had a rise of 2.3 percentage points and the rate for Wales increased by 0.8 percentage points. Seven regions experienced falls in the employment rate. The West Midlands had an annual fall of 1.2 percentage points and the East Midlands decreased by 1.1 percentage points.

Table 6 shows the unemployment rate (according to the internationally-consistent ILO definition) for persons aged 16 and over from the LFS. The UK rate in the second quarter of 2007 was 5.4 per cent, down 0.2 percentage points from the previous quarter and down 0.1 percentage point on a year earlier. Regionally, the rates ranged from 7.5 per cent in London to 3.7 per cent in Northern Ireland.

Over the year, the unemployment rate had decreased in eight regions. Three regions had a fall of 0.5 percentage points or more: Scotland, down 0.9 percentage points, and Northern Ireland and the South

Table 5
Employment[1] rates for persons of working age: by NUTS1 region

Percentages, seasonally adjusted

		United Kingdom	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	England	Wales	Scotland	Northern Ireland
2004	Apr-Jun	74.7	69.8	73.8	74.1	76.3	73.9	79.0	70.1	78.7	78.1	75.0	72.6	74.7	66.8
	Jul-Sep	74.7	70.1	73.5	74.3	75.6	75.1	78.9	69.4	79.0	78.7	75.1	71.3	75.0	67.0
	Oct-Dec	74.9	69.8	74.1	74.5	76.1	74.9	78.8	69.3	79.1	78.7	75.2	72.3	75.1	69.2
2005	Jan-Mar	74.9	70.3	73.3	74.5	76.4	74.7	78.8	69.8	78.9	78.8	75.1	71.7	75.3	68.8
	Apr-Jun	74.7	70.2	73.3	74.3	76.5	74.4	78.7	69.3	79.0	78.8	75.0	71.4	75.0	68.5
	Jul-Sep	74.8	69.7	73.5	74.7	77.2	74.0	78.5	69.5	78.9	78.3	75.0	72.3	75.2	69.9
	Oct-Dec	74.5	70.1	72.9	74.4	77.2	73.4	77.5	69.3	78.8	77.8	74.6	71.8	75.4	68.7
2006	Jan-Mar	74.6	70.9	73.4	74.2	77.0	73.8	77.4	69.9	78.8	78.1	74.9	71.5	75.3	69.4
	Apr-Jun	74.6	71.7	73.3	74.1	76.9	73.8	76.9	69.5	79.0	78.4	74.8	71.5	74.8	70.1
	Jul-Sep	74.5	70.9	73.5	73.5	77.1	73.9	77.0	69.5	78.9	77.8	74.7	72.1	75.2	68.9
	Oct-Dec	74.5	71.2	73.0	73.8	76.5	73.2	77.1	69.7	78.7	78.4	74.6	71.8	76.1	69.5
2007	Jan-Mar	74.3	70.9	72.5	72.7	76.0	72.7	77.4	69.9	78.2	78.0	74.3	71.7	76.6	70.5
	Apr-Jun	74.4	71.2	72.6	73.1	75.8	72.6	77.2	69.7	78.6	78.0	74.4	72.3	77.2	70.5

Note:

1 Includes employees, self-employed, participants on government-supported training schemes and unpaid family workers.

Source: Labour Force Survey

Table 6
Unemployment[1] rates for persons aged 16 and over: by NUTS1 region

Percentages, seasonally adjusted

		United Kingdom	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	England	Wales	Scotland	Northern Ireland
		MGSX	YCNC	YCND	YCNE	YCNF	YCNG	YCNH	YCNI	YCNJ	YCNK		YCNM	YCNN	ZSFB
2004	Apr-Jun	4.8	5.5	4.4	4.6	4.2	5.5	3.8	7.0	3.7	3.7	4.7	4.2	6.0	5.1
	Jul-Sep	4.7	5.9	4.5	4.6	4.1	5.0	3.6	7.2	3.6	3.3	4.6	4.9	5.3	5.0
	Oct-Dec	4.7	6.4	4.6	4.6	4.2	4.7	3.8	7.2	3.5	3.3	4.6	4.2	5.7	4.6
2005	Jan-Mar	4.7	5.8	4.7	4.4	4.3	4.7	3.8	6.7	3.7	3.6	4.6	4.6	5.5	4.8
	Apr-Jun	4.8	6.8	4.4	4.8	4.2	4.7	3.9	7.2	3.8	3.2	4.7	4.6	5.4	4.9
	Jul-Sep	4.8	6.7	4.5	4.5	4.4	4.7	4.1	6.7	4.0	3.7	4.8	4.6	5.5	4.3
	Oct-Dec	5.1	6.5	4.9	5.4	4.6	5.3	4.5	7.4	4.2	3.9	5.2	4.9	5.2	4.5
2006	Jan-Mar	5.2	6.6	4.9	5.4	5.0	5.2	4.8	7.7	4.5	3.6	5.3	4.8	5.3	4.4
	Apr-Jun	5.5	6.1	5.3	5.7	5.4	5.7	5.0	7.9	4.7	3.7	5.5	5.7	5.4	4.2
	Jul-Sep	5.6	6.9	5.6	6.0	5.3	6.1	5.0	8.0	4.5	3.9	5.7	5.4	5.0	4.7
	Oct-Dec	5.5	6.5	5.3	6.0	5.8	6.5	4.5	7.9	4.3	3.8	5.6	5.2	5.2	4.2
2007	Jan-Mar	5.5	6.8	5.7	6.2	5.5	6.4	4.7	7.3	4.6	3.9	5.7	5.5	4.9	4.2
	Apr-Jun	5.4	6.5	5.8	5.6	5.0	6.8	4.6	7.5	4.2	4.0	5.5	5.5	4.5	3.7

Source: Labour Force Survey

East both down 0.5 percentage points. The unemployment rate rose in four regions. The West Midlands had the largest increase of 1.1 percentage points.

Table 7 shows economic inactivity rates for persons of working age from the LFS. The UK rate in the second quarter of 2007 was 21.2 per cent, unchanged from the previous quarter but up 0.2 percentage points on a year earlier. Across the regions, rates varied from 17.9 per cent in the South East to 26.7 per cent in Northern Ireland.

Compared with a year earlier, three regions had a decrease in the inactivity rate, and thus a corresponding increase in the working-age activity rate. Scotland had the largest annual fall of 1.7 percentage points. Eight regions had an increase in the economic inactivity rate over the year. The largest annual rise was in the East Midlands with 1.5 percentage points. The rate for the East of England was unchanged over the year.

Table 8 shows the number of employee jobs, not seasonally adjusted, from the Employers Surveys. The number of UK employee jobs was 27,202,000, an increase of 167,000 over the year to June 2007. In percentage terms, this was a 0.6 per cent increase.

There were annual increases in all regions except the South West which fell by 0.1 per cent. The largest percentage rises were in Wales (2.4 per cent) and Northern Ireland (2.1 per cent).

Table 9 shows the claimant count rate (referring to people claiming Jobseeker's Allowance benefits as a proportion of the workforce). The UK rate was 2.6 per cent in September 2007, unchanged from August 2007, but 0.4 percentage points down on a year earlier. This national rate masks large variations between regions and component countries of the UK. For September 2007, the North East has the highest claimant count rate in the UK at 3.9 per cent. The North East is followed by the West Midlands (3.6 per cent), the North West (3.1 per cent) and Yorkshire and The Humber (3.0 per cent). The South East and the South West had the lowest claimant count rates, at 1.5 per cent. The claimant count rate was 2.8 per cent in Wales, and 2.7 per cent in both Scotland and Northern Ireland.

Table 7
Economic inactivity rates for persons of working age: by NUTS1 region

Percentages, seasonally adjusted

		United Kingdom	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	England	Wales	Scotland	Northern Ireland
2004	Apr-Jun	*21.5*	*26.0*	*22.7*	*22.3*	*20.3*	*21.6*	*17.8*	*24.5*	*18.2*	*18.9*	*21.2*	*24.1*	*20.5*	*29.4*
	Jul-Sep	*21.5*	*25.4*	*23.0*	*22.1*	*21.1*	*20.9*	*18.1*	*25.1*	*17.9*	*18.6*	*21.2*	*24.9*	*20.7*	*29.4*
	Oct-Dec	*21.3*	*25.3*	*22.3*	*21.8*	*20.5*	*21.3*	*18.0*	*25.3*	*17.9*	*18.6*	*21.1*	*24.5*	*20.2*	*27.4*
2005	Jan-Mar	*21.4*	*25.3*	*23.0*	*22.0*	*20.2*	*21.6*	*18.0*	*25.0*	*18.0*	*18.2*	*21.2*	*24.7*	*20.1*	*27.6*
	Apr-Jun	*21.5*	*24.6*	*23.2*	*21.9*	*20.1*	*21.8*	*18.1*	*25.2*	*17.8*	*18.5*	*21.2*	*25.1*	*20.6*	*27.8*
	Jul-Sep	*21.3*	*25.3*	*22.9*	*21.6*	*19.2*	*22.2*	*18.0*	*25.3*	*17.8*	*18.6*	*21.2*	*24.1*	*20.3*	*26.9*
	Oct-Dec	*21.4*	*25.0*	*23.3*	*21.2*	*18.9*	*22.4*	*18.7*	*25.1*	*17.7*	*18.9*	*21.2*	*24.4*	*20.4*	*28.0*
2006	Jan-Mar	*21.1*	*23.9*	*22.7*	*21.5*	*18.8*	*22.0*	*18.6*	*24.2*	*17.4*	*18.9*	*20.8*	*24.8*	*20.4*	*27.3*
	Apr-Jun	*21.0*	*23.5*	*22.5*	*21.3*	*18.6*	*21.6*	*18.9*	*24.4*	*17.1*	*18.4*	*20.7*	*24.0*	*20.8*	*26.7*
	Jul-Sep	*21.0*	*23.8*	*22.1*	*21.7*	*18.5*	*21.2*	*18.9*	*24.2*	*17.3*	*18.9*	*20.7*	*23.7*	*20.8*	*27.5*
	Oct-Dec	*21.0*	*23.7*	*22.8*	*21.3*	*18.7*	*21.6*	*19.1*	*24.2*	*17.7*	*18.4*	*20.8*	*24.1*	*19.7*	*27.4*
2007	Jan-Mar	*21.2*	*23.8*	*23.0*	*22.4*	*19.5*	*22.2*	*18.6*	*24.4*	*18.0*	*18.7*	*21.1*	*24.0*	*19.3*	*26.4*
	Apr-Jun	*21.2*	*23.8*	*22.8*	*22.5*	*20.1*	*21.9*	*18.9*	*24.6*	*17.9*	*18.6*	*21.2*	*23.4*	*19.1*	*26.7*

Source: Labour Force Survey

Table 8
Employee jobs:[1] by NUTS1 region

Thousands, not seasonally adjusted

	United Kingdom	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	England	Wales	Scotland	Northern Ireland
Jun 2003	26,146	1,000	2,944	2,160	1,746	2,313	2,278	3,926	3,618	2,109	22,094	1,102	2,277	673
Jun 2004	26,358	1,004	2,982	2,212	1,763	2,306	2,301	3,916	3,618	2,146	22,248	1,133	2,297	680
Jun 2005	26,747	1,036	2,990	2,223	1,818	2,331	2,306	3,971	3,667	2,194	22,536	1,161	2,355	694
Jun 2006	27,035	1,061	2,946	2,243	1,844	2,341	2,331	4,035	3,735	2,211	22,747	1,203	2,383	700
Sep 2006	27,073	1,057	2,936	2,252	1,854	2,342	2,345	4,034	3,737	2,209	22,766	1,219	2,384	704
Dec 2006	27,328	1,071	2,958	2,264	1,884	2,359	2,363	4,086	3,765	2,224	22,974	1,229	2,409	715
Mar 2007[r]	27,052	1,059	2,931	2,252	1,857	2,337	2,323	4,062	3,720	2,198	22,739	1,219	2,383	712
Jun 2007	27,202	1,061	2,948	2,267	1,857	2,349	2,337	4,083	3,747	2,209	22,858	1,232	2,397	715

Notes:

1 Employee jobs figures are of a measure of jobs rather than people. For example, if a person holds two jobs, each job will be counted in the employee jobs total. Employees jobs figures come from quarterly surveys of employers carried out by ONS and administrative sources.

r = revised.

Source: Employer surveys

Compared with a year earlier, all regions had a lower claimant count rate. The largest decrease was 0.5 percentage points, which occurred in London, Scotland and Northern Ireland.

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Small Business Service, *Statistical Press Release 24 October 2006: Business Start*

Table 9
Claimant count rates:[1] by NUTS1 region

Percentages, seasonally adjusted

		United Kingdom	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	England	Wales	Scotland	Northern Ireland
		BCJE	DPDM	IBWC	DPBI	DPBJ	DPBN	DPDP	DPDQ	DPDR	DPBM	VASQ	DPBP	DPBQ	DPBR
2002		*3.1*	*5.0*	*3.5*	*3.6*	*2.9*	*3.5*	*2.1*	*3.5*	*1.6*	*1.9*	*2.9*	*3.5*	*3.8*	*4.4*
2003		*3.0*	*4.5*	*3.2*	*3.3*	*2.8*	*3.5*	*2.1*	*3.6*	*1.7*	*1.9*	*2.9*	*3.3*	*3.7*	*4.1*
2004		*2.7*	*4.0*	*2.8*	*2.8*	*2.5*	*3.3*	*2.0*	*3.5*	*1.6*	*1.6*	*2.6*	*3.0*	*3.4*	*3.6*
2005		*2.7*	*3.9*	*2.9*	*2.9*	*2.5*	*3.4*	*2.1*	*3.4*	*1.6*	*1.6*	*2.6*	*3.0*	*3.2*	*3.3*
2006		*2.9*	*4.1*	*3.3*	*3.3*	*2.8*	*3.9*	*2.3*	*3.4*	*1.8*	*1.8*	*2.9*	*3.1*	*3.1*	*3.2*
2006	Sep	*3.0*	*4.1*	*3.4*	*3.3*	*2.9*	*3.9*	*2.3*	*3.4*	*1.8*	*1.8*	*2.9*	*3.0*	*3.2*	*3.2*
	Oct	*3.0*	*4.1*	*3.4*	*3.3*	*2.9*	*3.9*	*2.4*	*3.4*	*1.8*	*1.8*	*2.9*	*3.0*	*3.1*	*3.2*
	Nov	*2.9*	*4.2*	*3.4*	*3.3*	*2.9*	*3.9*	*2.4*	*3.4*	*1.8*	*1.8*	*2.9*	*3.0*	*3.1*	*3.1*
	Dec	*2.9*	*4.2*	*3.4*	*3.3*	*2.8*	*3.9*	*2.3*	*3.3*	*1.8*	*1.8*	*2.9*	*3.0*	*3.1*	*3.1*
2007	Jan	*2.9*	*4.1*	*3.3*	*3.2*	*2.8*	*3.9*	*2.3*	*3.3*	*1.7*	*1.8*	*2.8*	*2.9*	*2.9*	*3.0*
	Feb	*2.8*	*4.2*	*3.3*	*3.2*	*2.8*	*3.9*	*2.3*	*3.2*	*1.7*	*1.8*	*2.8*	*2.9*	*3.0*	*3.0*
	Mar	*2.8*	*4.1*	*3.3*	*3.2*	*2.8*	*3.8*	*2.3*	*3.2*	*1.7*	*1.7*	*2.8*	*2.9*	*2.9*	*3.0*
.	Apr	*2.8*	*4.1*	*3.2*	*3.1*	*2.7*	*3.7*	*2.2*	*3.1*	*1.7*	*1.7*	*2.7*	*2.9*	*2.9*	*2.9*
	May	*2.7*	*4.0*	*3.2*	*3.1*	*2.7*	*3.7*	*2.2*	*3.1*	*1.6*	*1.6*	*2.7*	*2.8*	*2.8*	*2.9*
	Jun	*2.7*	*4.0*	*3.1*	*3.1*	*2.7*	*3.7*	*2.2*	*3.0*	*1.6*	*1.6*	*2.7*	*2.8*	*2.7*	*2.8*
	Jul	*2.7*	*4.0*	*3.1*	*3.1*	*2.7*	*3.6*	*2.1*	*3.0*	*1.6*	*1.6*	*2.6*	*2.8*	*2.7*	*2.7*
	Aug	*2.6*	*3.9*	*3.1*	*3.0*	*2.6*	*3.6*	*2.1*	*2.9*	*1.6*	*1.5*	*2.6*	*2.8*	*2.7*	*2.7*
	Sep	*2.6*	*3.9*	*3.1*	*3.0*	*2.6*	*3.6*	*2.1*	*2.9*	*1.5*	*1.5*	*2.6*	*2.8*	*2.7*	*2.7*

Note:

1 Count of claimants of Jobseeker's Allowance expressed as a percentage of the total workforce – that is, workforce jobs plus claimants.

Source: Jobcentre Plus administration system.

Ups and Closures: VAT registrations and de-registrations in 2005 at http://stats.berr.gov.uk/ed/vat/VATStatsPressReleaseOct2006.pdf

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Key time series

National accounts aggregates

Last updated: 19/10/07

Seasonally adjusted

	£ million		Indices (2003 = 100)						
	At current prices		Value indices at current prices		Chained volume indices			Implied deflators[3]	
	Gross domestic product (GDP) at market prices	Gross value added (GVA) at basic prices	GDP at market prices[1]	GVA at basic prices	Gross national disposable income at market prices[2]	GDP at market prices	GVA at basic prices	GDP at market prices	GVA at basic prices
	YBHA	ABML	YBEU	YBEX	YBFP	YBEZ	CGCE	YBGB	CGBV
2001	1,003,297	889,063	89.7	89.5	93.7	95.3	95.6	94.1	93.6
2002	1,055,793	937,323	94.4	94.3	97.1	97.3	97.3	97.0	97.0
2003	1,118,245	993,507	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2004	1,184,296	1,051,934	105.9	105.9	103.4	103.3	103.3	102.6	102.5
2005	1,233,976	1,096,629	110.3	110.4	104.3	105.2	105.2	104.9	104.9
2006	1,301,914	1,157,136	116.4	116.5	106.5	108.2	108.2	107.7	107.6
2001 Q1	247,905	219,532	88.7	88.4	93.1	94.9	95.3	93.5	92.7
2001 Q2	249,597	220,901	89.3	88.9	93.4	95.0	95.3	94.0	93.3
2001 Q3	251,028	222,536	89.8	89.6	94.4	95.6	95.8	94.0	93.6
2001 Q4	254,767	226,094	91.1	91.0	94.1	95.9	96.0	95.0	94.9
2002 Q1	259,054	229,737	92.7	92.5	95.9	96.4	96.5	96.1	95.9
2002 Q2	262,774	233,372	94.0	94.0	96.2	97.0	96.9	96.9	97.0
2002 Q3	265,836	236,103	95.1	95.1	98.3	97.7	97.6	97.4	97.4
2002 Q4	268,129	238,111	95.9	95.9	98.2	98.2	98.1	97.7	97.7
2003 Q1	272,953	242,612	97.6	97.7	99.4	98.8	98.8	98.9	98.9
2003 Q2	277,119	246,427	99.1	99.2	98.9	99.3	99.3	99.8	99.9
2003 Q3	281,996	250,492	100.9	100.9	100.0	100.4	100.4	100.4	100.5
2003 Q4	286,177	253,976	102.4	102.3	101.7	101.5	101.6	100.9	100.7
2004 Q1	288,912	256,106	103.3	103.1	101.9	102.2	102.2	101.1	100.9
2004 Q2	295,066	262,094	105.5	105.5	103.2	103.1	103.2	102.3	102.3
2004 Q3	297,941	264,732	106.6	106.6	103.0	103.5	103.5	102.9	103.0
2004 Q4	302,377	269,002	108.2	108.3	105.4	104.1	104.2	103.9	104.0
2005 Q1	303,996	270,082	108.7	108.7	104.1	104.4	104.4	104.2	104.1
2005 Q2	307,306	273,158	109.9	110.0	105.4	104.8	104.9	104.9	104.8
2005 Q3	308,515	273,676	110.4	110.2	103.5	105.4	105.4	104.7	104.5
2005 Q4	314,159	279,713	112.4	112.6	104.1	106.1	106.2	106.0	106.1
2006 Q1	318,171	283,047	113.8	114.0	105.2	106.9	107.0	106.4	106.5
2006 Q2	321,860	285,937	115.1	115.1	107.0	107.8	107.8	106.8	106.8
2006 Q3	329,009	292,359	117.7	117.7	107.1	108.5	108.6	108.5	108.4
2006 Q4	332,874	295,793	119.1	119.1	106.7	109.4	109.5	108.8	108.8
2007 Q1	337,877	299,867	120.9	120.7	108.9	110.3	110.4	109.6	109.4
2007 Q2	344,321	305,937	123.2	123.2	110.1	111.2	111.3	110.8	110.7
2007 Q3						112.1	112.2		
Percentage change, quarter on corresponding quarter of previous year[4]									
2001 Q1	*5.0*	*5.3*	*5.1*	*5.4*	*3.3*	*2.9*	*2.9*	*2.1*	*2.2*
2001 Q2	*4.6*	*5.0*	*4.6*	*5.0*	*3.2*	*2.3*	*2.1*	*2.3*	*2.8*
2001 Q3	*4.1*	*4.5*	*4.2*	*4.6*	*3.1*	*2.4*	*1.9*	*1.8*	*2.6*
2001 Q4	*4.8*	*5.2*	*4.7*	*5.2*	*3.7*	*2.0*	*1.6*	*2.7*	*3.6*
2002 Q1	*4.5*	*4.6*	*4.5*	*4.6*	*3.0*	*1.6*	*1.3*	*2.8*	*3.5*
2002 Q2	*5.3*	*5.6*	*5.3*	*5.7*	*3.0*	*2.1*	*1.7*	*3.1*	*4.0*
2002 Q3	*5.9*	*6.1*	*5.9*	*6.1*	*4.1*	*2.2*	*1.9*	*3.6*	*4.1*
2002 Q4	*5.2*	*5.3*	*5.3*	*5.4*	*4.4*	*2.4*	*2.2*	*2.8*	*3.0*
2003 Q1	*5.4*	*5.6*	*5.3*	*5.6*	*3.6*	*2.5*	*2.4*	*2.9*	*3.1*
2003 Q2	*5.5*	*5.6*	*5.4*	*5.5*	*2.8*	*2.4*	*2.5*	*3.0*	*3.0*
2003 Q3	*6.1*	*6.1*	*6.1*	*6.1*	*1.7*	*2.8*	*2.9*	*3.1*	*3.2*
2003 Q4	*6.7*	*6.7*	*6.8*	*6.7*	*3.6*	*3.4*	*3.6*	*3.3*	*3.1*
2004 Q1	*5.8*	*5.6*	*5.8*	*5.5*	*2.5*	*3.4*	*3.4*	*2.2*	*2.0*
2004 Q2	*6.5*	*6.4*	*6.5*	*6.4*	*4.3*	*3.8*	*3.9*	*2.5*	*2.4*
2004 Q3	*5.7*	*5.7*	*5.6*	*5.6*	*3.0*	*3.1*	*3.1*	*2.5*	*2.5*
2004 Q4	*5.7*	*5.9*	*5.7*	*5.9*	*3.6*	*2.6*	*2.6*	*3.0*	*3.3*
2005 Q1	*5.2*	*5.5*	*5.2*	*5.4*	*2.2*	*2.2*	*2.2*	*3.1*	*3.2*
2005 Q2	*4.1*	*4.2*	*4.2*	*4.3*	*2.1*	*1.6*	*1.6*	*2.5*	*2.4*
2005 Q3	*3.5*	*3.4*	*3.6*	*3.4*	*0.5*	*1.8*	*1.8*	*1.7*	*1.5*
2005 Q4	*3.9*	*4.0*	*3.9*	*4.0*	*-1.2*	*1.9*	*1.9*	*2.0*	*2.0*
2006 Q1	*4.7*	*4.8*	*4.7*	*4.9*	*1.1*	*2.4*	*2.5*	*2.1*	*2.3*
2006 Q2	*4.7*	*4.7*	*4.7*	*4.6*	*1.5*	*2.9*	*2.8*	*1.8*	*1.9*
2006 Q3	*6.6*	*6.8*	*6.6*	*6.8*	*3.5*	*2.9*	*3.0*	*3.6*	*3.7*
2006 Q4	*6.0*	*5.7*	*6.0*	*5.8*	*2.5*	*3.1*	*3.1*	*2.6*	*2.5*
2007 Q1	*6.2*	*5.9*	*6.2*	*5.9*	*3.5*	*3.2*	*3.2*	*3.0*	*2.7*
2007 Q2	*7.0*	*7.0*	*7.0*	*7.0*	*2.9*	*3.2*	*3.2*	*3.7*	*3.7*
2007 Q3						*3.3*	*3.3*		

Notes:

Source: Office for National Statistics

1 "Money GDP".
2 This series is only updated once a quarter, in line with the full quarterly national accounts data set.
3 Based on chained volume measures and current price estimates of expenditure components of GDP.
4 For index number series, these are derived from the rounded figures shown in the table.

Gross domestic product: by category of expenditure

Last updated: 19/10/07

£ million, chained volume measures, reference year 2003, seasonally adjusted

	Domestic expenditure on goods and services at market prices											
	Final consumption expenditure			Gross capital formation								
	Households	Non-profit institutions[1]	General government	Gross fixed capital formation	Changes in inventories[2]	Acquisitions less disposals of valuables	Total	Exports of goods and services	Gross final expenditure	*less* imports of goods and services	Statistical discrepancy (expenditure)	Gross domestic at product market prices
	ABJR	HAYO	NMRY	NPQT	CAFU	NPJR	YBIM	IKBK	ABMG	IKBL	GIXS	ABMI
2001	653,326	27,155	217,359	178,203	5,577	342	1,082,333	277,694	1,360,205	294,449	0	1,066,217
2002	676,833	27,130	224,868	184,701	2,289	183	1,116,239	280,593	1,396,862	308,706	0	1,088,108
2003	697,160	27,185	232,699	186,700	3,983	–37	1,147,690	285,397	1,433,087	314,842	0	1,118,245
2004	721,434	27,327	240,129	197,655	4,597	–42	1,191,099	299,289	1,490,388	335,703	0	1,154,685
2005	732,005	28,167	246,527	200,654	3,611	–354	1,210,610	323,749	1,534,359	359,626	1,183	1,175,916
2006	746,358	29,875	251,724	217,085	1,236	66	1,246,344	357,110	1,603,454	394,860	793	1,209,387
2001 Q1	161,204	6,873	53,609	44,158	1,675	–26	267,565	71,295	339,027	73,841	0	265,267
2001 Q2	162,333	6,788	53,894	44,888	1,793	202	270,071	69,333	339,452	73,937	0	265,573
2001 Q3	164,239	6,762	54,600	45,017	1,726	30	272,481	67,921	340,353	73,327	0	267,163
2001 Q4	165,550	6,732	55,256	44,140	383	136	272,216	69,145	341,373	73,344	0	268,214
2002 Q1	167,588	6,762	55,756	44,562	1,059	66	275,814	69,440	345,256	75,709	0	269,595
2002 Q2	168,803	6,756	56,288	45,610	409	48	277,926	71,533	349,504	78,367	0	271,044
2002 Q3	169,715	6,793	56,429	46,422	520	62	280,004	71,056	351,089	78,006	0	273,034
2002 Q4	170,727	6,819	56,395	48,107	301	7	282,495	68,564	351,013	76,624	0	274,435
2003 Q1	171,828	6,843	57,099	46,805	–477	–8	282,249	72,662	354,921	78,836	0	276,082
2003 Q2	174,146	6,779	57,684	46,131	–635	94	284,342	70,610	354,945	77,283	0	277,686
2003 Q3	175,140	6,790	58,445	45,964	2,223	–68	288,498	70,334	358,825	78,089	0	280,743
2003 Q4	176,046	6,773	59,471	47,800	2,872	–55	292,601	71,791	364,396	80,634	0	283,734
2004 Q1	178,197	6,830	59,969	49,353	–439	112	294,023	73,389	367,412	81,648	0	285,764
2004 Q2	180,362	6,805	59,530	49,159	1,042	–90	296,808	74,861	371,670	83,313	0	288,357
2004 Q3	181,032	6,826	60,002	49,832	1,047	–96	298,644	75,097	373,741	84,300	0	289,441
2004 Q4	181,843	6,866	60,628	49,311	2,947	32	301,624	75,942	377,565	86,442	0	291,123
2005 Q1	182,466	7,005	60,858	49,393	1,894	–158	301,458	75,952	377,410	85,898	253	291,764
2005 Q2	182,306	6,987	61,613	49,334	797	86	301,122	79,576	380,698	87,920	300	293,078
2005 Q3	183,174	7,042	61,885	50,642	853	–201	303,394	82,357	385,751	91,483	320	294,588
2005 Q4	184,059	7,133	62,171	51,285	67	–81	304,636	85,864	390,500	94,325	310	296,486
2006 Q1	184,161	7,356	62,857	52,461	434	–128	307,140	93,587	400,727	102,053	225	298,899
2006 Q2	186,443	7,437	62,612	53,305	–196	233	309,834	96,083	405,917	104,796	202	301,323
2006 Q3	186,861	7,511	62,919	54,766	1,707	–29	313,735	83,629	397,364	94,220	186	303,330
2006 Q4	188,893	7,571	63,336	56,553	–709	–10	315,635	83,811	399,446	93,791	180	305,835
2007 Q1	190,133	7,629	63,631	57,170	272	73	318,908	83,998	402,905	94,848	203	308,260
2007 Q2	191,562	7,701	63,850	56,635	851	327	320,925	84,126	405,051	94,469	204	310,787
2007 Q3												313,273

Percentage change, quarter on corresponding quarter of previous year

2001 Q1	*2.1*	*3.9*	*1.8*	*3.0*		*2.8*	*9.7*	*4.3*	*9.0*	*2.9*
2001 Q2	*2.9*	*0.6*	*1.6*	*5.5*		*3.2*	*3.0*	*3.1*	*6.1*	*2.3*
2001 Q3	*3.4*	*–1.6*	*2.8*	*3.7*		*3.0*	*1.0*	*2.6*	*3.6*	*2.3*
2001 Q4	*4.0*	*–3.0*	*3.3*	*–1.6*		*2.7*	*–1.6*	*1.7*	*0.7*	*2.1*
2002 Q1	*4.0*	*–1.6*	*4.0*	*0.9*		*3.1*	*–2.6*	*1.8*	*2.5*	*1.6*
2002 Q2	*4.0*	*–0.5*	*4.4*	*1.6*		*2.9*	*3.2*	*3.0*	*6.0*	*2.1*
2002 Q3	*3.3*	*0.5*	*3.3*	*3.1*		*2.8*	*4.6*	*3.2*	*6.4*	*2.2*
2002 Q4	*3.1*	*1.3*	*2.1*	*9.0*		*3.8*	*–0.8*	*2.8*	*4.5*	*2.3*
2003 Q1	*2.5*	*1.2*	*2.4*	*5.0*		*2.3*	*4.6*	*2.8*	*4.1*	*2.4*
2003 Q2	*3.2*	*0.3*	*2.5*	*1.1*		*2.3*	*–1.3*	*1.6*	*–1.4*	*2.5*
2003 Q3	*3.2*	*0.0*	*3.6*	*–1.0*		*3.0*	*–1.0*	*2.2*	*0.1*	*2.8*
2003 Q4	*3.1*	*–0.7*	*5.5*	*–0.6*		*3.6*	*4.7*	*3.8*	*5.2*	*3.4*
2004 Q1	*3.7*	*–0.2*	*5.0*	*5.4*		*4.2*	*1.0*	*3.5*	*3.6*	*3.5*
2004 Q2	*3.6*	*0.4*	*3.2*	*6.6*		*4.4*	*6.0*	*4.7*	*7.8*	*3.8*
2004 Q3	*3.4*	*0.5*	*2.7*	*8.4*		*3.5*	*6.8*	*4.2*	*8.0*	*3.1*
2004 Q4	*3.3*	*1.4*	*1.9*	*3.2*		*3.1*	*5.8*	*3.6*	*7.2*	*2.6*
2005 Q1	*2.4*	*2.6*	*1.5*	*0.1*		*2.5*	*3.5*	*2.7*	*5.2*	*2.1*
2005 Q2	*1.1*	*2.7*	*3.5*	*0.4*		*1.5*	*6.3*	*2.4*	*5.5*	*1.6*
2005 Q3	*1.2*	*3.2*	*3.1*	*1.6*		*1.6*	*9.7*	*3.2*	*8.5*	*1.8*
2005 Q4	*1.2*	*3.9*	*2.5*	*4.0*		*1.0*	*13.1*	*3.4*	*9.1*	*1.8*
2006 Q1	*0.9*	*5.0*	*3.3*	*6.2*		*1.9*	*23.2*	*6.2*	*18.8*	*2.4*
2006 Q2	*2.3*	*6.4*	*1.6*	*8.0*		*2.9*	*20.7*	*6.6*	*19.2*	*2.8*
2006 Q3	*2.0*	*6.7*	*1.7*	*8.1*		*3.4*	*1.5*	*3.0*	*3.0*	*3.0*
2006 Q4	*2.6*	*6.1*	*1.9*	*10.3*		*3.6*	*–2.4*	*2.3*	*–0.6*	*3.2*
2007 Q1	*3.2*	*3.7*	*1.2*	*9.0*		*3.8*	*–10.2*	*0.5*	*–7.1*	*3.1*
2007 Q2	*2.7*	*3.5*	*2.0*	*6.2*		*3.6*	*–12.4*	*–0.2*	*–9.9*	*3.1*
2007 Q3										*3.3*

Notes:

1 Non-profit institutions serving households (NPISH).
2 This series includes a quarterly alignment adjustment.

Source: Office for National Statistics

Labour market summary

Last updated: 17/10/07

United Kingdom (thousands), seasonally adjusted

	All aged 16 and over								
	All	Total economically active	Total in employment	Unemployed	Economically inactive	Economic activity rate (%)	Employment rate (%)	Unemployment rate (%)	Economic inactivity rate (%)
	1	2	3	4	5	6	7	8	9
All persons	MGSL	MGSF	MGRZ	MGSC	MGSI	MGWG	MGSR	MGSX	YBTC
Jun-Aug 2005	47,822	30,186	28,759	1,426	17,636	*63.1*	*60.1*	*4.7*	*36.9*
Jun-Aug 2006	48,193	30,717	29,015	1,702	17,476	*63.7*	*60.2*	*5.5*	*36.3*
Sep-Nov 2006	48,285	30,703	29,029	1,674	17,583	*63.6*	*60.1*	*5.5*	*36.4*
Dec-Feb 2007	48,378	30,677	28,982	1,694	17,701	*63.4*	*59.9*	*5.5*	*36.6*
Mar-May 2007	48,471	30,735	29,075	1,660	17,736	*63.4*	*60.0*	*5.4*	*36.6*
Jun-Aug 2007	48,563	30,752	29,097	1,655	17,812	*63.3*	*59.9*	*5.4*	*36.7*
Male	MGSM	MGSG	MGSA	MGSD	MGSJ	MGWH	MGSS	MGSY	YBTD
Jun-Aug 2005	23,183	16,341	15,493	849	6,842	*70.5*	*66.8*	*5.2*	*29.5*
Jun-Aug 2006	23,387	16,609	15,632	977	6,778	*71.0*	*66.8*	*5.9*	*29.0*
Sep-Nov 2006	23,439	16,617	15,664	953	6,822	*70.9*	*66.8*	*5.7*	*29.1*
Dec-Feb 2007	23,492	16,629	15,660	969	6,863	*70.8*	*66.7*	*5.8*	*29.2*
Mar-May 2007	23,544	16,689	15,734	955	6,855	*70.9*	*66.8*	*5.7*	*29.1*
Jun-Aug 2007	23,596	16,676	15,730	947	6,920	*70.7*	*66.7*	*5.7*	*29.3*
Female	MGSN	MGSH	MGSB	MGSE	MGSK	MGWI	MGST	MGSZ	YBTE
Jun-Aug 2005	24,638	13,845	13,267	578	10,794	*56.2*	*53.8*	*4.2*	*43.8*
Jun-Aug 2006	24,806	14,108	13,383	726	10,697	*56.9*	*54.0*	*5.1*	*43.1*
Sep-Nov 2006	24,846	14,086	13,365	721	10,760	*56.7*	*53.8*	*5.1*	*43.3*
Dec-Feb 2007	24,886	14,048	13,323	725	10,839	*56.4*	*53.5*	*5.2*	*43.6*
Mar-May 2007	24,927	14,046	13,341	705	10,881	*56.3*	*53.5*	*5.0*	*43.7*
Jun-Aug 2007	24,967	14,075	13,367	708	10,892	*56.4*	*53.5*	*5.0*	*43.6*

	All aged 16 to 59/64								
	All	Total economically active	Total in employment	Unemployed	Economically inactive	Economic activity rate (%)	Employment rate (%)	Unemployment rate (%)	Economic inactivity rate (%)
	10	11	12	13	14	15	16	17	18
All persons	YBTF	YBSK	YBSE	YBSH	YBSN	MGSO	MGSU	YBTI	YBTL
Jun-Aug 2005	37,032	29,100	27,695	1,405	7,933	*78.6*	*74.8*	*4.8*	*21.4*
Jun-Aug 2006	37,296	29,517	27,841	1,676	7,779	*79.1*	*74.6*	*5.7*	*20.9*
Sep-Nov 2006	37,337	29,484	27,837	1,647	7,853	*79.0*	*74.6*	*5.6*	*21.0*
Dec-Feb 2007	37,378	29,449	27,778	1,671	7,929	*78.8*	*74.3*	*5.7*	*21.2*
Mar-May 2007	37,419	29,491	27,858	1,633	7,928	*78.8*	*74.5*	*5.5*	*21.2*
Jun-Aug 2007	37,459	29,491	27,862	1,629	7,969	*78.7*	*74.4*	*5.5*	*21.3*
Male	YBTG	YBSL	YBSF	YBSI	YBSO	MGSP	MGSV	YBTJ	YBTM
Jun-Aug 2005	19,155	15,971	15,133	838	3,183	*83.4*	*79.0*	*5.2*	*16.6*
Jun-Aug 2006	19,322	16,209	15,244	965	3,113	*83.9*	*78.9*	*6.0*	*16.1*
Sep-Nov 2006	19,360	16,203	15,260	943	3,156	*83.7*	*78.8*	*5.8*	*16.3*
Dec-Feb 2007	19,398	16,216	15,256	961	3,182	*83.6*	*78.6*	*5.9*	*16.4*
Mar-May 2007	19,436	16,273	15,329	944	3,163	*83.7*	*78.9*	*5.8*	*16.3*
Jun-Aug 2007	19,474	16,245	15,309	936	3,230	*83.4*	*78.6*	*5.8*	*16.6*
Female	YBTH	YBSM	YBSG	YBSJ	YBSP	MGSQ	MGSW	YBTK	YBTN
Jun-Aug 2005	17,878	13,128	12,562	567	4,749	*73.4*	*70.3*	*4.3*	*26.6*
Jun-Aug 2006	17,975	13,308	12,598	711	4,666	*74.0*	*70.1*	*5.3*	*26.0*
Sep-Nov 2006	17,977	13,280	12,577	704	4,697	*73.9*	*70.0*	*5.3*	*26.1*
Dec-Feb 2007	17,980	13,233	12,523	710	4,747	*73.6*	*69.6*	*5.4*	*26.4*
Mar-May 2007	17,983	13,218	12,529	689	4,764	*73.5*	*69.7*	*5.2*	*26.5*
Jun-Aug 2007	17,985	13,246	12,553	693	4,739	*73.7*	*69.8*	*5.2*	*26.3*

Notes:

Relationship between columns: 1 = 2 + 5; 2 = 3 + 4; 6 = 2/1; 7 = 3/1; 8 = 4/2;
9 = 5/1; 10 = 11 + 14; 11 = 12 + 13; 15 = 11/10; 16 = 12/10; 17 = 13/11; 18 = 14/10
The Labour Force Survey is a survey of the population of private households, student halls of residence and NHS accommodation.

Source: Labour Force Survey, Office for National Statistics
Labour Market Statistics Helpline: 01633 456901

Prices

Last updated: 16/10/07

Percentage change over 12 months

	Consumer prices						Not seasonally adjusted, except for series PLLW, RNPE and RNPF Producer prices			
	Consumer prices index (CPI)			Retail prices index (RPI)			Output prices		Input prices	
	All items	CPI excluding indirect taxes (CPIY)[1]	CPI at constant tax rates (CPI-CT)	All items	All items excluding mortgage interest payments (RPIX)	All items excluding mortgage interest payments and indirect taxes (RPIY)[2]	All manufactured products	Excluding food, beverages, tobacco and petroleum products	Materials and fuels purchased by manufacturing industry	Excluding food, beverages, tobacco and petroleum products
	D7G7	EL2S	EAD6	CZBH	CDKQ	CBZX	PLLU[3]	PLLW[3]	RNPE[3]	RNPF[3]
2003 Jan	1.3			2.9	2.7	2.9	1.3	0.9	1.7	–2.2
2003 Feb	1.6			3.2	3.0	3.1	1.5	1.1	2.5	–2.0
2003 Mar	1.5			3.1	3.0	3.2	2.1	1.3	0.8	–1.5
2003 Apr	1.4			3.1	3.0	2.9	1.6	1.3	–1.3	–0.6
2003 May	1.3			3.0	2.9	2.7	1.1	1.2	–0.1	–0.2
2003 Jun	1.1			2.9	2.8	2.7	1.1	1.2	0.0	–1.2
2003 Jul	1.3			3.1	2.9	2.8	1.3	1.3	0.6	–0.5
2003 Aug	1.4			2.9	2.9	2.7	1.5	1.2	1.9	0.0
2003 Sep	1.4			2.8	2.8	2.7	1.4	1.4	1.3	1.0
2003 Oct	1.4			2.6	2.7	2.4	1.5	1.3	2.5	1.2
2003 Nov	1.3			2.5	2.5	2.1	1.7	1.4	4.6	1.7
2003 Dec	1.3	1.1	1.1	2.8	2.6	2.2	1.8	1.5	2.0	0.4
2004 Jan	1.4	1.5	1.3	2.6	2.4	2.0	1.6	1.4	–0.3	0.0
2004 Feb	1.3	1.3	1.1	2.5	2.3	1.9	1.6	1.5	–1.3	–0.5
2004 Mar	1.1	1.1	1.0	2.6	2.1	1.7	1.4	1.5	0.9	–0.1
2004 Apr	1.1	1.1	1.0	2.5	2.0	1.8	1.8	1.3	2.9	–0.2
2004 May	1.5	1.4	1.3	2.8	2.3	2.2	2.5	1.4	5.6	0.7
2004 Jun	1.6	1.5	1.4	3.0	2.3	2.3	2.6	1.4	3.7	1.3
2004 Jul	1.4	1.4	1.2	3.0	2.2	2.0	2.6	1.7	3.7	1.4
2004 Aug	1.3	1.3	1.1	3.2	2.2	2.0	2.8	2.2	4.6	2.3
2004 Sep	1.1	1.0	0.9	3.1	1.9	1.7	3.1	2.3	8.1	3.8
2004 Oct	1.2	1.2	1.1	3.3	2.1	2.0	3.5	2.9	9.2	4.8
2004 Nov	1.5	1.4	1.4	3.4	2.2	2.2	3.5	2.9	6.7	4.6
2004 Dec	1.7	1.7	1.6	3.5	2.5	2.5	2.9	2.5	4.4	4.2
2005 Jan	1.6	1.7	1.5	3.2	2.1	2.0	2.6	2.5	9.6	7.5
2005 Feb	1.7	1.7	1.6	3.2	2.1	2.0	2.7	2.5	11.0	8.2
2005 Mar	1.9	2.0	1.8	3.2	2.4	2.3	2.9	2.4	11.1	7.4
2005 Apr	1.9	2.0	1.9	3.2	2.3	2.3	3.3	2.6	10.0	7.0
2005 May	1.9	2.0	1.8	2.9	2.1	2.2	2.7	2.5	7.6	6.5
2005 Jun	2.0	2.2	1.9	2.9	2.2	2.2	2.5	2.3	12.0	7.4
2005 Jul	2.3	2.5	2.3	2.9	2.4	2.5	3.1	2.2	13.9	8.6
2005 Aug	2.4	2.6	2.3	2.8	2.3	2.3	3.0	1.9	12.8	7.5
2005 Sep	2.5	2.6	2.4	2.7	2.5	2.5	3.3	2.1	10.5	5.7
2005 Oct	2.3	2.5	2.3	2.5	2.4	2.3	2.6	1.4	8.9	7.0
2005 Nov	2.1	2.3	2.1	2.4	2.3	2.3	2.3	1.3	13.6	9.6
2005 Dec	1.9	2.1	1.8	2.2	2.0	2.0	2.4	1.7	17.9	12.1
2006 Jan	1.9	2.1	1.9	2.4	2.3	2.3	2.9	1.8	15.8	10.3
2006 Feb	2.0	2.1	2.0	2.4	2.3	2.3	2.9	1.8	15.4	10.7
2006 Mar	1.8	1.9	1.7	2.4	2.1	2.2	2.5	1.9	12.9	10.1
2006 Apr	2.0	2.1	2.0	2.6	2.4	2.3	2.5	2.2	15.2	10.1
2006 May	2.2	2.3	2.2	3.0	2.9	2.8	3.1	2.4	13.5	8.9
2006 Jun	2.5	2.6	2.4	3.3	3.1	3.2	3.4	2.8	10.9	8.8
2006 Jul	2.4	2.4	2.3	3.3	3.1	3.2	2.9	2.5	10.6	8.9
2006 Aug	2.5	2.6	2.4	3.4	3.3	3.4	2.7	2.3	8.1	8.0
2006 Sep	2.4	2.6	2.3	3.6	3.2	3.3	1.9	2.2	4.9	7.1
2006 Oct	2.4	2.7	2.3	3.7	3.2	3.3	1.6	2.6	4.7	6.1
2006 Nov	2.7	3.0	2.6	3.9	3.4	3.6	1.8	2.6	3.3	4.7
2006 Dec	3.0	3.2	2.9	4.4	3.8	3.9	2.2	2.5	2.1	2.8
2007 Jan	2.7	2.9	2.6	4.2	3.5	3.7	2.2	2.5	–2.1	1.7
2007 Feb	2.8	2.9	2.6	4.6	3.7	3.9	2.3	2.6	–0.8	1.4
2007 Mar	3.1	3.1	2.9	4.8	3.9	4.0	2.7	2.7	0.8	2.4
2007 Apr	2.8	2.9	2.6	4.5	3.6	3.7	2.4	2.4	–0.7	2.0
2007 May	2.5	2.6	2.3	4.3	3.3	3.4	2.4	2.3	1.4	3.4
2007 Jun	2.4	2.5	2.2	4.4	3.3	3.3	2.5	2.1	2.5	3.2
2007 Jul	1.9	2.0	1.7	3.8	2.7	2.6	2.5	2.2	0.6	1.2
2007 Aug	1.8	1.9	1.6	4.1	2.7	2.6	2.5	2.3	0.7	2.0
2007 Sep	1.8	1.7	1.6	3.9	2.8	2.8	2.7	2.2	6.4	3.3

Notes:

Source: Office for National Statistics

1 The taxes excluded are VAT, duties, insurance premium tax, air passenger duty and stamp duty on share transactions.
2 The taxes excluded are council tax, VAT, duties, vehicle excise duty, insurance premium tax and air passenger duty.
3 Derived from these identification (CDID) codes.

NOTES TO TABLES

Identification (CDID) codes

The four-character identification code at the top of each alpha column of data is the ONS reference for that series of data on our time series database. Please quote the relevant code if you contact us about the data.

Conventions

Where figures have been rounded to the final digit, there may be an apparent slight discrepancy between the sum of the constituent items and the total shown. Although figures may be given in unrounded form to facilitate readers' calculation of percentage changes, rates of change, etc, this does not imply that the figures can be estimated to this degree of precision as they may be affected by sampling variability or imprecision in estimation methods.

The following standard symbols are used:

..	not available
-	nil or negligible
P	provisional
–	break in series
R	revised
r	series revised from indicated entry onwards

CONCEPTS AND DEFINITIONS

Labour Force Survey 'monthly' estimates

Labour Force Survey (LFS) results are three-monthly averages, so consecutive months' results overlap. Comparing estimates for overlapping three-month periods can produce more volatile results, which can be difficult to interpret.

Labour market summary

Economically active

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

Economically inactive

People who are neither in employment nor unemployed. This includes those who want a job but have not been seeking work in the last four weeks, those who want a job and are seeking work but not available to start work, and those who do not want a job.

Employment and jobs

There are two ways of looking at employment: the number of people with jobs, or the number of jobs. The two concepts are not the same as one person can have more than one job. The number of people with jobs is measured by the Labour Force Survey (LFS) and includes people aged 16 or over who do paid work (as an employee or self-employed), those who have a job that they are temporarily away from, those on government-supported training and employment programmes, and those doing unpaid family work. The number of jobs is measured by workforce jobs and is the sum of employee jobs (as measured by surveys of employers), self-employment jobs from the LFS, people in HM Forces, and government-supported trainees. Vacant jobs are not included.

Unemployment

The number of unemployed people in the UK is measured through the Labour Force Survey following the internationally agreed definition recommended by the ILO (International Labour Organisation) – an agency of the United Nations.

Unemployed people:

- are without a job, want 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

Other key indicators

Claimant count

The number of people claiming Jobseeker's Allowance benefits.

Earnings

A measure of the money people receive in return for work done, gross of tax. It includes salaries and, unless otherwise stated, bonuses but not unearned income, benefits in kind or arrears of pay.

Productivity

Whole economy output per worker is the ratio of Gross Value Added (GVA) at basic prices and Labour Force Survey (LFS) total employment. Manufacturing output per filled job is the ratio of manufacturing output (from the Index of Production) and productivity jobs for manufacturing (constrained to LFS jobs at the whole economy level).

Redundancies

The number of people who:

- were not in employment during the reference week, and
- reported that they had been made redundant in the month of, or the two calendar months prior to, the reference week

plus the number of people who:

- were in employment during the reference week, and
- started their job in the same calendar month as, or the two calendar months prior to, the reference week, and
- reported that they had been made redundant in the month of, or the two calendar months prior to, the reference week

Unit wage costs

A measure of the cost of wages and salaries per unit of output.

Vacancies

The statistics are based on ONS's Vacancy Survey of businesses. The survey is designed to provide comprehensive estimates of the stock of vacancies across the economy, excluding those in agriculture, forestry and fishing. Vacancies are defined as positions for which employers are actively seeking recruits from outside their business or organisation. More information on labour market concepts, sources and methods is available in the *Guide to Labour Market Statistics* at www.statistics.gov.uk/about/data/guides/LabourMarket/default.asp

Directory of online tables

The tables listed below are available as Excel spreadsheets via weblinks accessible from the main *Economic & Labour Market Review* (ELMR) page of the National Statistics website. Tables in sections 1, 3, 4 and 5 replace equivalent ones formerly published in *Economic Trends*, although there are one or two new tables here; others have been expanded to include, as appropriate, both unadjusted/seasonally adjusted, and current price/chained volume measure variants. Tables in sections 2 and 6 were formerly in *Labour Market Trends*. The opportunity has also been taken to extend the range of dates shown in many cases, as the online tables are not constrained by page size.

In the online tables, the four-character identification codes at the top of each data column correspond to the ONS reference for that series on our time series database. The latest data sets for the old *Economic Trends* tables and the Labour Market Statistics First Release tables are still available on this database via the 'Time Series Data' link on the National Statistics main web page. These data sets can also be accessed from links at the bottom of each section's table listings via the 'Data tables' link in the individual ELMR edition pages on the website.

Weblink: www.statistics.gov.uk/elmr/11_07/data_page.asp

Title	Frequency of update	Updated since last month
UK economic accounts		
1.01 National accounts aggregates	M	✔
1.02 Gross domestic product and gross national income	M	✔
1.03 Gross domestic product, by category of expenditure	M	✔
1.04 Gross domestic product, by category of income	M	.
1.05 Gross domestic product and shares of income and expenditure	M	.
1.06 Income, product and spending per head	Q	.
1.07 Households' disposable income and consumption	M	.
1.08 Household final consumption expenditure	M	.
1.09 Gross fixed capital formation	M	.
1.10 Gross value added, by category of output	M	✔
1.11 Gross value added, by category of output: service industries	M	✔
1.12 Summary capital accounts and net lending/net borrowing	Q	.
1.13 Private non-financial corporations: allocation of primary income account	Q	.
1.14 Private non-financial corporations: secondary distribution of income account and capital account	Q	.
1.15 Balance of payments: current account	M	✔
1.16 Trade in goods (on a balance of payments basis)	M	✔
1.17 Measures of variability of selected economic series	Q	.
1.18 Index of services	M	✔
Selected labour market statistics		
2.01 Summary of Labour Force Survey data	M	✔
2.02 Employment by age	M	✔
2.03 Full-time, part-time and temporary workers	M	✔
2.04 Public and private sector employment	Q	.
2.05 Workforce jobs	Q	.
2.06 Workforce jobs by industry	Q	.
2.07 Actual weekly hours of work	M	✔
2.08 Usual weekly hours of work	M	✔
2.09 Unemployment by age and duration	M	✔
2.10 Claimant count levels and rates	M	✔
2.11 Claimant count by age and duration	M	✔
2.12 Economic activity by age	M	✔
2.13 Economic inactivity by age	M	✔
2.14 Economic inactivity: reasons	M	✔
2.15 Educational status, economic activity and inactivity of young people	M	✔
2.16 Average earnings – including bonuses	M	✔
2.17 Average earnings – excluding bonuses	M	✔
2.18 Productivity and unit wage costs	M	✔
2.19 Regional labour market summary	M	✔

Weblink: www.statistics.gov.uk/11_07/data_page.asp

2.20	International comparisons	M	✔
2.21	Labour disputes	M	✔
2.22	Vacancies	M	✔
2.23	Vacancies by industry	M	✔
2.24	Redundancies: levels and rates	M	✔
2.25	Redundancies: by industry	Q	•
2.26	Sampling variability for headline labour market statistics	M	✔

Prices

3.01	Producer and consumer prices	M	✔
3.02	Harmonised Indices of Consumer Prices: EU comparisons	M	✔

Selected output and demand indicators

4.01	Output of the production industries	M	✔
4.02	Engineering and construction: output and orders	M	✔
4.03	Motor vehicle and steel production	M	✔
4.04	Indicators of fixed investment in dwellings	M	✔
4.05	Number of property transactions	M	✔
4.06	Change in inventories	Q	•
4.07	Inventory ratios	Q	•
4.08	Retail sales, new registrations of cars and credit business	M	✔
4.09	Inland energy consumption: primary fuel input basis	M	✔

Selected financial statistics

5.01	Sterling exchange rates and UK reserves	M	✔
5.02	Monetary aggregates	M	✔
5.03	Counterparts to changes in money stock M4	M	✔
5.04	Public sector receipts and expenditure	Q	✔
5.05	Public sector key fiscal indicators	M	✔
5.06	Consumer credit and other household sector borrowing	M	•
5.07	Analysis of bank lending to UK residents	M	•
5.08	Interest rates and yields	M	✔
5.09	A selection of asset prices	M	✔

Further labour market statistics

6.01	Working-age households	A	•
6.02	Local labour market indicators by unitary and local authority	Q	•
6.03	Employment by occupation	Q	•
6.04	Employee jobs by industry	M	✔
6.05	Employee jobs by industry division, class or group	Q	✔
6.06	Employee jobs by region and industry	Q	✔
6.07	Key productivity measures by industry	M	✔
6.08	Total workforce hours worked per week	Q	✔
6.09	Total workforce hours worked per week by region and industry group	Q	✔
6.10	Job-related training received by employees	Q	•
6.11	Unemployment rates by previous occupation	Q	•

Weblink: www.statistics.gov.uk/11_07/data_page.asp

6.12	Average Earnings Index by industry: excluding and including bonuses	M	✔
6.13	Average Earnings Index: effect of bonus payments by main industrial sector	M	•
6.14	Median earnings and hours by main industrial sector	A	•
6.15	Median earnings and hours by industry section	A	✔
6.16	Index of wages per head: international comparisons	M	✔
6.17	Regional Jobseeker's Allowance claimant count rates	M	✔
6.18	Claimant count area statistics: counties, unitary and local authorities	M	✔
6.19	Claimant count area statistics: UK parliamentary constituencies	M	✔
6.20	Claimant count area statistics: constituencies of the Scottish Parliament	M	✔
6.21	Jobseeker's Allowance claimant count flows	M	✔
6.22	Number of previous Jobseeker's Allowance claims	Q	✔
6.23	Interval between Jobseeker's Allowance claims	Q	•
6.24	Average duration of Jobseeker's Allowance claims by age	Q	•
6.25	Vacancies by size of enterprise	M	✔
6.26	Redundancies: re-employment rates	Q	•
6.27	Redundancies by Government Office Region	Q	•
6.28	Redundancy rates by industry	Q	•
6.29	Labour disputes: summary	M	✔
6.30	Labour disputes: stoppages in progress	M	✔

Notes

A Annually
Q Quarterly
M Monthly

More information

Time series are available from www.statistics.gov.uk/statbase/tsdintro.asp
Subnational labour market data are available from www.statistics.gov.uk/statbase/Product.asp?vlnk=14160 and www.nomisweb.co.uk
Labour Force Survey tables are available from www.statistics.gov.uk/statbase/Product.asp?vlnk=14365
Annual Survey of Hours and Earnings data are available from www.statistics.gov.uk/StatBase/Product.asp?vlnk=13101

Contact points

Recorded announcement of latest RPI
020 7533 5866
rpi@ons.gsi.gov.uk

Labour Market Statistics Helpline
01633 456901
labour.market@ons.gsi.gov.uk

Earnings Customer Helpline
01633 819024
earnings@ons.gsi.gov.uk

National Statistics Customer Contact Centre
0845 601 3034
info@statistics.gsi.gov.uk

Skills and Education Network
024 7682 3439
senet@lsc.gov.uk

Department for Children, Schools and Families Public Enquiry Unit
0870 000 2288

For statistical information on

Average Earnings Index (monthly)
01633 819024

Claimant count
01633 456901

Consumer Prices Index
020 7533 5874

Earnings
Annual Survey of Hours and Earnings
01633 819024

Basic wage rates and hours for manual workers with a collective agreement
01633 819008

Low-paid workers
01633 819024
lowpay@ons.gsi.gov.uk

Labour Force Survey
01633 456901
labour.market@ons.gsi.gov.uk

Economic activity and inactivity
01633 456901

Employment
Labour Force Survey
01633 456901
labour.market@ons.gsi.gov.uk

Employee jobs by industry
01633 812318

Total workforce hours worked per week
01633 812766
productivity@ons.gsi.gov.uk

Workforce jobs series – short-term estimates
01633 812318
workforce.jobs@ons.gsi.gov.uk

Labour costs
01633 819024

Labour disputes
01633 819205

Labour Force Survey
01633 456901
labour.market@ons.gsi.gov.uk

Labour Force Survey Data Service
01633 655732
lfs.dataservice@ons.gsi.gov.uk

New Deal
0114 209 8228

Productivity and unit wage costs
01633 812766

Public sector employment
General enquiries
020 7533 6178

Source and methodology enquiries
01633 812362

Qualifications (Department for Children, Schools and Families)
0870 000 2288

Redundancy statistics
01633 456901

Retail Prices Index
020 7533 5874
rpi@ons.gsi.gov.uk

Skills (Department for Innovation, Universities & Skills)
0870 001 0336
Skill needs surveys and research into skill shortages
0870 001 0336

Small firms (BERR)
Enterprise Directorate
0114 279 4439

Subregional estimates
01633 812038

Annual employment statistics
annual.employment.figures@ons.gsi.gov.uk

Annual Population Survey, local area statistics
020 7533 6130

Trade unions (BERR)
Employment relations
020 7215 5934

Training
Adult learning – work-based training (DWP)
0114 209 8236

Employer-provided training (Department for Innovation, Universities & Skills)
0870 001 0336

Travel-to-Work Areas
Composition and review
020 7533 6114

Unemployment
01633 456901

Vacancies
Vacancy Survey: total stocks of vacancies
020 7533 6162

ONS economic and labour market publications

ANNUAL

Financial Statistics Explanatory Handbook

2007 edition. Palgrave Macmillan, ISBN 1-4039-9783-7. Price £45.

www.statistics.gov.uk/products/p4861.asp

Foreign Direct Investment (MA4)

2005 edition

www.statistics.gov.uk/products/p9614.asp

Input-Output analyses for the United Kingdom

2006 edition

www.statistics.gov.uk/products/p7640.asp

Research and development in UK businesses (MA14)

2005 edition

www.statistics.gov.uk/statbase/product.asp?vlnk=165

Share Ownership

2006 edition

www.statistics.gov.uk/products/p930.asp

United Kingdom Balance of Payments (Pink Book)

2007 edition. Palgrave Macmillan, ISBN 978-1-4039-9397-7. Price £49.50.

www.statistics.gov.uk/products/p1140.asp

United Kingdom National Accounts (Blue Book)

2007 edition. Palgrave Macmillan, ISBN 978-1-4039-9398-4. Price £49.50.

www.statistics.gov.uk/products/p1143.asp

First releases

- Annual survey of hours and earnings
- Foreign direct investment
- Gross domestic expenditure on research and development
- Low pay estimates
- Regional gross value added
- Share ownership
- UK Business enterprise research and development
- Work and worklessness among households

QUARTERLY

Consumer Trends

2007 quarter 2

www.statistics.gov.uk/products/p242.asp

United Kingdom Economic Accounts

2007 quarter 2. Palgrave Macmillan, ISBN 978-0-230-52619-8. Price £32.

www.statistics.gov.uk/products/p1904.asp

UK trade in goods analysed in terms of industry (MQ10)

2007 quarter 2

www.statistics.gov.uk/products/p731.asp

First releases

- Balance of payments
- Business investment
- GDP preliminary estimate
- Government deficit and debt under the Maastricht Treaty (six-monthly)
- International comparisons of productivity (six-monthly)
- Internet connectivity
- Investment by insurance companies, pension funds and trusts
- Productivity
- Profitability of UK companies
- Public sector employment
- Quarterly National Accounts
- UK output, income and expenditure

MONTHLY

Financial Statistics

October 2007. Palgrave Macmillan, ISBN 978-0-230-52593-1. Price £45.

www.statistics.gov.uk/products/p376.asp

Focus on Consumer Price Indices

September 2007

www.statistics.gov.uk/products/p867.asp

Monthly review of external trade statistics (MM24)

September2007

www.statistics.gov.uk/products/p613.asp

Producer Price Indices (MM22)

September 2007

www.statistics.gov.uk/products/p2208.asp

First releases

- Consumer price Indices
- Index of production
- Index of services
- Labour market statistics
- Labour market statistics: regional
- Producer prices
- Public sector finances
- Retail sales
- UK trade

OTHER

The ONS Productivity Handbook: a statistical overview and guide

Palgrave Macmillan, ISBN 978-0-230-57301-7. Price £55.

www.statistics.gov.uk/about/data/guides/productivity/default.asp

Labour Market Review

2006 edition. Palgrave Macmillan, ISBN 1-4039-9735-7. Price £40.

www.statistics.gov.uk/products/p4315.asp

National Accounts Concepts, Sources and Methods

www.statistics.gov.uk/products/p1144.asp

Sector classification guide (MA23)

www.statistics.gov.uk/products/p7163.asp

Recent articles

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Graeme Chamberlin, Tony Clayton and Shikeb Farooqui

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Leonidas Akritidis

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Mala Mistry

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James Scruton

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Hilary Mainwaring and Hugh Skipper

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Harry Duff

Measuring societal wellbeing
Paul Allin

Services producer price index (experimental) – second quarter 2007
Ian Richardson

Future articles

List is provisional and subject to change.

DECEMBER

UK research and development Satellite Account: preliminary methods and estimates

Volume of capital services: estimates for 1950 to 2006

Experimental quality-adjusted labour input measure, 1996 to 2006

Methodological changes to the Index of Production

Developments in measuring the UK service industries, 1990 to 2006

New LFS questions on economic activity