national STATISTICS

July 2001
No 572

Economic Trends

Managing Editor: Adèle Rowe
Editor: Paul Dickman

London: The Stationery Office

Contents

Introduction

Economic Trends brings together all the main economic indicators. It contains three regular sections of tables and charts illustrating trends in the UK economy.

'Economic Update' is a feature giving an overview of the latest economic statistics. The content and presentation will vary from month to month depending on topicality and coverage of the published statistics. The accompanying table on main economic indicators is wider in coverage than the table on selected monthly indicators appearing in previous editions of *Economic Trends*. Data included in this section may not be wholly consistent with other sections which will have gone to press earlier.

Articles on international economic indicators and the final expenditure prices index appear monthly and an article on regional economic indicators appears every February, May, August and November. Occasional articles comment on and analyse economic statistics and introduce new series, new analyses and new methodology.

Quarterly information on the national accounts and the balance of payments appears in *United Kingdom Economic Accounts* which is published every January, April, July and October by The Stationery Office.

The main section is based on information available to National Statistics on the date printed in note 1 below and shows the movements of the key economic indicators. The indicators appear in tabular form on left hand pages with corresponding charts on facing right hand pages. Colour has been used to aid interpretation in some of the charts, for example by creating a background grid on those charts drawn to a logarithmic scale. Index numbers in some tables and charts are given on a common base year for convenience of comparison.

Economic Trends is prepared monthly by National Statistics in collaboration with the Bank of England.

Notes on the tables

1. All data in the tables and accompanying charts is current, as far as possible, to 26 June 2001.

2. The four letter identification code at the top of each column of data is our own reference to this series of data on our database. Please quote the relevant code if you contact us requiring any further information about the data.

3. Some data, particularly for the latest time period, is provisional and may be subject to revisions in later issues.

4. The statistics relate mainly to the United Kingdom; where figures are for Great Britain only, this is shown on the table.

5. Almost all quarterly data are seasonally adjusted; those not seasonally adjusted are indicated by NSA.

6. Rounding may lead to inconsistencies between the sum of constituent parts and the total in some tables.

7. A line drawn across a column between two consecutive figures indicates that the figures above and below the line have been compiled on different bases and are not strictly comparable. In each case a footnote explains the difference.

8. 'Billion' denotes one thousand million.

9. There is no single correct definition of *money*. The most widely used aggregates are:

M0, the narrowest measure, consists of notes and coin in circulation outside the Bank of England and bankers' operational deposits at the Bank.

M4 comprises notes and coin in circulation with the public, together with all sterling deposits (including *certificates of deposit*) held with UK banks and building societies by the rest of the private sector.

The Bank of England also publish data for liquid assets outside M4.

10. Symbols used:

.. not available

- nil or less than half the final digit shown

+ alongside a heading indicates a series for which measures of variability are given in the table on page T79

† indicates that the data has been revised since the last edition; the period marked is the earliest in the table to have been revised

* average (or total) of five weeks.

Articles published in *Economic Trends*

Regular articles

Corporate services price index. Commentary and figures are published every March, June, September and December.

Final expenditure prices index. Commentary and figures are published monthly.

International economic indicators. Commentary, figures and charts are published monthly.

Regional economic indicators. Commentary, figures and charts are published every February, May, August and November.

United Kingdom national accounts and **balance of payments** quarterly figures are published in *United Kingdom Economic Accounts* every January, April, July and October.

Other articles

2000

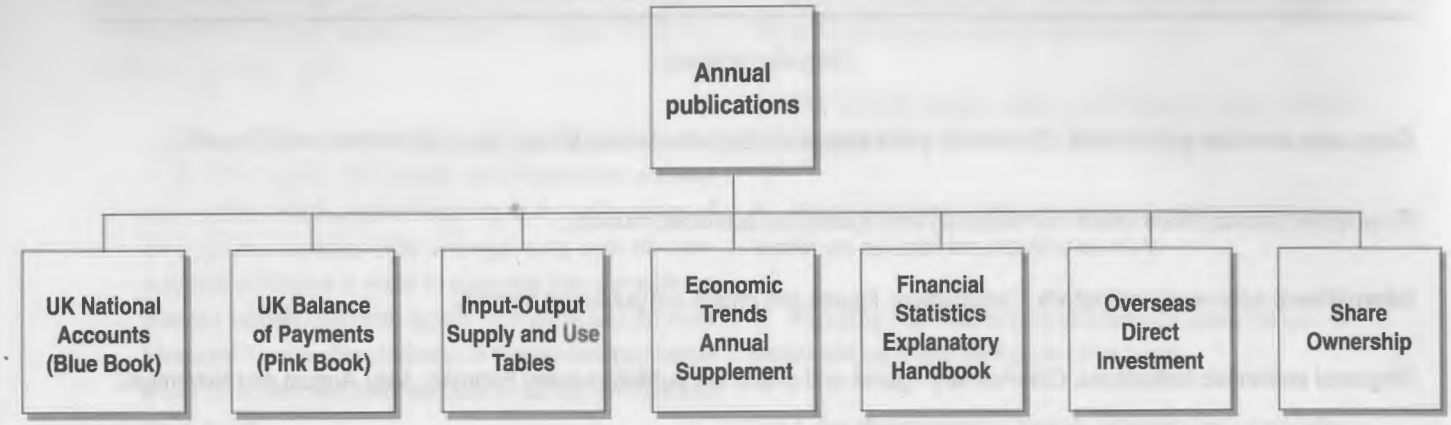
December	International comparisons of company profitability.
	Introducing the experimental monthly index of services.
	Geographical breakdown of income in the balance of payments.
	UK regional gross domestic product methodological guide.

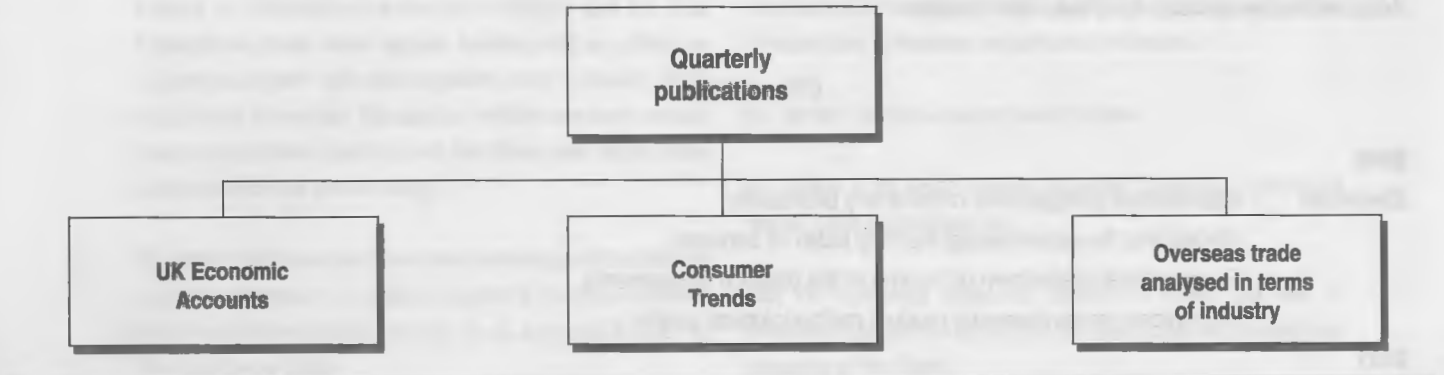
2001

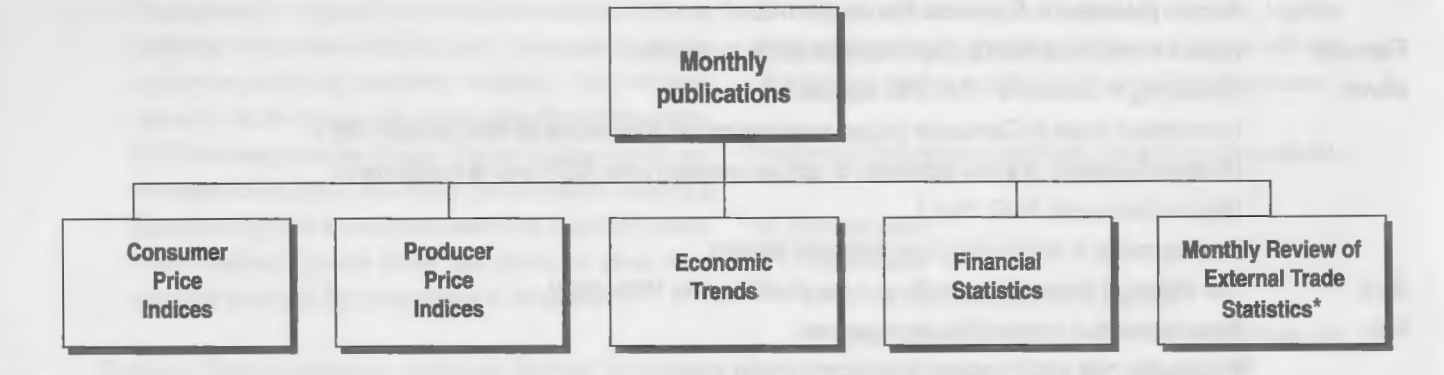
January	Commodity flow analysis in quarterly balancing of GDP.
	Articles published in Economic Trends 1991–2000.
February	Recent trends in dividends payments and share buy-backs.
March	Measuring e-commerce - the ONS approach.
	Harmonised index of Consumer prices: methodological improvements from January 2001
	Revisions analysis of initial estimates of annual constant price GDP and its components
	Regional accounts 1999: Part 1
	Developments in local area gross domestic product
April	The effects of taxes and benefits on household income 1999–2000
May	Developments in productivity management
	Introducing new and improved labour productivity data
	International comparisons of productivity
	Measuring the productivity in the provision of public services
	ONS plans for the 2001 and 2002 Blue and Pink Books
	Sub-regional and local area gross domestic product
June	Jobs in the public and private sectors
	Experimental monthly balance of payments
	Agricultural land prices statistics and indicators
	UK health accounts

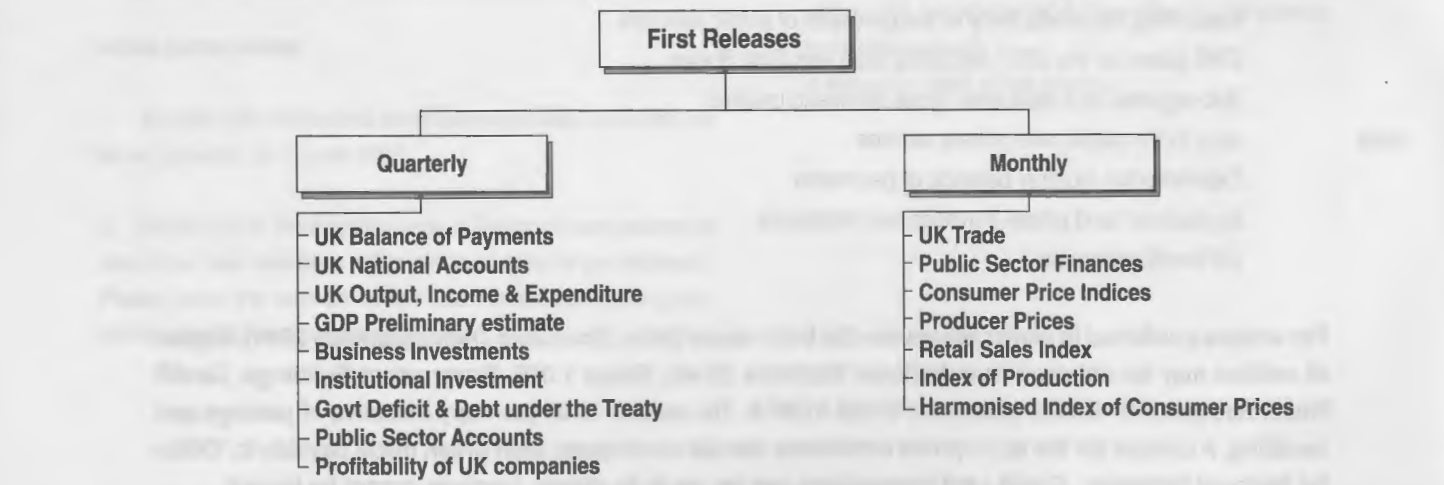
For articles published in earlier issues see the list in issue 566 of *Economic Trends* (January 2001). Copies of articles may be obtained from National Statistics Direct, Room 1.015, Government Buildings, Cardiff Road, Newport, NP10 8XG, telephone 01633 812078. The cost is £5.00 per copy inclusive of postage and handling. A cheque for the appropriate remittance should accompany each order, made payable to 'Office for National Statistics'. Credit card transactions can be made by phone; invoices cannot be issued.

United Kingdom Macro-Economic Statistics Publications









Other publications: *- Labour Market Trends - National Accounts Concepts, Sources and Methods - Sector Classification Guide for the National Accounts*

** Available in electronic format only from the National Statistics website www.statistics.gov.uk*

In Brief

Articles

Magdalen Williams of the ONS describes the E-commerce Inquiry to Business 2000. After summarising the likely effects of e-commerce, the article outlines the inquiry and summarises the results of the survey. These include the use of the Internet, web-sites, internet connections and sales/purchases by e-commerce with estimates of their values. Finally, a methodology note is also included that gives details of the sample design and data analysis.

Rocky Harris of the ONS discusses UK atmospheric emission and energy use accounts, 1990–1999. The main results show estimated emissions of greenhouse gases and acid rain precursors, also emissions/output, i.e. in relation to economic activity. Following this, the energy use accounts show estimates of the underlying use of fossil fuels by each industrial sector, together with their total energy consumption. An annexe defines the various atmospheric pollutants and environmental themes.

Prabhat Vaze of the ONS describes Information and Communication technology (ICT) Deflation and Growth. After a summary of the sensitivity analysis methodology, the introduction outlines the problems in estimating economic growth. Next, the article summarises the role of ICT in National income and explains the measurement of ICT prices for deflation. The results of sensitivity analysis using US ICT deflators are then discussed. Finally, some issues regarding software investment are considered and conclusions summarised.

Recent economic publications

Annual

Share Ownership: a report on the ownership of shares as at 31 December 2000. The Stationery Office, ISBN 0 11 621465 1. Price £39.50.

Quarterly

Consumer Trends: 2001 quarter 1. The Stationery Office, ISBN 0 11 621359 0. Price £45 (published 19th July).
UK Economic Accounts: 2001 quarter 1. The Stationery Office, ISBN 0 11 621401 5. Price £26.

Monthly

Consumer Price Indices (MM23): April 2001. The Stationery Office, ISBN 0 11 538041 1. Price £185 p.a.
Financial Statistics: June 2001. The Stationery Office, ISBN 0 11 621305 1. Price £23.50.
Monthly Review of External Trade Statistics (MM24): March 2001. The Stationery Office, ISBN 0 11 538095 7. Price £185 p.a.

All of these publications are available from The Stationery Office; telephone 0870 600 5522, fax 0870 600 5533, e-mail **bookorders@theso.co.uk** or online at **www.clicktso.com**

Economic Update - July 2001

by Geoff Tily, Macro-Economic Assessment - Office for National Statistics

Address: D4/20, 1 Drummond Gate, London, SW1V 2QQ Tel: 020 7533 5919, E-mail: geoff.tily@ONS.gov.uk

Overview

With ongoing concerns about the state of the world economy, UK GDP data shows economic growth weaker for the second quarter in a row. Driving the ongoing slower growth in the first quarter was a fall in the output of manufacturing industries, and in particular an apparently ongoing sharp fall in the output of the so-called high-tech industries. On the other hand services growth has only slowed modestly. Demand data shows a mixed but perhaps overall weakening picture. Household demand weakened over the last two quarters, although, as seen in retail sales, durable goods demand remains strong. The latest business investment figures now shows a decline into the first quarter after an acceleration at the end of 2000. At the same time, company profits are showing some slowdown in the wake of increased profit warnings, and relatively speaking their indebtedness remains high. First quarter trade remained reasonably robust, but trade figures have been subdued in the most recent months. The ongoing high trade deficit was offset by strong investment income in the first quarter. Labour market information continues to show increases to employment and decreases to unemployment, although some evidence of a slowdown in improvements to employment. While there were increases to consumer prices series, these might best be regarded as largely explained by erratic factors, with producer prices remaining low.

GDP Activity

GDP in the first quarter of 2001 showed quarterly growth of 0.5 per cent, a second consecutive quarter of weaker growth. Quarterly growth in the fourth quarter of 2000 was 0.4 per cent following 0.9 per cent in the second quarter. Comparing with the same quarter a year ago, annual growth was 2.7 per cent, up slightly on the previous quarter. While the previous quarter's weaker growth was driven by a decline of growth in the energy sector, the latest quarter's slowdown was dominated by a fall in the output of the manufacturing industries. The service sector in both quarters has been a little weaker than previous quarters, but still continues to grow at a brisk annual pace.

These figures measure UK output growth through a period of increasing concern and uncertainty over the state of the world economy, reflected most clearly in stock-market data.

Chart 1 shows how growth in the FTSE all-share index was subdued in 2000, declined fairly sharply in March 2001, and subsequently saw its decline arrested but recovered only a little into April and May. As noted, the slower GDP growth was driven by a fall of 0.7 per cent in the output of the manufacturing industries. This decline was dominated by a fall of 4.3 per cent in the previously high growing 'electrical and electronic engineering' industries. Later index of manufacturing data reveals that this decline continued into April, with other manufacturing industries also seeing a decline (of 0.4 per cent in the three months to April). Chart 2 shows the two series of index numbers, which, while on different scales, illustrates how the latest figures differ to the previous downturns in the IOM, in that it is the first time that these 'high-tech' industries have seen a substantive decline.

Chart 1
FTSE All-share index
10 April 1962=100

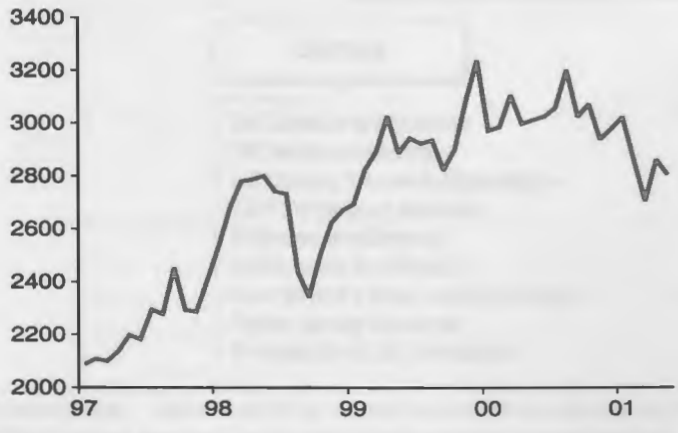
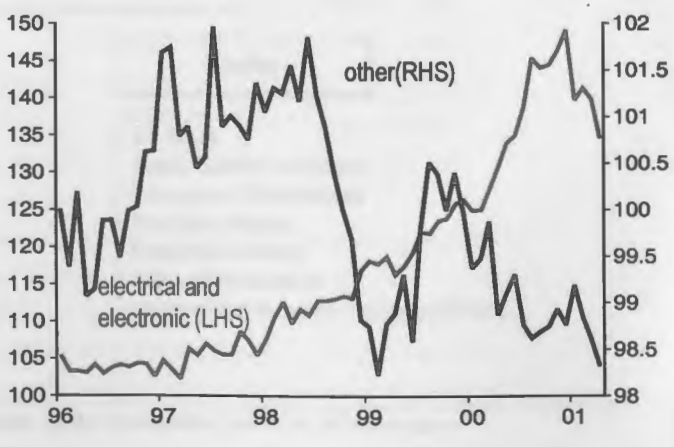
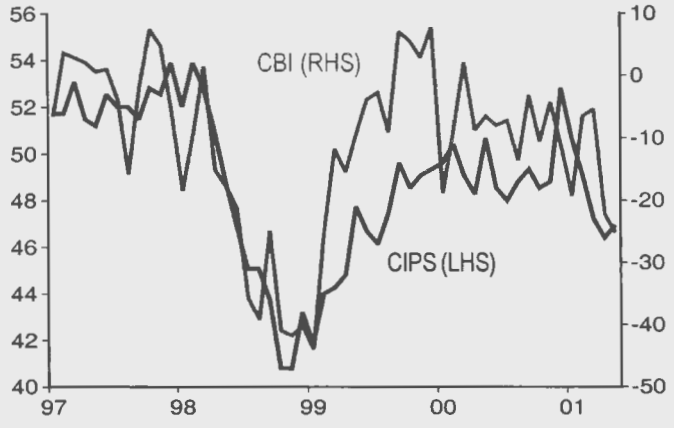


Chart 2
Indices of manufacturing
seasonally adjusted 1995=100, months



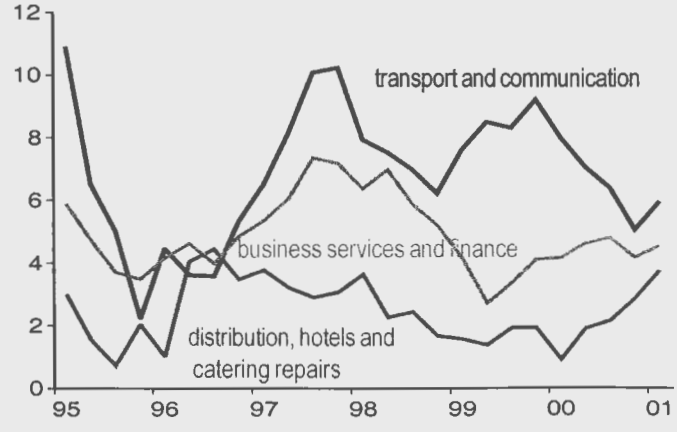
In chart 3, external figures also show a weakening in the manufacturing industry, with declines over recent months to both the CBI 'total order books' and the Chartered Institute of Purchasing and Supply's Purchasing Managers' Index. On the other hand, both series are not showing the sort of declines seen in 1998, although this may reflect the more localised nature of the most recent decline in the official figures.

Chart 3
Manufacturing



Quarterly growth in the service sector increased to 0.9 per cent in the first quarter of 2001 from 0.7 per cent the previous quarter, but a little below the 1.1 per cent in the third quarter of 2000. Annual rate growth in the service sector continues at a robust 3.7 per cent. Industry detail reveals ongoing robust growth in most areas, although recent quarters have perhaps seen some modest slowing of previously very high growth in 'transport, storage and communications' and 'business services and finance', set against a quickening of pace in the 'distribution, hotels and catering; repairs' sector (with the latter despite overall weak growth in the 'hotels and restaurants' sector).

Chart 4
Service industries
percentage change, quarter on quarter a year ago



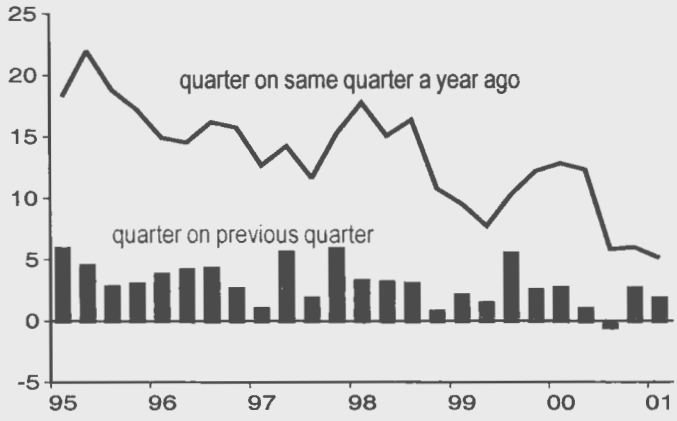
Broadly echoing official figures, both British Chamber of Commerce and CIPS showed services output robust in the first quarter, although the latter subsequently fell sharply into April and remained at the lower level in May.

Domestic demand

The household demand situation remains difficult to interpret. The main signal of slowdown remains National Accounts data, where quarterly growth has been 0.6 per cent in both the first quarter of 2001 and the last quarter of 2000, with growth comparing with the same quarter a year ago at 3.3 per cent. These figures contrast with retail sales data, where sales volumes grew by 1.6 per cent in the first quarter, and monthly figures into both April and May showing a latest estimate of quarterly growth remaining at the same pace. While the difference between the two sources can largely be explained by weaker services consumption in the fourth quarter, and weakness to a number of non-durables, in particular energy, in the first quarter, overall differences continue to mean that it remains difficult to assess the overall degree of household demand.

Very broadly, non-NS figures tend to suggest ongoing high household demand. Gross consumer credit data from the Bank of England (chart 5) showed some slowdown in the third quarter of 2000, but a subsequent acceleration into the latest two quarters. Consumer confidence data was sending somewhat contrasting messages with GfK increasing and MORI weakening, but May figures show both series strong.

Chart 5
Gross consumer credit
seasonally adjusted perentage change



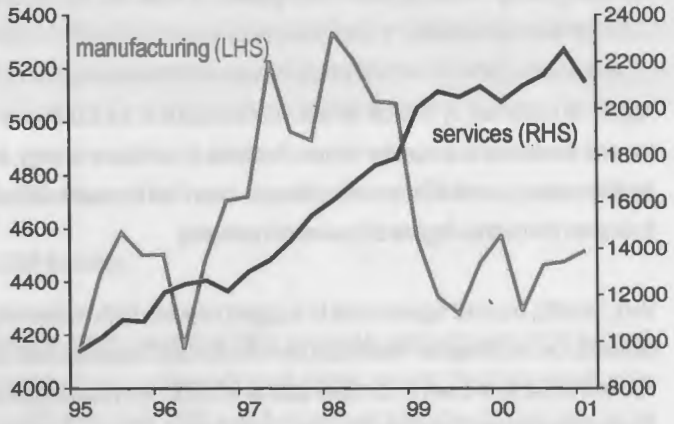
Lastly external retailing data from the CBI show retailing volumes and expectations remaining high and the British Retail Consortium figures showing a marked acceleration throughout 2001.

The medium term strength of consumer demand relative to income has led to a decline in the saving ratio over the past three years. Data for the first quarter of 2001 shows a ratio of 4.1 per cent down from 5.4 per cent

in the previous quarter, the fall and ongoing lower level coming despite some slowdown to consumption expenditure.

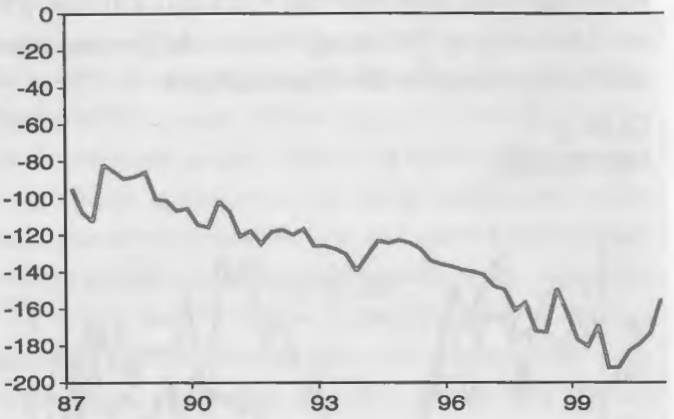
Turning to investment demand, National Accounts data now shows business investment declining by 5.0 per cent into the first quarter of 2001, following growth of 4.2 per cent in the fourth quarter. Chart 6 shows the trends in both services and manufacturing investment, with the latest data perhaps, at this stage, best interpreted as suggesting some levelling out of growth in both sectors.

Chart 6
Business investment
seasonally adjusted £ million



Alongside this potential slowdown in investment, the financial position of the corporate sector has been improving in the most recent quarters, although this improvement may have been partly driven by 'special' factors and overall indebtedness remains relatively high. Annual figures show the net borrowing of the private non-financial corporation sector was £9.6 billion in 2000 compared with £19.1 billion in 1999, and recovered further to modest net lending of £0.6 billion in 2001 quarter one. Very generally, this recovery has come as companies saw some recovery to profit growth, sharply reduced payments of dividends and much slower growth in investment expenditure. The profit growth partly underpinning this recovery has been dominated by the strong profits in the oil industry due to the present high price of oil. The trend in the latest data excluding such profits, in particular if the NS alignment adjustment is excluded, may be suggesting that profit growth has again slowed to around zero. However the recovery to the net borrowing of the corporate sector should be set against the ongoing high level of net liabilities as measured on PNFCs' balance sheet. Chart 7 shows that, despite some recent recovery, the PNFC sector has net liabilities of around one and a half times annual GDP, compared to net liabilities of around the level of GDP towards the end of the 1980s.

Chart 5
PNFCs' net assets / liabilities
% of GDP

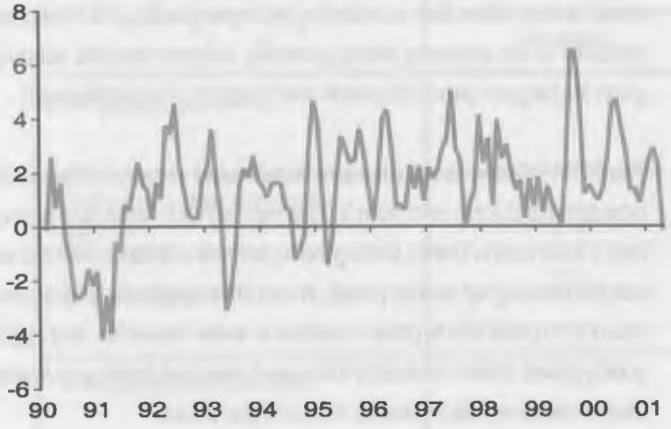


Government demand saw quarterly growth of 0.8 per cent into the first quarter, following a small fall of 0.4 per cent in the fourth quarter. Comparing with the first quarter of 2000, the latest estimate of annual growth remains a fairly robust 2.7 per cent. Higher growth in government expenditure over the last two years comes alongside an ongoing improvement of government finances. Public sector net borrowing figures show that there was a surplus of £15.9 billion in 2000-2001, and that figures to May show borrowing in 2001-02 on a similar path to 2000-01. The improvement in overall finances is due to the continued growth in tax revenues, which have more than accounted for the ongoing expenditure growth.

Finally on domestic demand, import growth remained strong overall in Q1, but the monthly figures, which now extend into quarter two as well, currently suggest imports may have peaked and are now declining. Index number data shows imports to EU economies have been declining since January 2001, although continued to exhibit growth of 1.1 per cent in the three months to April (the latest month), due to the more subdued figures in 2000. Import figures from non-EU economies also suggest a peak in January, with declines in each month to May, here growth in the three months to May was a decline of 1.5 per cent.

Chart 9 puts the quarterly decline to April into context of a run of data since the start of the 1990s. This shows the growth really falling back to the levels seen prior to the period of strong import growth from the second half of 1999, as concerns in the wake of South East Asia and the Russian debt crises were put aside.

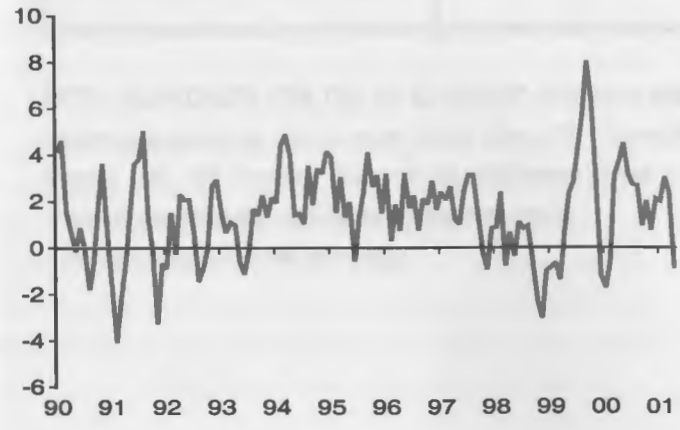
Chart 8
Import volumes
growth, three months on previous three months



Overseas demand

Export data in the first quarter of 2001 saw quarterly growth of 1.4 per cent, reflecting some degree of slowdown over the fourth quarter of 2000, where growth was 2.3 per cent. The data now available extending into the second quarter shows the slowdown continuing. Monthly index number figures currently suggest that exports to EU economies may have peaked in January, and fell back in each of the months to April (growth in the three months to April was a decline of 0.2 per cent). At the same time exports to non-EU countries currently appear to have peaked in February, falling back sharply in March and April, with a slight recovery in May (growth in the three months to May was a decline of 2 per cent). This decline has been driven by the trends in exports to America, which exhibit the same pattern. Chart 9 puts the latest quarterly growth into May in a longer run perspective, here the decline again appears to reflect a slowing down of the acceleration in exports seen since the second half of 1999

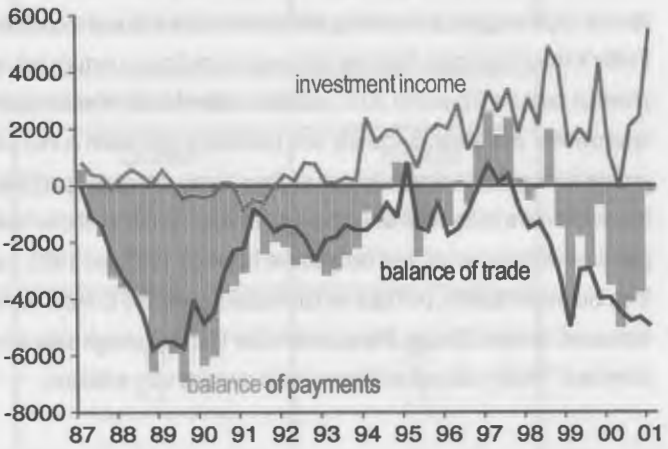
Chart 9
Export volumes
growth, three months on previous three months



Thus trade data appears to reflect perceptions of concern over the state of the global economy, with overall UK trade slowing as the economy moved into the second quarter of 2001

Lastly on trade, the overall movements of imports and exports into the first quarter were such that the balance of trade continued to widen, and apart from the first quarter 1999, at £5.0 billion, was at its worse level since figures seen at the end of the 1980s. However the first quarter also saw a large surplus of £5.6 billion on investment income, due firstly to UK companies receiving net settlement receipts of £2.3 billion on interest rate swaps, and secondly to weaker foreign countries' earnings on direct investment in the UK. This surplus led to the balance of payments deficit recovering from £3.7 billion in the fourth quarter of 2000 to £0.2 billion in the first quarter of 2001.

Chart 11
Balance of payments
seasonally adjusted £ million



Labour Market

The labour market data continues to show employment increasing and unemployment falling, with little evidence of change to the rate of improvement in unemployment figures, but employment data overall probably showing slowing growth.

The ILO measure of unemployment shows the rate falling to 5.0 per cent in February -April 2001 from 5.2 per cent in November 2000 -Jan 2000. The claimant count data the employment rate was 3.2 per cent in May and April 2001, having fallen from 3.3 per cent in the first three months of the year. The latter figure is the lowest rate since the third quarter of 1975.

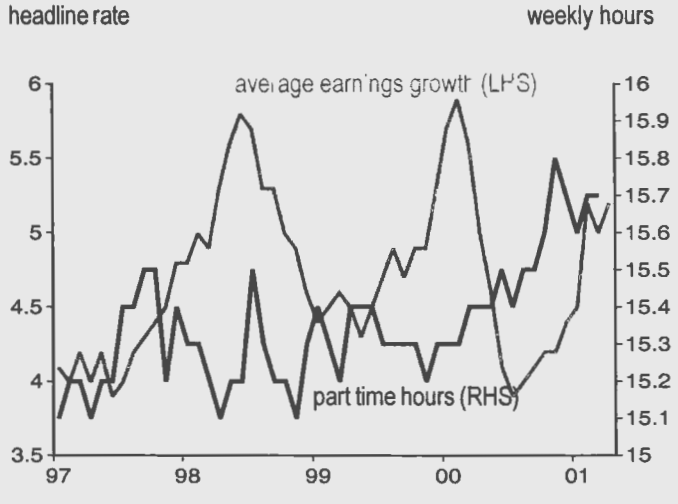
The most prominent slowdown is seen in the workforce jobs employer survey data, where annual growth into the first quarter of 2001 was only 0.4 per cent (comparing with the same quarter a year ago), the same as annual growth in the previous quarter, and only little above 0.3 per cent

in the third quarter. Taken together, these annual rates constitute the lowest period of growth seen since the economy emerged from recession in 1993. The same figures show growth flat between the fourth quarter of 2000 and the first quarter of 2001. The LFS figures record higher growth of 0.9 per cent in the year to February–April 2001, and quarterly growth of 0.2 per cent, down from growth of 0.4 per cent between the previous three month periods (November 2000-January 2001 and August-October 2000).

Any incongruence between stronger falls in unemployment than increases in employment is rectified by noting that there has also been a sharp increase of 180,000 individuals who are recorded by the LFS as inactive, and who have said they do not want a job.

Some are now seeing concerns in the earnings data, with the headline rate at 5.2 per cent in April 2001, up from 5.0 per cent in March, and from a low point of 3.9 per cent in July 2000. The acceleration is seen in both the manufacturing and services sectors, and does not reflect bonus payments as the data excluding bonuses shows the same acceleration. Three factors might suggest interpreting this acceleration with some caution. Firstly it should be noted that overall the earnings figures remain below previous peaks at the end of 2000 and the middle of 1998, at which point employment was lower. Secondly, one possible explanation is that the acceleration reflects increased pay for the sharply increased part time hours that have been seen since the start of 2000. Chart 11 shows how part time workers' hours was fairly stable between 1997 and 1999, but then increased quickly, perhaps as businesses preferred to meet some increased demand through this source rather than all through extra employment. Thirdly external settlement data remains very subdued.

Chart 11
Earnings and part time hours



Prices

A number of inflation measures accelerated fairly sharply in April and May, however the increases can plausibly be mostly explained as due to erratic factors, rather than as reflecting an ongoing build-up of inflationary pressure in the economy. More generally, inflation remains subdued given the long run period of growth and low rates of unemployment.

The RPIX inflation target measure accelerated sharply in May 2001, increasing to 2.4 per cent from 2.0 per cent in April, which was also up from 1.9 per cent in March. Driving the higher rate of inflation over the two months were higher service prices, in turn driven particularly by a turnaround from price falls to price increases in water industries, and higher goods prices, driven by sharply increased seasonal foods and vegetables prices as well as increases in oil and gas prices.

A further reason for less concern about consumer price figures may be the producer prices figures. Here underlying producer prices (excluding food, beverages, tobacco and petroleum) show both output and input prices slowing from a recent peak in the third quarter of 2000. From this peak to May 2001, output prices decelerated from 1.1 per cent to 0.2 per cent, and input prices from 4.4 to 2.2 per cent. Examining monthly index numbers, suggests that inflation growth in both underlying input and output prices is likely to remain subdued, with recent movements appearing fairly flat.

Overall then, while some inflationary concerns are seen, a large share of recent accelerations can be plausibly explained as due to more erratic factors.

Forecasts for the UK Economy

A comparison of independent forecasts, June 2001

The tables below are extracted from HM Treasury's "FORECASTS FOR THE UK ECONOMY" and summarise the average and range of independent forecasts for 2001 and 2002, updated monthly.

	Independent Forecasts for 2001		
	Average	Lowest	Highest
GDP growth (per cent)	2.3	1.6	2.9
Inflation rate (Q4: per cent)			
- RPI	1.7	0.9	2.7
- RPI excl MIPs	2.0	1.3	2.7
Unemployment (Q4, mn)	1.00	0.89	1.10
Current Account (£ bn)	-19.7	-31.0	-14.1
PSNB *(2001-02, £ bn)	-8.4	-28.8	0.9

	Independent Forecasts for 2002		
	Average	Lowest	Highest
GDP growth (per cent)	2.6	0.4	3.3
Inflation rate (Q4: per cent)			
- RPI	2.5	1.1	3.9
- RPI excl MIPs	2.3	1.4	3.4
Unemployment (Q4, mn)	1.03	0.75	1.18
Current Account (£ bn)	-20.7	-39.3	-9.8
PSNB* (2002-03, £ bn)	-3.3	-29.1	10.0

NOTE: "FORECASTS FOR THE UK ECONOMY" gives more detailed forecasts, covering 27 variables and is published monthly by HM Treasury, available on annual subscription, price £75. Subscription enquiries should be addressed to Miss C T Coast-Smith, Public Enquiry Unit, HM Treasury, Room 110/2, Parliament Street, London SW1P 3AG (Tel: 0171-270 4558). It is also available at the Treasury's internet site: http://www.hm-treasury.gov.uk.

* PSNB: Public Sector Net Borrowing.

International Economic Indicators - June 2001

Cedrik Schurich, Macro-Economic Assessment - National Statistics

Address: D4/20, 1 Drummond Gate, London, SW1V 2QQ Tel: 020 7533 5923 E-mail: cedrik.schurich@ONS.gov.uk

Overview

EU15 GDP growth slowed a little in the last two quarters of 2000, largely driven by a slowdown in the contribution of consumption and investment. However, growth in the labour market remained reasonably robust but prices remained subdued. Within the EU, German GDP slowed quite substantially since 2000 quarter three but employment growth remained strong. French GDP growth also slowed significantly in 2001 quarter one, alongside earlier signals of weakness in industrial production. In contrast, Italian GDP growth remained overall strong and there were no signs of a slowdown in industrial production. US GDP growth remained low in 2001 quarter one while unemployment increased strongly. In Japan, GDP growth rebounded but industrial production showed signs of renewed weakness. Employment growth did not respond to the pick up in GDP growth and deflation continued.

EU15

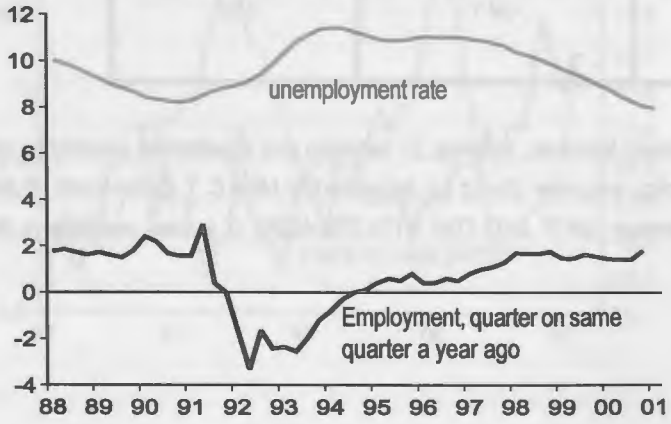
Quarterly GDP growth slowed to 0.6 per cent in both 2000 quarter four and 2000 quarter three, down from a recent peak of 1.1 per cent in 1999 quarter three. Notwithstanding this slowdown in recent quarters, annual GDP growth in 2000 grew by a vigorous 3.4 per cent, up from 2.6 per cent in 1999.

The recent slowdown in GDP growth came mainly from falling contributions of consumption and investment. The contribution of consumption was 0.2 per cent and 0.3 per cent in the last two quarters of 2000, down from more robust contributions of 0.5 per cent in previous quarters. Echoing this slowdown, quarterly retail sales growth was zero in 2000 quarter four, after having fallen by 0.3 per cent in the previous quarter. Hopes that 2001 quarter one might be a better quarter for retail sales were dented by zero growth in February 2001, suggesting that the vigorous pick up of 1.8 per cent in January 2001 might have been no more than a blip. The contribution of investment was 0.1 per cent and 0.2 per cent in the last two quarters of 2000, down from more robust contributions of around 0.3 per cent in previous quarters.

Chart 1

EU15 - Employment growth and unemployment rate

seasonally adjusted percentage changes, quarters



In line with GDP, quarterly industrial production growth slowed in recent quarters, from peak quarterly growth of 1.9 per cent in 2000 quarter two to 0.4 per cent in 2001 quarter one. Latest data was not reassuring, with a fall of 0.9 per cent in March 2001. Within the quarter, the fall in March was particularly strong.

Despite the recent slowdown in GDP, annual employment growth was 1.8 per cent in 2000 quarter four, up from 1.4 per cent in the previous quarter (chart 1). Employment has been growing quite firmly in recent years, lowering the unemployment rate from a peak of 11.2 per cent in 1994 quarter two to 7.8 per cent in 2001 quarter one.

Perhaps reflecting sustained improvements to employment, annual earnings growth rose to 3.5 per cent in 2000, up from 3.0 per cent in 1999 and 2.5 per cent in 1998. Quarterly annual earnings growth remained at 3.5 per cent in 2000 quarter four, the same rate as in the previous quarter.

Despite continued growth in employment and earnings, annual inflation moderated slightly in 2001 quarter one. Annual consumer price inflation was 2.7 per cent in 2001 quarter one, slightly lower than in the previous quarter, while annual producer price inflation slowed more substantially, from 5.1 per cent in 2000 quarter four to 3.3 per cent in 2001 quarter one. Over the last two years, however, consumer and producer price inflation has been increasingly driven by higher oil prices. The more recent fall in oil prices at the end of 2000 is picked up by the monthly producer price data (though not the consumer price data), which decreased from a peak rate of 5.6 per cent in October 2000 to 2.8 per cent in April 2001.

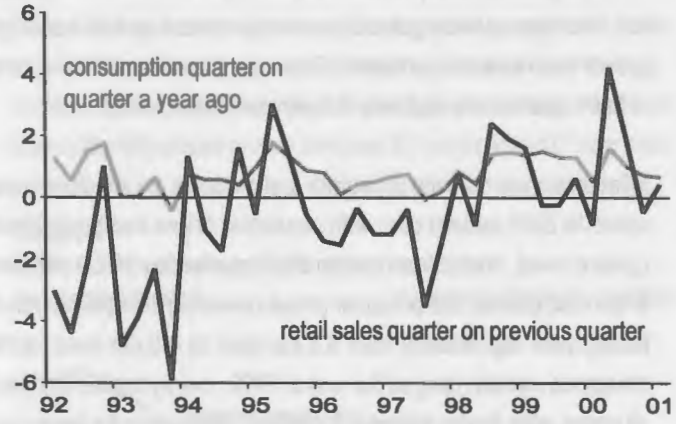
Germany

After having slowed quite substantially in 2000 quarter three and four, quarterly GDP growth picked up only a little in 2001 quarter one, growing by 0.4 per cent. This is much lower than the peak growth of 1.2 per cent seen in 2000 quarter two.

Continued weak GDP growth in 2001 quarter one came from zero growth in the contribution of consumption (for the second consecutive quarter) and a large negative contribution from investment of 0.5 per cent. The zero contribution from consumption contrasts with the pick up in retail sales, from minus 1.1 per cent in 2000 quarter four to 0.6 per cent in 2001 quarter one. The contribution from exports fell by 0.3 per cent but the net contribution from trade was however positive as imports fell by 1.2 per cent.

Despite being volatile, the contribution of consumption has been rather robust in the last three years, in contrast to the last three quarters. This is at odds with the retail sales series which, while volatile, has shown a more subdued picture (chart 2). The contribution of investment has been similar to that of consumption in the last three years: volatile but overall robust, again in contrast to the last two quarters.

Chart 2
Germany - household consumption and retail sales
seasonally adjusted percentage changes, quarters



Industrial production figures were more difficult to interpret. Quarterly growth in production recovered by 1.8 per cent in the first quarter of 2001 following a decline of 0.5 per cent in the previous quarter. However, it then fell by a sharp 2.7 per cent in April. This suggests that industrial production might be heading for a slowdown, which would be in line with recent GDP trends.

Despite the slowdown in GDP in 2000 quarter three and four, employment growth remained strong. As a result, unemployment continued to decline, to 7.7 per cent in 2000 quarter four and 2001 quarter one, after having peaked at 10.0 per cent in 1997 quarter four.

Quarterly annual earnings growth moderated somewhat, from 3.3 per cent in 2000 quarter three to 2.4 per cent in 2000 quarter four. The slowdown in 2000 quarter four halts a period of expansion in earnings growth, from 1998 quarter one, when it was only 1.3 per cent, to 2000 quarter three.

Perhaps reflecting stronger GDP growth in 1999 and certainly rising oil prices in that period, annual consumer and producer price inflation increased strongly in 2000 (though from a very low rate) compared to 1999: from 0.6 per cent to 1.9 per cent for consumer prices and minus 1.0 per cent to 3.4 per cent for producer prices. Quarterly annual growth in 2001 quarter one was pretty much unchanged compared to the previous quarter, at 2.5 per cent for consumer price inflation and 4.8 per cent for producer price inflation.

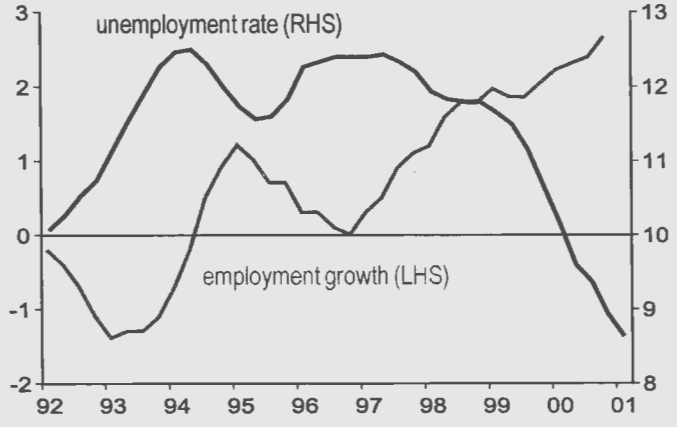
France

In the first quarter of 2001, the French economy may have caught up with the general slowdown in the world economy. After three years of vigorous expansion, quarterly GDP growth in 2001 quarter one slowed to 0.5 per cent, down from 0.8 per cent in the previous two quarters.

The 2001 quarter one slowdown was dominated by declines in the contribution of investment and sharp destocking. Investment growth made the weakest contribution to GDP growth since 1997 quarter one. The contribution of consumption, however, picked up strongly, relative to the lower figures in previous quarters. Strong quarterly retail sales growth of 3.4 per cent echoed this movement in consumption in 2001 quarter one, following very robust growth in January. But retail sales fell by 4.6 per cent in April. As with Germany, French GDP in the first quarter of 2001 was also supported by a substantial fall in import growth. France's trade balance has been rather weak and often negative in recent years.

Growth in quarterly industrial production remained weak in 2001 quarter one, at 0.5 per cent, only slightly higher than the 0.3 per cent growth recorded in the previous quarter. Growth has been weak since 2000 quarter one, except in 2000 quarter three, which recorded growth of 1.4 per cent.

Chart 3
France - Employment growth and unemployment
seasonally adjusted percentage changes, quarters



The robust expansion in GDP since 1997 was accompanied by strong growth in employment. Employment grew strongly by an annual rate of 2.7 per cent in 2000 quarter four (chart 3), the highest rate for a number of decades. The latest figures showed no signs of slackening. As a result, unemployment, although it remains high, has been continuously falling in recent years, from it's a peak of 12.5 per cent in 1994 quarter two to 8.6 per cent in 2001 quarter one. Earnings growth picked up strongly from 2.5 per cent in1999 to 5.2 per cent in 2000. At the same time, both consumer and producer price inflation recorded higher rates in 2000 compared with 1999. As with other EU economies, inflation in France has been falling in much of the 1990s.

Italy

Unlike other EU economies, data shows Italian GDP growth accelerating, at least to 2000 quarter four. GDP growth (chart 4) has been quite strong and increasing since 1999 quarter one, except for some weakness in the first two quarters of 2000. Annual growth in 2000 quarter four was 2.6 per cent, slightly down on the 2.8 per cent recorded in the previous quarter. Overall, growth in 2000 was significantly up on 1999, 2.9 per cent compared with 1.6 per cent.

Chart 4
Italy - GDP growth
seasonally adjusted percentage changes, quarters

The main reason for the stronger growth between 2000 quarter three and four was a recovery in stockbuilding, which fell strongly in quarter three, buy 1.3 per cent. The contributions of consumption, government and investment where all very subdued, with growth largely driven by exports. While overall the contribution to GDP growth by consumption increased from 1.4 per cent in 1999 to 1.8 per cent in 2000, this was not reflected in retail sales, which fell by 0.6 per cent in 2000, down from 1.1 per cent. The weaker consumption fiugre in the first quarter of 2001 may, however, be more in line.

In line with GDP, growth in quarterly industrial production has been strong since 1999 quarter two, except in 2000 quarter three, when production increased by only 0.1 per cent. But in 2000 quarter four, growth returned to 1.2 per cent.

Sustained GDP growth has equally led to a quite significant acceleration in annual employment growth since 2000 quarter two, reaching 2.8 per cent in quarter four, up from a period in early 1998 characterised by rates of about 1.2 per cent.

However, despite relatively strong growth in annual employment in recent years, the fall in unemployment has been more modest, from 11.8 per cent in 1998 quarter one to 10.0 per cent in 2000 quarter four. Perhaps reflecting this high unemployment, annual earnings growth has remained subdued. Earnings growth was 2.0 per cent in 2001 quarter one and only 1.6 per cent in April 2001.

Inflation signals from the consumer and producer price indices were mixed in 2001 quarter one, with consumer prices continuing their upward trend, from 2.6 per cent in 2000 quarter four to 2.9 per cent in the next quarter, but producer prices reversing the upward trend, falling quite significantly from 6.5 per cent to 4.9 per cent. Both measures started rising at the end of 1999, mainly fuelled by rising oil prices, after having followed a declining trend since the beginning of the 1990s, in line with other EU economies.

USA

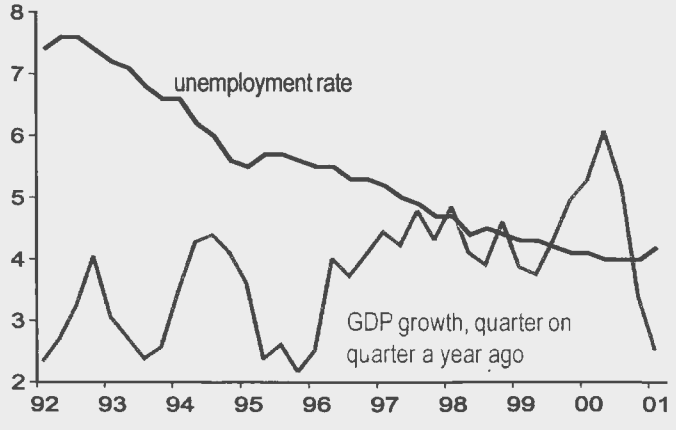
The US continues to provide the greatest concerns over the global economy, with growth apparently now well below rates seen in the expansion over the last five years. Quarterly growth slowed sharply in 2000 quarter three, falling to 0.5 per cent, down from 1.4 per cent in 2000 quarter two. It then further fell to 0.3 per cent in 2000 quarter four and 2001 quarter one.

The slowdown in GDP growth has come from a number of sources. The contribution of consumption has fallen, but only moderately so. The fall in the contribution from investment has been sharper but, perhaps surprisingly, has picked up in 2001 quarter one to 0.4 per cent. At the same time, the slack seems to have been taken up by a sharp increase in government consumption, where the contribution was up to 0.7 per cent, from zero growth in the previous quarter, the highest contribution since 1966 quarter two. On top of that, and as with Germany and France, the trade balance made a 0.3 per cent contribution to GDP growth in 2001 quarter one. As a result, low GDP growth in 2001 quarter one came from a large fall in the contribution of stock building, which fell by 0.8 per cent. This would lend some support to the proposition that the current downturn in the US represents some form of inventory adjustment.

On the other hand, the decline in quarterly industrial production has been unambiguous, with growth declining from 0.9 per cent in 2000 quarter three, to a fall of 0.2 per cent in 2000 quarter four and a fall of 1.7 per cent in 2001 quarter one. This represents the first period of declining industrial production since 1991 quarter one. On a monthly basis, industrial production has declined in every month since October 2000.

At the same time, the GDP slowdown has led to a significant weakening of the labour market (chart 5). Annual employment growth has continued to slow down in 2001 quarter one, increasing by only 0.7 per cent compared with 1.0 per cent in 2000 quarter four. Until 2000 quarter two, annual employment growth had been significantly above 1 per cent in most quarters in recent years. Monthly figures in April and May showed growth coming to a virtual standstill, with annual growth of minus 0.1 per cent and 0.1 per cent

Chart 5
USA - GDP growth and unemployment rate
seasonally adjusted percentage changes, quarters



respectively. Reflecting this slowdown in employment growth, unemployment picked up to 4.2 per cent in 2001 quarter one, after a long period of falling unemployment and the rate stabilising at 4.0 per cent in each quarter of 2000. In April 2001, unemployment increased by 0.2 percentage points to 4.5 per cent but then fell back a little to 4.4 per cent in May. More generally, considering the low rate of unemployment, earnings growth has remained quite subdued. The recent increases to unemployment may have contributed to the quite significant slowdown in earnings growth in the first quarter of 2001, to 2.6 per cent, compared with 3.5 per cent in the previous quarter. That said, May 2001 data showed a pick up in earnings.

There has been some indication from consumer and producer price index data of a fall in already low inflation. While annual consumer prices remained flat at slightly above 3.0 per cent, producer prices fell from 3.4 per cent in 2000 quarter four to 2.1 per cent in 2001 quarter one. This perhaps reflects low earnings growth as well as lower oil prices.

Japan

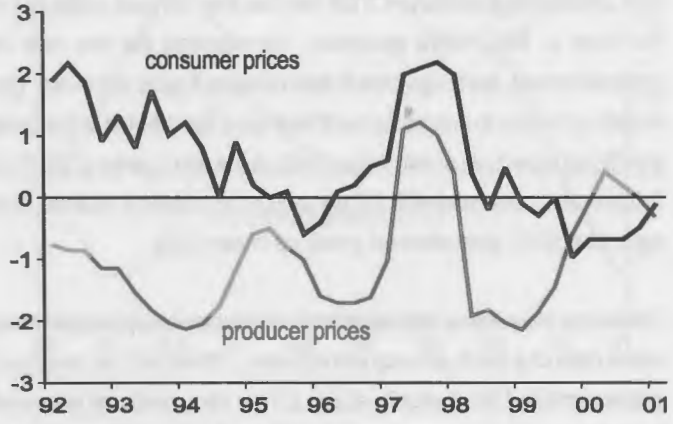
Quarterly GDP growth in 2000 quarter four was 0.8 per cent, a strong rebound from the 0.6 per cent fall in the previous quarter. However, this movement might be interpreted as merely a continuation of the overall weak and volatile growth since growth in the Japanese economy resumed in 1999.

Given this volatility and weakness, it is quite difficult to make useful comment on short-term quarterly movements in the components of demand. General trends, however, have been for a subdued and possibly deteriorating contribution from consumption, a fairly steady positive contribution from government and volatile but overall weak investment. In 2000 exports supported GDP, but these weakened substantially over the second half of the year. More specifically, in 2000 quarter four investment held up, but this may be a one off.

Broadly, quarterly growth in industrial production had recovered strongly since 1999 quarter three but has shown signs of renewed weakness in the latest periods; quarterly growth in production slowed sharply to 0.3 per cent in 2000 quarter four and then fell by 3.1 per cent in 2001 quarter one. This deterioration continued with a further fall of 1.7 per cent in April, overall suggesting that GDP growth in 2001 quarter one might be weak.

Annual employment growth has hardly responded to the pick up in GDP growth over the last two years, remaining mostly negative or zero. More recently in 2001 quarter one, quarterly employment growth fell by 1.8 per cent. As a result, unemployment remained

Chart 6
Japan - producer and consumer price inflation
seasonally adjusted percentage changes, quarters
quarter on quarter a year ago



unchanged at 4.7 per cent in both 1999 and 2000 as a whole, with little information in the quarterly figures.

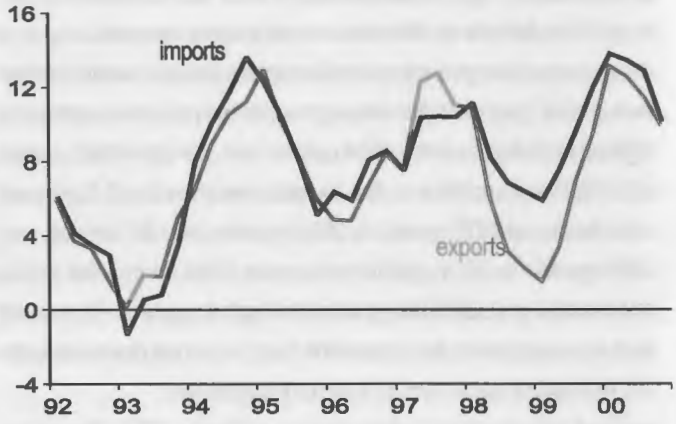
Despite no improvements to unemployment, but in line with rises in GDP and employment, earnings growth picked up in 2000 to 1.7 per cent, after having been falling in the two previous years, by 0.7 per cent and 0.8 per cent respectively. This contrasts with consumer and producer prices having continued to fall in 2000 (chart 6). Japan has suffered from consumer and producer price deflation since mid-1998. This dfeflation has occurred in Japan despite rising oil prices and the slight recovery in earnings growth.

World Trade

Echoing the national figures, world trade data showed signs of some slowdown in the global economy. OECD exports and imports of goods, which include both manufactures and raw materials, slowed significantly in the last quarter of 2000. Quarterly exports of goods slowed to 1.3 per cent, from 2.7 per cent in the preceding quarter, while quarterly imports of goods slowed to 1.1 per cent in 2000 quarter four, from 2.8 per cent in the preceding quarter. This slowdown in OECD trade comes after a strong period of expansion since 1999 quarter two. As a result, annual growth in OECD exports and imports of goods in 2000 remain very high, at 11.8 per cent and 12.5 per cent respectively (chart 7 shows OECD trade in goods, quarter on same quarter a year ago). Trade of non-OECD countries was also very robust in 1999 and 2000, after a poor performance in 1998, in the wake of the financial crisis in south-east Asia, and has shown no sign of weakening in the latest period.

Trends in exports and imports of manufactures (which exclude raw materials) were very similar to trends in goods trade; OECD quarterly exports growth fell to 1.5 per cent in 2000 quarter four, down from

Chart 7
OECD exports and imports of goods
seasonally adjusted percentage changes, quarters
quarter on quarter a year ago



2.7 per cent in the previous quarter, while the equivalent figures for imports were 1.4 per cent and 3.1 per cent. Manufactures trade for non-OECD countries was similar to trends observed for goods trade.

In general, the slowdown in trade for both OECD and non-OECD countries in 2000 quarter four is likely to reflect the slowdown of the US economy, subdued growth in Japan and signs of a slowdown in Europe.

Notes

The series presented here are taken from the OECD's Main Economic Indicators and are shown for each of the G7 (except the UK) economies and for the European Union (EU15) countries in aggregate. The definitions and methodologies used conform to SNA 68 and SNA 93.

Comparisons of indicators over the same period should be treated with caution, as the length and timing of the economic cycles varies across countries.

For world trade, goods includes manufactures, along with food, beverages and tobacco, basic materials and fuels.

Data for France, Germany, Italy, the USA and Japan has been updated to SNA93 basis, EU 15 tables are only available on an SNA68 basis. The two bases are not directly comparable meaning that cross-country comparisons with countries on different bases are less valid. All the European data is likely to be put on the SNA93 basis in OECD data very soon.

1 European Union 15

	Contribution to change in GDP													
	GDP	PFC	GFC	GFCF	ChgStk[1]	Exports	less Imports	IoP	Sales	CPI	PPI	Earnings	Empl	Unempl
Percentage change on a year earlier														
	ILGB	HUDS	HUDT	HUDU	HUDV	HUDW	HUDX	ILGV	ILHP	HYAB	ILAI	ILAR	ILIJ	GADR
1995	2.4	1.1	0.2	0.6	0.2	2.3	2.0	3.6	–0.3	3.1	4.5	3.4	0.6	10.7
1996	1.7	1.1	0.3	0.4	–0.5	1.4	1.2	0.6	0.6	2.5	0.7	3.8	0.5	10.8
1997	2.6	1.3	0.1	0.7	0.2	3.1	2.7	3.9	1.5	2.0	0.9	3.1	1.0	10.6
1998	2.8	1.9	0.2	1.2	0.4	2.0	2.9	3.7	2.9	1.8	–0.4	2.6	1.8	9.9
1999	2.6	1.9	0.4	1.1	–0.2	1.6	2.2	1.8	2.0	1.2	–	3.0	1.5	9.2
2000	3.4	1.7	0.4	1.0	–	4.0	3.6	4.6	2.1	2.5	4.8	3.5	1.5	8.2
1998 Q1	3.6	1.9	0.2	1.4	0.6	3.4	3.8	5.7	2.6	1.8	0.7	2.9	1.7	10.2
Q2	2.9	1.8	0.2	1.1	0.5	2.5	3.2	4.7	2.6	2.2	0.2	2.8	1.7	10.0
Q3	2.7	2.1	0.2	1.3	0.2	1.6	2.7	3.4	3.3	1.6	–0.8	2.8	1.7	9.9
Q4	2.1	2.0	0.3	1.0	0.2	0.7	2.2	1.5	2.9	1.4	–1.7	1.8	1.8	9.7
1999 Q1	2.0	2.0	0.4	1.0	–	0.3	1.6	0.5	2.3	1.1	–1.8	2.8	1.5	9.5
Q2	2.2	1.8	0.3	1.1	–0.2	0.8	1.7	0.6	1.2	1.1	–0.9	2.8	1.5	9.3
Q3	2.6	1.9	0.4	1.1	–0.2	1.9	2.4	2.0	1.9	1.2	0.5	2.7	1.6	9.1
Q4	3.4	1.9	0.4	1.1	–0.2	3.1	3.1	4.0	2.8	1.5	2.4	3.6	1.5	8.8
2000 Q1	3.6	1.8	0.4	1.2	–0.2	3.9	3.4	4.2	2.4	2.2	4.1	3.6	1.4	8.6
Q2	3.8	2.0	0.4	1.1	0.1	4.1	3.9	5.5	3.5	2.3	4.8	3.6	1.4	8.3
Q3	3.4	1.7	0.4	1.0	0.1	4.0	3.7	4.8	1.9	2.7	5.1	3.5	1.4	8.1
Q4	3.0	1.4	0.4	0.8	–0.2	4.0	3.4	4.0	0.6	2.8	5.1	3.5	1.8	7.9
2001 Q1	..	..	..	..	..	..	..	3.9	..	2.7	3.3	..	..	7.8
2000 Apr	..	..	..	..	..	..	..	5.4	3.8	2.1	4.4	..	..	8.4
May	..	..	..	..	..	..	..	6.4	4.7	2.2	4.9	..	..	8.3
Jun	..	..	..	..	..	..	..	4.7	1.9	2.6	5.2	..	..	8.2
Jul	..	..	..	..	..	..	..	4.7	0.9	2.5	5.0	..	..	8.1
Aug	..	..	..	..	..	..	..	5.1	1.9	2.5	4.8	..	..	8.1
Sep	..	..	..	..	..	..	..	4.4	2.8	2.9	5.3	..	..	8.0
Oct	..	..	..	..	..	..	..	3.5	–	2.8	5.6	..	..	7.9
Nov	..	..	..	..	..	..	..	3.7	0.9	2.9	5.2	..	..	7.9
Dec	..	..	..	..	..	..	..	4.8	0.9	2.7	4.4	..	..	7.8
2001 Jan	..	..	..	..	..	..	..	4.9	2.8	2.7	3.7	..	..	7.8
Feb	..	..	..	..	..	..	..	4.1	1.8	2.7	3.3	..	..	7.8
Mar	..	..	..	..	..	..	..	2.5	..	2.6	2.8	..	..	7.7
Apr	..	..	..	..	..	..	..	..	..	2.8	2.8	..	..	7.6

Percentage change on previous quarter										
	ILGL	HUDY	HUDZ	HUEA	HUEB	HUEC	HUED	ILHF	ILHZ	ILIT
1998 Q1	0.9	0.7	0.1	0.4	0.2	0.5	1.0	1.3	1.3	–0.3
Q2	0.4	0.4	0.1	0.1	–0.1	0.4	0.5	0.6	0.7	1.1
Q3	0.6	0.5	0.1	0.4	–0.1	0.1	0.3	0.3	0.7	0.7
Q4	0.2	0.5	0.1	0.2	0.2	–0.3	0.3	–0.6	0.3	0.3
1999 Q1	0.7	0.6	0.2	0.3	–0.1	0.2	0.5	0.3	0.7	–0.6
Q2	0.6	0.2	–	0.3	–0.3	0.9	0.6	0.6	–0.4	1.1
Q3	1.1	0.5	0.1	0.3	–0.1	1.1	1.0	1.7	1.3	0.9
Q4	1.0	0.5	0.1	0.2	0.2	0.9	1.0	1.3	1.2	0.2
2000 Q1	0.9	0.5	0.1	0.3	–0.1	1.0	0.8	0.5	0.3	–0.7
Q2	0.8	0.5	0.1	0.2	0.1	1.0	1.0	1.9	0.6	1.0
Q3	0.6	0.3	0.1	0.2	–0.1	1.0	0.8	1.0	–0.3	0.8
Q4	0.6	0.2	0.1	0.1	–	1.0	0.7	0.5	–	0.6
2001 Q1	..	..	..	..	..	..	..	0.4	..	..

Percentage change on previous month		
	ILKF	ILKP
2000 Apr	0.4	–
May	1.2	2.8
Jun	–0.9	–2.7
Jul	0.8	–
Aug	0.9	0.9
Sep	–0.5	–
Oct	–0.3	–0.9
Nov	0.9	0.9
Dec	0.8	–
2001 Jan	–0.6	1.8
Feb	0.7	–
Mar	–0.9	..
Apr	..	..

GDP = Gross Domestic Product at constant market prices
PFC = Private Final Consumption at constant market prices
GFC = Government Final Consumption at constant market prices
GFCF = Gross Fixed Capital Formation at constant market prices
ChgStk = Change in Stocks at constant market prices
Exports = Exports of goods and services
Imports = Imports of goods and services
IoP = Industrial Production
Sales = Retail Sales Volume
CPI = Consumer Prices, measurement not uniform among countries
PPI = Producer Prices (manufacturing)
Earnings = Average Wage Earnings (manufacturing), definitions of coverage and treatment vary among countries
Empl = Total Employment not seasonally adjusted
Unempl = Standardised Unemployment rates: percentage of total labour force

Source: OECD - SNA68

1 Includes statistical discrepancy

2 Germany

	GDP	Contribution to change in GDP: PFC	GFC	GFCF	ChgStk	Exports	less Imports	IoP	Sales	CPI	PPI	Earnings	Empl[1]	Unempl
Percentage change on a year earlier	ILFY	HUBW	HUBX	HUBY	HUBZ	HUCA	HUCB	ILGS	ILHM	HVLL	ILAF	ILAO	ILIG	GABD
1995	1.8	1.3	0.3	–0.1	0.2	1.4	1.3	1.0	0.8	1.7	1.9	4.0	0.1	8.2
1996	0.8	0.5	0.4	–0.2	–0.4	1.3	0.8	0.7	–1.1	1.4	–1.2	3.5	–0.4	8.9
1997	1.5	0.4	–0.2	0.2	0.2	2.9	2.1	3.7	–1.6	1.9	1.1	1.5	–0.3	9.9
1998	1.8	1.1	0.1	0.5	0.5	1.8	2.1	4.2	1.0	1.0	–0.4	1.8	1.4	9.3
1999	1.4	1.4	–	0.6	0.2	1.4	2.2	1.5	0.4	0.6	–1.0	2.6	0.6	8.6
2000	3.1	1.0	0.3	0.7	0.1	4.2	3.2	6.3	1.2	1.9	3.4	2.7	0.4	7.9
1998 Q1	3.0	0.9	–	1.0	0.5	3.0	2.4	6.1	0.8	1.2	0.7	1.3	1.1	9.8
Q2	1.7	0.5	–	0.4	0.5	2.8	2.5	4.8	–0.9	1.4	0.2	1.8	1.7	9.5
Q3	1.6	1.4	0.1	0.5	0.2	1.3	1.9	4.4	2.4	0.7	–0.8	2.1	1.0	9.1
Q4	1.0	1.5	0.3	0.1	0.7	–	1.6	1.4	1.9	0.4	–1.7	2.2	1.8	8.9
1999 Q1	0.6	1.4	–	0.2	0.7	–0.1	1.5	–0.6	1.6	0.3	–2.4	2.5	0.8	8.8
Q2	1.0	1.5	–0.1	0.6	0.3	0.6	1.9	0.5	–0.2	0.5	–1.7	2.4	0.1	8.7
Q3	1.6	1.3	0.1	0.8	–0.1	1.9	2.4	1.8	–0.2	0.7	–0.7	2.7	1.1	8.6
Q4	2.5	1.3	–	0.9	–0.1	3.1	2.8	4.4	0.6	1.0	0.6	3.0	0.4	8.4
2000 Q1	2.6	0.5	0.3	0.9	–0.7	4.3	2.7	5.4	–0.9	1.7	2.3	2.8	0.2	8.1
Q2	4.0	1.6	0.4	0.8	–	4.0	2.8	6.9	4.2	1.6	2.6	2.4	0.4	7.9
Q3	3.3	1.0	0.1	0.5	0.7	3.9	2.9	7.2	1.9	2.0	3.7	3.3	0.4	7.8
Q4	2.6	0.8	0.3	0.5	0.5	4.8	4.2	5.5	–0.5	2.4	4.5	2.4	0.8	7.7
2001 Q1	2.0	0.7	–	–0.4	0.9	3.1	2.3	6.0	0.4	2.5	4.8	..	0.7	7.7
2000 Apr	..	..	..	..	..	..	..	6.6	6.4	1.5	2.1	..	..	8.0
May	..	..	..	..	..	..	..	8.8	7.4	1.4	2.7	..	..	7.9
Jun	..	..	..	..	..	..	..	5.2	–1.0	1.9	2.9	..	..	7.9
Jul	..	..	..	..	..	..	..	7.6	–0.3	1.9	3.3	..	..	7.9
Aug	..	..	..	..	..	..	..	6.8	2.0	1.8	3.5	..	..	7.8
Sep	..	..	..	..	..	..	..	7.0	4.1	2.5	4.3	..	..	7.8
Oct	..	..	..	..	..	..	..	5.2	–2.1	2.4	4.6	..	..	7.7
Nov	..	..	..	..	..	..	..	5.6	–0.2	2.4	4.7	..	..	7.7
Dec	..	..	..	..	..	..	..	5.8	0.9	2.2	4.2	..	..	7.7
2001 Jan	..	..	..	..	..	..	..	8.4	1.8	2.4	4.6	..	..	7.7
Feb	..	..	..	..	..	..	..	6.5	–1.0	2.6	4.7	..	..	7.7
Mar	..	..	..	..	..	..	..	3.1	0.5	2.5	4.9	..	..	7.7
Apr	..	..	..	..	..	..	..	..	..	2.9	5.0	..	..	7.7

Percentage change on previous quarter	ILGI	HUCC	HUCD	HUCE	HUCF	HUCG	HUCH	ILHC	ILHW	ILIQ
1998 Q1	1.1	0.9	0.3	0.3	0.1	0.3	0.8	2.3	1.5	–0.7
Q2	–0.5	–0.3	–	–0.3	0.1	0.5	0.5	–	–0.7	1.5
Q3	0.3	0.5	–	0.3	0.1	–0.3	0.2	0.5	0.8	–0.1
Q4	–	0.3	0.1	–0.2	0.4	–0.5	0.1	–1.4	0.4	1.1
1999 Q1	0.8	0.9	–	0.4	0.1	0.2	0.7	0.4	1.2	–1.7
Q2	–0.1	–0.2	–0.1	0.1	–0.2	1.2	0.9	1.0	–2.6	0.8
Q3	0.9	0.4	0.1	0.5	–0.4	1.0	0.7	1.8	0.8	0.9
Q4	0.9	0.3	–	–0.1	0.5	0.7	0.5	1.1	1.3	0.4
2000 Q1	1.0	0.1	0.3	0.4	–0.6	1.4	0.6	1.3	–0.3	–1.9
Q2	1.2	0.8	–	–	0.4	0.9	1.0	2.5	2.5	1.0
Q3	0.3	–0.2	–0.1	0.2	0.3	0.9	0.8	2.1	–1.4	0.9
Q4	0.2	–	0.1	–	0.3	1.5	1.8	–0.5	–1.1	0.8
2001 Q1	0.4	–	0.1	–0.5	–0.2	–0.3	–1.2	1.8	0.6	–1.9

Percentage change on previous month	ILKC	ILKM
2000 Apr	0.9	2.8
May	2.3	4.4
Jun	–2.5	–7.5
Jul	2.8	1.4
Aug	0.7	1.6
Sep	–0.4	–0.5
Oct	–0.8	–2.4
Nov	0.6	0.6
Dec	0.2	2.1
2001 Jan	2.3	–0.5
Feb	0.1	–0.4
Mar	–2.7	–0.8
Apr	..	..

GDP = Gross Domestic Product at constant market prices
PFC = Private Final Consumption at constant market prices
GFC = Government Final Consumption at constant market prices
GFCF = Gross Fixed Capital Formation at constant market prices
ChgStk = Change in Stocks at constant market prices
Exports = Exports of goods and services
Imports = Imports of goods and services
IoP = Industrial Production
Sales = Retail Sales volume
CPI = Consumer Prices measurement not uniform among countries
PPI = Producer Prices (manufacturing)
Earnings = Average Earnings (manufacturing), definitions of coverage and treatment vary among countries
Empl = Total Employment not seasonally adjusted
Unempl = Standardised Unemployment rates: percentage of total workforce

Source: OECD - SNA93

1 Excludes members of armed forces

3 France

	GDP	Contribution to change in GDP: PFC	GFC	GFCF	ChgStk	Exports	less Imports	IoP	Sales	CPI	PPI[1]	Earnings	Empl[2]	Unempl
Percentage change on a year earlier	ILFZ	HUBK	HUBL	HUBM	HUBN	HUBO	HUBP	ILGT	ILHN	HXAA	ILAG	ILAP	ILIH	GABC
1995	1.9	0.8	–	0.4	0.5	1.7	1.5	2.5	–	1.7	5.2	2.4	0.9	11.7
1996	1.1	0.7	0.5	–	–0.6	0.7	0.3	0.9	–0.3	2.0	–2.7	2.6	0.2	12.3
1997	1.9	0.1	0.5	–	0.1	2.8	1.5	3.8	1.0	1.2	–0.6	2.6	0.7	12.3
1998	3.5	1.9	–	1.3	0.8	2.1	2.6	5.2	2.6	0.8	–0.9	2.2	1.6	11.8
1999	3.0	1.7	0.5	1.2	–0.3	1.0	1.0	2.1	2.4	0.5	–1.6	2.5	1.9	11.3
2000	3.3	1.5	0.5	1.3	0.1	3.6	3.7	3.2	0.6	1.7	2.1	5.2	2.4	9.5
1998 Q1	3.6	1.6	–	1.1	0.8	3.3	3.2	7.8	2.3	0.9	0.5	2.4	1.2	11.9
Q2	3.8	2.1	–	1.4	1.2	2.6	3.4	6.6	3.2	1.1	–0.3	2.0	1.6	11.8
Q3	3.5	2.1	–0.1	1.4	0.5	1.8	2.3	3.7	2.4	0.7	–1.4	2.1	1.8	11.8
Q4	3.0	2.0	–	1.3	0.7	0.7	1.7	2.7	2.7	0.4	–2.3	2.0	1.8	11.8
1999 Q1	2.7	1.8	0.3	1.3	–	0.1	0.8	1.1	3.3	0.2	–2.7	2.0	2.0	11.7
Q2	2.5	1.4	0.4	1.1	–0.4	0.4	0.5	0.6	1.8	0.4	–2.3	2.0	1.9	11.5
Q3	3.1	1.8	0.5	1.1	–0.7	1.4	1.0	2.5	2.3	0.5	–1.6	2.7	1.8	11.2
Q4	3.8	1.7	0.6	1.2	–0.2	2.2	1.8	4.2	2.0	1.0	–	3.4	2.0	10.7
2000 Q1	3.7	1.9	0.5	1.1	–	3.1	2.9	4.0	2.1	1.5	1.2	5.2	2.2	10.2
Q2	3.5	1.7	0.5	1.2	–0.1	3.8	3.6	3.4	1.4	1.5	2.1	5.4	2.3	9.6
Q3	3.2	1.4	0.6	1.4	0.6	3.4	4.2	3.5	–	1.9	2.7	5.2	2.4	9.4
Q4	2.9	1.1	0.5	1.5	–	4.0	4.2	2.1	–1.4	1.9	2.4	5.0	2.7	8.9
2001 Q1	2.7	1.4	0.6	1.3	–0.8	2.7	2.5	2.4	1.4	1.2	2.5	..	..	8.6
2000 Apr	..	..	..	..	..	..	..	4.0	–0.9	1.3	1.9	..	..	9.8
May	..	..	..	..	..	..	..	3.0	4.1	1.5	2.1	..	..	9.6
Jun	..	..	..	..	..	..	..	3.2	1.1	1.7	2.2	..	..	9.4
Jul	..	..	..	..	..	..	..	3.9	–1.6	1.7	2.6	..	..	9.4
Aug	..	..	..	..	..	..	..	3.9	1.7	1.8	2.7	..	..	9.4
Sep	..	..	..	..	..	..	..	2.5	0.1	2.2	2.7	..	..	9.3
Oct	..	..	..	..	..	..	..	2.1	–1.2	1.9	2.5	..	..	9.1
Nov	..	..	..	..	..	..	..	1.3	–1.4	2.2	2.4	..	..	8.9
Dec	..	..	..	..	..	..	..	3.0	–1.4	1.5	2.5	..	..	8.8
2001 Jan	..	..	..	..	..	..	..	3.1	2.1	1.1	2.6	..	..	8.7
Feb	..	..	..	..	..	..	..	2.3	0.3	1.3	2.5	..	..	8.6
Mar	..	..	..	..	..	..	..	1.9	1.8	1.2	2.3	..	..	8.6
Apr	..	..	..	..	..	..	..	..	–0.3	1.8	1.9	..	..	8.5

Percentage change on previous quarter	ILGJ	HUBQ	HUBR	HUBS	HUBT	HUBU	HUBV	ILHD	ILHX				ILIR	
1998 Q1	1.1	0.4	–0.1	0.4	0.5	0.8	0.9	2.0	–0.1				0.4	
Q2	1.0	0.8	–	0.5	0.2	0.2	0.7	1.2	1.1				0.6	
Q3	0.5	0.3	–	0.2	–0.1	0.1	–	–0.5	0.7				0.5	
Q4	0.4	0.4	0.1	0.2	0.1	–0.4	0.1	0.1	1.1				0.3	
1999 Q1	0.8	0.2	0.2	0.4	–0.2	0.2	–	0.4	0.5				0.6	
Q2	0.9	0.5	0.1	0.3	–0.2	0.6	0.4	0.7	–0.4				0.5	
Q3	1.0	0.7	0.1	0.2	–0.4	1.1	0.6	1.3	1.1				0.5	
Q4	1.1	0.4	0.2	0.4	0.6	0.4	0.8	1.7	0.8				0.5	
2000 Q1	0.6	0.4	0.1	0.3	–	1.1	1.2	0.2	0.6				0.8	
Q2	0.7	0.2	0.2	0.4	–0.3	1.3	1.1	0.2	–1.0				0.6	
Q3	0.8	0.4	0.1	0.3	0.3	0.7	1.1	1.4	–0.3				0.6	
Q4	0.8	–	0.1	0.5	–	0.9	0.8	0.3	–0.7				0.7	
2001 Q1	0.5	0.7	0.1	0.1	–0.8	–0.2	–0.5	0.5	3.4				..	

Percentage change on previous month	ILKD	ILKN
2000 Apr	–0.4	–2.6
May	0.2	2.5
Jun	0.1	–1.0
Jul	1.5	–0.2
Aug	–	–0.1
Sep	–0.6	–0.3
Oct	0.4	–0.9
Nov	0.3	0.9
Dec	0.3	–0.2
2001 Jan	0.1	3.4
Feb	0.2	–1.0
Mar	–0.2	1.5
Apr	..	–4.6

GDP = Gross Domestic Product at constant market prices
PFC = Private Final Consumption at constant market prices
GFC = Government Final Consumption at constant market prices
GFCF = Gross Fixed Capital Formation at constant market prices
ChgStk = Change in Stocks at constant market prices
Exports = Exports of goods and services
Imports = Imports of goods and services

Sales = Retail Sales volume
CPI = Consumer Prices, measurement not uniform among countries
PPI = Producer Prices (manufacturing)
Earnings = Average Wage Earnings (manufacturing), definitions of coverage and treatment vary among countries
Empl = Total Employment not seasonally adjusted
Unempl = Standardised Unemployment rates: percentage of total workforce
IoP=Index of Production

1 Producer prices in manufactured goods
2 Excludes members of armed foces

Source: OECD - SNA93

4 Italy

	GDP	Contribution to change in GDP: PFC	GFC	GFCF	ChgStk	Exports	less Imports	IoP	Sales	CPI	PPI	Earnings	Empl	Unempl
Percentage change on a year earlier														
	ILGA	HUCI	HUCJ	HUCK	HUCL	HUCM	HUCN	ILGU	ILHO	HYAA	ILAH	ILAQ	ILII	GABE
1995	2.9	1.0	–0.4	1.1	0.2	3.1	2.1	5.8	0.4	5.3	7.9	3.1	–0.6	11.7
1996	1.1	0.7	0.2	0.7	–0.7	0.2	–0.1	–1.6	1.3	4.0	1.8	3.1	0.5	11.7
1997	2.0	1.9	–	0.4	0.3	1.7	2.3	3.9	0.9	2.0	1.3	3.6	0.4	11.8
1998	1.8	1.8	0.1	0.8	0.3	1.0	2.2	1.4	1.1	2.0	0.1	2.8	1.2	11.8
1999	1.6	1.4	0.3	0.9	0.4	–	1.3	–0.1	1.1	1.7	–0.2	2.3	1.2	11.4
2000	2.9	1.8	0.3	1.2	–1.0	2.9	2.2	4.0	–0.6	2.5	5.9	2.1	1.9	10.5
1998 Q1	3.0	1.8	–	1.3	1.1	2.8	4.0	5.3	0.7	2.0	1.2	2.2	1.0	11.8
Q2	1.7	1.7	–	1.0	–0.5	1.4	2.0	2.5	1.6	2.1	0.6	3.1	0.9	11.9
Q3	1.9	1.8	0.1	0.8	0.2	0.4	1.4	0.3	1.0	2.1	–0.1	2.8	1.1	11.9
Q4	0.7	2.0	0.1	0.2	0.4	–0.6	1.5	–2.3	1.0	1.7	–1.2	3.0	1.5	11.8
1999 Q1	1.1	1.8	0.2	0.5	0.5	–1.2	0.7	–1.3	1.3	1.2	–1.8	3.0	1.2	11.6
Q2	1.2	1.2	0.2	0.7	1.3	–0.9	1.1	–2.5	0.3	1.4	–1.4	2.1	1.3	11.4
Q3	1.3	1.4	0.3	1.0	–0.2	0.2	1.3	0.5	0.3	1.7	–	2.3	1.2	11.3
Q4	2.8	1.3	0.3	1.4	–0.1	2.0	2.2	3.1	2.3	2.1	2.2	1.8	1.4	11.1
2000 Q1	3.3	1.5	0.3	1.4	–0.5	2.0	1.6	3.6	–0.6	2.6	4.6	1.9	1.2	11.0
Q2	3.0	2.1	0.3	1.4	–0.7	2.3	2.6	5.7	–0.3	2.6	6.2	2.5	1.5	10.6
Q3	2.8	1.9	0.2	1.2	–1.2	3.9	3.3	3.5	–	2.6	6.7	2.0	2.1	10.3
Q4	2.6	1.5	0.2	0.8	–1.5	3.3	1.6	3.3	–1.3	2.6	6.5	1.9	2.8	10.0
2001 Q1	..	..	..	..	..	..	..	2.5	–0.3	2.9	4.9	2.0	..	..
2000 May	..	..	..	..	..	..	..	7.8	–	2.5	6.4	2.7	..	10.6
Jun	..	..	..	..	..	..	..	5.0	–1.0	2.7	6.9	2.9	..	10.6
Jul	..	..	..	..	..	..	..	2.8	1.0	2.6	6.6	2.0	..	10.5
Aug	..	..	..	..	..	..	..	3.6	–1.9	2.6	6.5	2.0	..	10.3
Sep	..	..	..	..	..	..	..	3.9	1.0	2.6	6.8	2.0	..	10.2
Oct	..	..	..	..	..	..	..	2.3	–1.0	2.6	6.8	1.9	..	10.0
Nov	..	..	..	..	..	..	..	2.5	–1.9	2.7	6.7	1.9	..	10.0
Dec	..	..	..	..	..	..	..	5.2	–1.0	2.7	6.2	1.9	..	10.0
2001 Jan	..	..	..	..	..	..	..	3.6	–1.0	3.0	5.4	1.9	..	9.9
Feb	..	..	..	..	..	..	..	1.9	–	3.0	5.0	2.0	..	..
Mar	..	..	..	..	..	..	..	2.2	–	2.8	4.2	2.1	..	..
Apr	..	..	..	..	..	..	..	..	..	3.1	4.4	1.6	..	..
May	..	..	..	..	..	..	..	..	..	3.0	..	..	..	..

Percentage change on previous quarter														
	ILGK	HUCO	HUCP	HUCQ	HUCR	HUCS	HUCT	ILHE	ILHY				ILIS	
1998 Q1	0.1	0.6	–	0.1	0.2	0.5	1.2	–0.8	0.7				–0.7	
Q2	0.4	0.6	0.1	0.1	–0.6	0.1	–0.2	0.5	1.0				1.1	
Q3	0.6	0.3	–	0.1	0.5	–0.5	–0.2	–0.8	–				1.4	
Q4	–0.5	0.5	0.1	–	0.4	–0.7	0.7	–1.3	–0.6				–0.3	
1999 Q1	0.5	0.4	0.1	0.4	0.2	–0.1	0.5	0.3	1.0				–1.0	
Q2	0.6	–	0.1	0.2	0.1	0.4	0.2	–0.8	–				1.2	
Q3	0.7	0.5	0.1	0.4	–0.9	0.6	–	2.3	–				1.3	
Q4	0.9	0.5	0.1	0.4	0.4	1.1	1.6	1.3	1.3				–0.1	
2000 Q1	1.0	0.5	0.1	0.4	–0.1	–	–0.2	0.8	–1.9				–1.2	
Q2	0.3	0.6	–	0.2	–0.2	0.7	1.2	1.2	0.3				1.5	
Q3	0.5	0.2	–	0.1	–1.3	2.1	0.7	0.1	0.3				1.9	
Q4	0.8	0.1	0.1	–	0.1	0.4	–	1.2	–				0.6	
2001 Q1	..	..	..	..	..	..	..	–	–1.0				..	

Percentage change on previous month		
	ILKE	ILKO
2000 May	2.4	–
Jun	–0.8	–
Jul	–0.9	1.0
Aug	1.3	–1.9
Sep	–	1.9
Oct	–0.6	–1.0
Nov	0.9	1.0
Dec	2.2	–1.0
2001 Jan	–1.9	–1.0
Feb	–	1.0
Mar	0.6	–1.0
Apr	..	..
May	..	..

GDP = Gross Domestic Product at constant market prices
PFC = Private Final Consumption at constant market prices
GFC = Government Final Consumption at constant market prices
GFCF = Gross Fixed Capital Formation at constant market prices
ChgStk = Change in Stocks at constant market prices
Exports = Exports of goods and services
Imports = Imports of goods and services
IoP = Industrial Production
Sales = Retail Sales volume
CPI = Consumer Prices, measurement not uniform among countries
PPI = Producer Prices (manufacturing)
Earnings = Average Wage Earnings (manufacturing), definitions of coverage and treatment vary among countries
Empl = Total Employment not seasonally adjusted
Unempl = Standardised Unemployment not seasonally adjusted

Source: OECD - SNA93

5 USA

	GDP	Contribution to change in GDP: PFC	GFC	GFCF	ChgStk	Exports	less Imports	IoP	Sales	CPI	PPI	Earnings	Empl[1]	Unempl
Percentage change on a year earlier	ILGC	HUDG	HUDH	HUDI	HUDJ	HUDK	HUDL	ILGW	ILHQ	ILAA	ILAJ	ILAS	ILIK	GADO
1995	2.7	2.0	–	0.9	–0.5	1.0	0.9	4.8	3.6	2.8	2.9	2.6	1.5	5.6
1996	3.6	2.1	0.1	1.5	–	0.9	1.0	4.6	4.9	2.9	2.3	3.3	1.4	5.4
1997	4.4	2.4	0.3	1.6	0.4	1.4	1.7	6.7	4.1	2.3	0.3	3.2	2.3	5.0
1998	4.4	3.1	0.2	2.1	0.2	0.3	1.6	4.7	6.4	1.6	–1.1	2.5	1.5	4.5
1999	4.2	3.5	0.3	1.9	–0.4	0.3	1.5	4.2	8.6	2.1	1.8	2.9	1.5	4.2
2000	5.0	3.6	0.3	1.9	0.2	1.1	2.1	5.6	6.4	3.4	4.1	3.6	1.3	4.0
1998 Q1	4.8	2.8	0.2	2.0	0.8	0.8	1.8	6.3	4.8	1.4	–1.5	2.8	1.9	4.7
Q2	4.1	3.4	0.2	2.2	–0.3	0.2	1.7	5.3	7.5	1.6	–0.9	2.8	1.5	4.4
Q3	3.9	3.0	0.2	1.9	0.3	–0.2	1.3	4.3	5.3	1.6	–1.0	2.5	1.1	4.5
Q4	4.6	3.3	0.3	2.2	–	0.3	1.5	3.2	7.7	1.5	–0.9	1.9	1.3	4.4
1999 Q1	3.9	3.4	0.4	2.0	–0.8	–	1.2	3.3	9.0	1.7	–	1.8	1.7	4.3
Q2	3.8	3.4	0.1	1.8	–0.5	0.2	1.4	3.8	7.8	2.2	1.1	2.4	1.4	4.3
Q3	4.3	3.5	0.3	1.9	–0.4	0.6	1.8	4.4	9.3	2.4	2.4	3.7	1.4	4.2
Q4	5.0	3.7	0.4	1.9	0.1	0.5	1.8	5.1	8.3	2.6	3.2	3.6	1.5	4.1
2000 Q1	5.3	4.0	0.2	2.1	–0.1	0.9	2.0	5.8	8.5	3.4	4.6	4.2	1.6	4.0
Q2	6.1	3.6	0.5	2.2	0.7	1.2	2.2	6.5	7.0	3.3	4.4	3.6	1.6	4.0
Q3	5.2	3.5	0.3	1.9	0.4	1.3	2.3	5.9	6.3	3.5	3.9	2.9	1.1	4.0
Q4	3.4	3.0	0.1	1.5	–0.3	0.8	1.8	4.2	4.1	3.4	3.4	3.5	1.0	4.0
2001 Q1	2.5	2.2	1.0	1.1	–0.6	0.5	0.9	0.8	1.9	3.2	2.1	2.6	0.7	4.2
2000 May	..	..	..	..	..	..	..	6.4	6.7	3.1	4.2	2.7	1.2	4.1
Jun	..	..	..	..	..	..	..	6.8	6.6	3.7	5.0	3.6	1.3	4.0
Jul	..	..	..	..	..	..	..	5.6	6.7	3.7	4.4	3.6	1.0	4.0
Aug	..	..	..	..	..	..	..	5.9	6.0	3.4	3.6	2.7	1.0	4.1
Sep	..	..	..	..	..	..	..	6.1	6.3	3.4	3.8	2.6	1.1	3.9
Oct	..	..	..	..	..	..	..	5.0	5.7	3.4	3.6	3.5	1.0	3.9
Nov	..	..	..	..	..	..	..	4.4	3.9	3.5	3.5	3.5	0.9	4.0
Dec	..	..	..	..	..	..	..	3.1	2.6	3.4	2.9	3.5	1.1	4.0
2001 Jan	..	..	..	..	..	..	..	1.7	2.9	3.5	2.9	2.6	0.8	4.2
Feb	..	..	..	..	..	..	..	0.8	1.4	3.4	1.9	2.6	0.7	4.2
Mar	..	..	..	..	..	..	..	0.1	1.5	2.8	1.3	2.6	0.6	4.3
Apr	..	..	..	..	..	..	..	–0.9	2.5	3.3	2.2	2.6	–0.1	4.5
May	..	..	..	..	..	..	..	..	..	..	..	3.5	0.1	4.4

Percentage change on previous quarter	ILGM	HUDM	HUDN	HUDO	HUDP	HUDQ	HUDR	ILHG	ILIA	ILIU
1998 Q1	1.6	0.8	–0.1	0.7	0.6	–	0.5	0.9	1.4	–1.0
Q2	0.7	0.9	0.2	0.7	–0.7	–0.1	0.4	0.7	2.6	1.5
Q3	0.9	0.7	–	0.3	0.1	–0.1	0.2	0.9	0.5	0.6
Q4	1.4	0.8	0.1	0.5	–	0.4	0.4	0.8	2.9	0.2
1999 Q1	0.9	0.9	–	0.6	–0.2	–0.2	0.2	0.9	2.6	–0.6
Q2	0.6	0.9	–	0.4	–0.4	0.2	0.6	1.2	1.5	1.2
Q3	1.4	0.8	0.2	0.4	0.3	0.3	0.6	1.5	2.0	0.6
Q4	2.0	1.0	0.2	0.5	0.5	0.3	0.4	1.4	2.0	0.3
2000 Q1	1.2	1.2	–0.1	0.8	–0.5	0.2	0.4	1.6	2.7	–0.5
Q2	1.4	0.5	0.3	0.4	0.5	0.4	0.7	1.9	0.1	1.2
Q3	0.5	0.7	–0.1	0.1	–0.1	0.4	0.7	0.9	1.4	0.1
Q4	0.3	0.5	–	0.1	–0.2	–0.2	–0.1	–0.2	–0.2	0.2
2001 Q1	0.3	0.5	0.7	0.4	–0.8	–0.1	–0.4	–1.7	0.6	–0.7

Percentage change on previous month	ILKG	ILKQ	ILLA
2000 May	0.7	0.3	–0.2
Jun	0.5	0.1	0.8
Jul	–0.2	0.9	–
Aug	0.7	0.4	–0.4
Sep	0.2	0.2	–0.5
Oct	–0.2	–	0.6
Nov	–0.3	–0.6	–
Dec	–0.6	0.1	0.3
2001 Jan	–0.9	1.1	–1.2
Feb	–0.4	–0.4	0.2
Mar	–0.1	–0.1	0.4
Apr	–0.3	0.6	–0.1
May	..	..	–

GDP = Gross Domestic Product at constant market prices
PFC = Private Final Consumption at constant market prices
GFC = Government Final Consumption at constant market prices
GFCF = Gross Fixed Capital Formation at constant market prices
ChgStk = Change in Stocks at constant market prices
Exports = Exports of goods and services
Imports = Imports of goods and services
IoP = Industrial Production
Sales = Retail Sales volume
CPI = Consumer Prices, measurement not uniform among countries
PPI = Producer Prices (manufacturing)
Earnings = Average Earnings (manufacturing), definitions of coverage and treatment vary among countries
Empl = Total Employment not seasonally adjusted
Unempl = Standardised Unemployment rates: percentage of total workforce

Source: OECD - SNA93

1 Excludes members of armed forces

6 Japan

	Contribution to change in GDP												
	GDP	PFC	GFC	GFCF	ChgStk	Exports	less Imports	IoP[1]	Sales	CPI	PPI	Earnings[2]	Empl	Unempl
Percentage change on a year earlier														
	ILGD	HUCU	HUCV	HUCW	HUCX	HUCY	HUCZ	ILGX	ILHR	ILAB	ILAK	ILAT	ILIL	GADP
1995	1.6	0.8	0.6	–	0.6	0.3	0.9	3.0	0.1	–0.1	–0.7	2.9	–	3.1
1996	3.4	1.0	0.4	2.0	0.3	0.6	1.0	2.2	0.7	0.1	–1.7	2.6	0.5	3.4
1997	1.9	0.6	0.2	0.2	–	1.1	0.1	4.0	–1.9	1.7	0.6	2.8	1.0	3.4
1998	–1.1	0.1	0.3	–1.2	–0.6	–0.2	–0.6	–6.7	–5.5	0.7	–1.3	–0.8	–0.6	4.1
1999	0.8	0.7	0.6	–0.2	–0.2	0.1	0.2	1.0	–2.1	–0.3	–1.5	–0.7	–0.8	4.7
2000	1.7	0.3	0.6	0.3	0.1	1.2	0.8	5.2	–1.7	–0.7	0.1	1.7	–0.3	4.7
1998 Q1	–2.6	–2.4	0.2	–0.8	–0.1	0.2	–0.4	–4.2	–10.0	2.0	0.4	–0.4	–	3.7
Q2	0.7	1.3	0.3	–0.7	–0.6	–0.3	–0.6	–7.9	–2.4	0.4	–1.9	–0.3	–0.7	4.1
Q3	–0.8	1.0	0.3	–1.8	–0.9	–0.2	–0.6	–7.9	–3.8	–0.2	–1.8	–1.8	–0.9	4.2
Q4	–1.4	0.6	0.3	–1.5	–0.8	–0.6	–0.6	–6.7	–5.2	0.5	–2.0	–0.7	–1.0	4.4
1999 Q1	–0.4	0.2	0.5	–0.7	–0.4	–0.4	–0.3	–3.7	–4.2	–0.1	–2.1	–0.7	–1.2	4.6
Q2	1.0	1.1	0.5	–0.2	–0.2	–0.1	0.1	0.3	–2.1	–0.3	–1.8	–1.1	–1.1	4.7
Q3	2.1	1.6	0.7	–0.1	–0.1	0.3	0.3	2.7	–1.4	–	–1.4	–0.4	–0.7	4.7
Q4	0.4	–0.2	0.6	0.1	–	0.7	0.8	5.1	–0.4	–1.0	–0.6	–0.5	–0.2	4.7
2000 Q1	2.4	1.0	0.6	0.2	–	1.2	0.7	4.3	–2.9	–0.7	–0.1	2.0	–0.5	4.8
Q2	1.1	–	0.6	–0.2	0.1	1.4	0.8	6.6	–1.8	–0.7	0.4	2.3	–0.4	4.7
Q3	0.5	–0.7	0.5	0.2	0.1	1.2	0.8	5.3	–1.1	–0.7	0.2	1.6	–0.4	4.7
Q4	2.8	0.8	0.6	1.1	0.2	1.0	0.9	4.4	–1.1	–0.5	–	1.1	0.2	4.8
2001 Q1	..	..	..	..	..	..	..	0.6	3.0	–0.1	–0.3	0.5	0.5	4.8
2000 Apr	..	..	..	..	..	..	..	8.0	–3.3	–0.8	0.5	2.1	–0.5	4.8
May	..	..	..	..	..	..	..	5.0	–1.1	–0.7	0.3	1.9	–0.5	4.6
Jun	..	..	..	..	..	..	..	6.9	–1.1	–0.7	0.4	2.9	–0.3	4.7
Jul	..	..	..	..	..	..	..	5.7	–1.1	–0.5	0.2	1.4	–0.1	4.7
Aug	..	..	..	..	..	..	..	6.8	–1.1	–0.8	0.3	2.1	–0.4	4.6
Sep	..	..	..	..	..	..	..	3.5	–1.1	–0.8	0.1	1.4	–0.5	4.7
Oct	..	..	..	..	..	..	..	5.0	–1.1	–0.9	–	1.1	0.1	4.7
Nov	..	..	..	..	..	..	..	3.3	–1.1	–0.5	–0.1	–0.2	0.3	4.8
Dec	..	..	..	..	..	..	..	4.9	–1.1	–0.2	–	2.3	0.2	4.9
2001 Jan	..	..	..	..	..	..	..	1.4	2.2	0.1	–0.2	0.1	0.1	4.9
Feb	..	..	..	..	..	..	..	1.8	4.5	–0.1	–0.3	0.8	0.7	4.7
Mar	..	..	..	..	..	..	..	–1.4	2.2	–0.4	–0.4	0.5	0.5	4.7
Apr	..	..	..	..	..	..	..	–3.6	–	–0.4	–0.6	0.1	–0.2	4.8

Percentage change on previous quarter										
	ILGN	HUDA	HUDB	HUDC	HUDD	HUDE	HUDF	ILHH	ILIB	ILIV
1998 Q1	–0.6	0.3	–	–0.3	–0.4	–0.3	–0.1	–1.7	–0.3	–1.6
Q2	0.1	0.2	0.2	–0.2	–0.2	–0.1	–0.3	–4.3	–2.4	2.1
Q3	–1.1	0.3	–	–1.2	–0.2	–0.1	–	0.3	–0.7	–0.4
Q4	0.1	–0.1	0.1	0.2	–0.1	–0.1	–0.2	–1.1	–1.8	–1.1
1999 Q1	0.5	–0.1	0.2	0.5	0.1	–	0.2	1.4	0.7	–1.8
Q2	1.5	1.1	0.2	0.3	–	0.2	0.2	–0.3	–0.4	2.2
Q3	–0.1	0.7	0.2	–1.0	–0.1	0.3	0.2	2.7	–	–
Q4	–1.5	–1.9	0.1	0.4	–0.1	0.3	0.3	1.2	–0.7	–0.6
2000 Q1	2.4	1.1	0.2	0.6	0.2	0.5	–	0.6	–1.8	–2.1
Q2	0.2	0.1	0.2	–0.2	0.1	0.4	0.3	1.9	0.8	2.3
Q3	–0.6	–	0.1	–0.6	–	–	0.1	1.5	0.7	–
Q4	0.8	–0.3	0.2	1.3	–	0.1	0.4	0.3	–0.7	–
2001 Q1	..	..	..	..	..	..	..	–3.1	2.2	–1.8

Percentage change on previous month			
	ILKH	ILKR	ILLB
2000 Apr	0.7	–	1.4
May	–0.1	1.1	1.0
Jun	1.5	1.1	–
Jul	–0.5	–	–0.2
Aug	3.3	–	–0.1
Sep	–3.5	–1.1	–
Oct	1.3	–	0.4
Nov	–0.5	–	–0.1
Dec	1.7	–	–1.0
2001 Jan	–3.7	2.2	–1.2
Feb	0.6	1.1	–0.1
Mar	–2.0	–2.2	0.4
Apr	–1.7	–2.2	0.7

GDP = Gross Domestic Product at constant market prices
PFC = Private Final Consumption at constant market prices
GFC = Government Final Consumption at constant market prices
GFCF = Gross Fixed Capital Formation at constant market prices
ChgStk = Change in Stocks at constant market prices
Exports = Exports of goods and services
Imports = Imports of goods and services

Sales = Retail Sales volume
CPI = Consumer Prices, measurement not uniform among countries
PPI = Producer Prices (manufacturing)
Earnings = Average Earnings (manufacturing), definitions of coverage and treatment vary among countries
Empl = Total Employment not seasonally adjusted
Unempl = Standardised Unemployment rates: percentage of total workforce
IoP=Index of Production

1 Not adjusted for unequal number of working days in a month
2 Figures monthly and seasonally adjusted

Source: OECD - SNA93

7 World trade in goods[1]

	Export of manufactures			Import of manufactures			Export of goods			Import of goods			Total trade	
	Total	OECD	Other	Total	OECD	Other	Total	OECD	Other	Total	OECD	Other	manufactures	goods
Percentage change on a year earlier														
	ILIZ	ILJA	ILJB	ILJC	ILJD	ILJE	ILJF	ILJG	ILJH	ILJI	ILJJ	ILJK	ILJL	ILJM
1992	4.3	3.3	8.5	5.3	4.3	8.2	4.2	3.6	5.9	5.0	4.1	7.7	4.8	4.6
1993	4.8	2.2	15.4	4.0	1.0	12.5	4.0	2.2	9.1	3.3	0.9	10.4	4.4	3.6
1994	12.0	9.9	19.9	12.0	12.3	11.0	10.6	9.4	14.0	10.9	10.9	10.7	12.0	10.7
1995	9.6	9.8	8.6	10.9	10.3	12.4	8.9	9.3	7.8	9.7	8.8	12.2	10.2	9.3
1996	6.6	6.2	7.7	7.4	7.7	6.6	6.6	6.3	7.6	6.6	7.2	4.8	6.9	6.6
1997	11.4	11.8	10.2	10.7	11.2	9.4	10.4	11.0	9.2	9.5	9.7	8.9	11.0	10.0
1998	5.9	6.1	5.2	6.6	9.4	–0.6	5.4	5.5	4.6	5.8	8.1	–0.3	6.2	5.5
1999	6.3	5.8	8.1	8.0	10.3	1.4	5.8	5.4	6.7	6.6	8.8	0.2	7.1	6.2
2000	13.7	12.3	18.4	..	13.9	..	..	11.8	..	..	12.5	..	..	..
1995 Q2	10.0	10.3	8.9	12.2	11.5	13.8	9.6	10.2	7.8	11.3	10.4	13.7	11.1	10.4
Q3	8.5	9.0	6.9	10.5	9.6	12.9	7.8	8.2	6.7	9.3	8.0	12.7	9.5	8.5
Q4	6.8	6.9	6.3	7.4	6.3	10.2	6.2	6.0	6.6	6.4	5.1	9.7	7.1	6.3
1996 Q1	5.6	5.3	6.6	7.5	7.2	8.1	5.4	4.9	6.8	6.5	6.4	6.7	6.5	5.9
Q2	5.6	5.1	7.1	6.2	6.3	5.9	5.5	4.8	7.2	5.4	5.9	4.0	5.9	5.4
Q3	6.9	6.6	7.9	7.6	8.5	5.5	7.1	6.8	7.9	6.8	8.1	3.5	7.2	6.9
Q4	8.1	7.8	9.4	8.1	8.6	7.0	8.5	8.5	8.7	7.6	8.6	5.3	8.1	8.1
1997 Q1	8.4	7.9	10.3	8.0	8.0	8.2	8.0	7.5	9.4	7.5	7.5	7.3	8.2	7.7
Q2	12.4	12.9	10.6	11.4	12.2	9.5	11.5	12.3	9.5	10.0	10.4	9.1	11.9	10.8
Q3	13.0	13.9	10.3	11.6	12.2	10.0	11.8	12.8	9.1	10.2	10.4	9.6	12.3	11.0
Q4	11.7	12.3	9.7	11.5	12.1	10.0	10.4	11.1	8.7	10.1	10.4	9.4	11.6	10.3
1998 Q1	10.5	11.3	8.1	10.7	12.8	5.5	9.9	10.9	7.1	9.6	11.2	5.6	10.6	9.8
Q2	6.5	6.6	6.3	7.1	9.3	1.3	5.9	6.1	5.4	6.5	8.2	1.7	6.8	6.2
Q3	3.9	3.9	4.2	4.9	7.9	–2.8	3.4	3.2	3.7	4.3	6.9	–2.5	4.4	3.8
Q4	2.9	3.0	2.6	4.1	7.8	–5.8	2.3	2.3	2.4	3.1	6.4	–5.6	3.5	2.7
1999 Q1	2.4	2.4	2.4	4.1	7.0	–3.6	1.8	1.6	2.5	3.2	5.9	–4.3	3.3	2.5
Q2	3.9	3.7	4.9	6.4	8.9	–0.7	3.7	3.4	4.4	5.1	7.6	–1.9	5.2	4.4
Q3	7.9	7.1	10.3	9.2	11.3	2.9	7.4	7.1	8.2	7.7	9.7	1.6	8.5	7.5
Q4	11.0	9.9	14.7	12.1	13.7	7.1	10.1	9.5	11.6	10.5	12.0	5.8	11.5	10.3
2000 Q1	14.6	13.6	18.1	14.3	15.2	11.7	13.5	13.2	14.3	13.0	13.8	10.5	14.4	13.3
Q2	14.7	13.3	19.5	15.3	15.2	15.9	13.5	12.7	15.8	13.8	13.5	14.9	15.0	13.7
Q3	13.7	12.1	19.1	15.6	14.4	19.6	12.7	11.5	15.9	14.3	12.9	19.0	14.7	13.5
Q4	11.9	10.3	16.9	..	11.3	..	..	10.0	..	..	10.2	..	..	..
2001 Q1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Percentage change on previous quarter														
	ILJN	ILJO	ILJP	ILJQ	ILJR	ILJS	ILJT	ILJU	ILJV	ILJW	ILJX	ILJY	ILJZ	ILKA
1995 Q2	1.1	0.9	1.6	2.3	1.9	3.3	1.0	0.8	1.6	2.4	2.0	3.2	1.7	1.7
Q3	1.0	0.9	1.5	1.2	0.8	2.2	0.9	0.6	1.6	0.9	0.5	2.0	1.1	0.9
Q4	1.5	1.6	1.3	1.8	2.1	1.1	1.4	1.3	1.6	1.3	1.5	0.8	1.7	1.4
1996 Q1	1.9	1.9	2.0	2.1	2.4	1.3	2.0	2.1	1.8	1.7	2.2	0.5	2.0	1.9
Q2	1.0	0.7	2.1	1.0	0.9	1.2	1.1	0.7	2.0	1.3	1.6	0.6	1.0	1.2
Q3	2.3	2.3	2.3	2.6	2.9	1.8	2.4	2.5	2.2	2.3	2.6	1.6	2.4	2.3
Q4	2.7	2.7	2.7	2.3	2.2	2.5	2.8	3.0	2.4	2.1	2.0	2.5	2.5	2.5
1997 Q1	2.2	2.0	2.8	2.0	1.8	2.5	1.5	1.2	2.4	1.6	1.2	2.5	2.1	1.5
Q2	4.7	5.4	2.4	4.2	4.9	2.4	4.4	5.3	2.2	3.7	4.3	2.2	4.4	4.1
Q3	2.8	3.1	2.0	2.8	2.9	2.3	2.6	2.9	1.9	2.4	2.6	2.1	2.8	2.5
Q4	1.5	1.3	2.2	2.2	2.0	2.5	1.5	1.4	2.0	2.0	1.9	2.3	1.8	1.8
1998 Q1	1.1	1.1	1.3	1.3	2.4	–1.7	1.0	1.0	0.9	1.1	1.9	–1.1	1.2	1.0
Q2	0.9	1.0	0.6	0.7	1.6	–1.7	0.6	0.6	0.6	0.7	1.6	–1.6	0.8	0.7
Q3	0.4	0.5	–	0.7	1.6	–1.8	0.2	0.2	0.2	0.4	1.3	–2.2	0.5	0.3
Q4	0.5	0.5	0.6	1.3	2.0	–0.7	0.5	0.5	0.6	0.9	1.5	–0.9	0.9	0.7
1999 Q1	0.6	0.5	1.2	1.3	1.6	0.6	0.5	0.3	1.1	1.2	1.4	0.3	1.0	0.8
Q2	2.4	2.2	3.1	2.9	3.5	1.2	2.5	2.5	2.5	2.6	3.2	0.9	2.7	2.5
Q3	4.1	3.9	5.1	3.3	3.8	1.8	3.7	3.7	3.9	2.9	3.3	1.4	3.7	3.3
Q4	3.4	3.1	4.6	4.0	4.2	3.4	3.0	2.8	3.7	3.5	3.6	3.2	3.7	3.3
2000 Q1	3.9	3.8	4.1	3.4	2.9	4.9	3.7	3.7	3.6	3.5	3.1	4.8	3.6	3.6
Q2	2.6	2.0	4.4	3.8	3.5	4.9	2.4	2.0	3.8	3.3	2.8	4.9	3.2	2.9
Q3	3.2	2.7	4.7	3.6	3.1	5.1	3.0	2.7	4.0	3.3	2.8	4.9	3.4	3.2
Q4	1.8	1.5	2.7	..	1.4	..	..	1.3	..	..	1.1	..	..	..
2001 Q1	..	..	..	..	..	..	..	..	..	..	..	..	..	..

1 Data used in the World and OECD aggregates refer to Germany after unification

Source: OECD - SNA68

Final Expenditure Prices Index (Experimental) – May 2001

Contact: Richard Clegg Tel: 020-7533 5822 E-mail: fepi@ons.gov.uk

Note that further development work is ongoing and the FEPI will be available only as an experimental index until this work has been completed.

Summary

The rate of inflation for the FEPI increased from 1.9 per cent in April to 2.1 per cent in May, the highest recorded figure since March 1999, due to higher inflation for consumer prices.

The FEPI annual percentage change

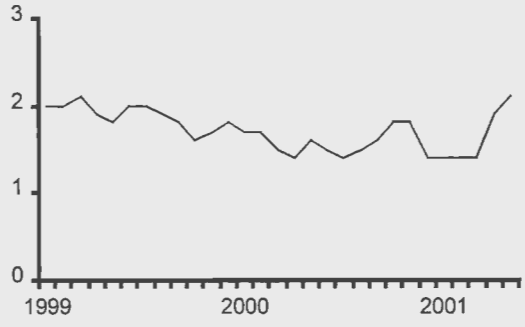


Table A

Final Expenditure Prices Index and components (January 1992=100 and annual percentage change)

		ICP		IIP		IGP		INP		FEPI	
		Index	% change	Index	% change	Index	% change	Index	% change	Index	% change
2000	Dec	124.5	1.1	118.8	1.5	124.1	2.3	130.0	2.6	123.3	1.4
2001	Jan	123.7	1.1	118.9	1.8	124.2	2.1	130.4	2.9	122.8	1.4
	Feb	124.2	1.1	118.9	1.8	124.2	2.1	130.5	2.9	123.1	1.4
	Mar	124.6	1.1	119.0	1.4	124.2	2.1	130.7	3.1	123.4	1.4
	Apr	125.6	1.5	119.6	2.0	125.6	2.4	132.4	3.6	124.5	1.9
	May	126.6	2.0	120.2	1.8	126.0	2.4	132.7	3.7	125.2	2.1

The Index of Consumer Prices (ICP)

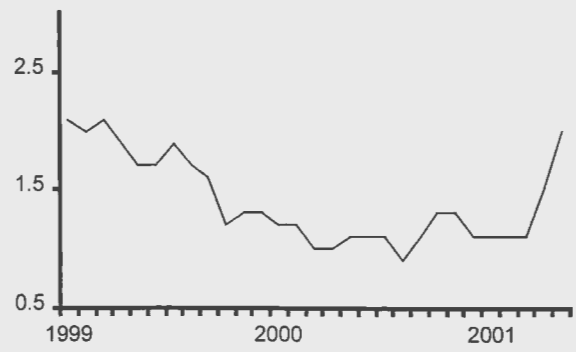
Consumer price inflation, as measured by the ICP, increased substantially from 1.5 per cent in April to 2.0 per cent in May. There were upward effects for most categories within the ICP.

The largest upward effect came from food and non-alcoholic beverages where the annual rate of inflation increased from 4.2 per cent in April to 5.9 per cent in May, mainly due to price increases for fresh vegetables and potatoes. Poor weather conditions since last autumn have hampered planting and harvesting.

Further large upward effects came from:

- Fuels and lubricants for vehicles, where the annual rate of inflation was less negative in May, at minus 1.6 per cent, than in April at minus 4.9 per cent, due to higher crude oil prices.
- Transport services, where the annual rate of inflation increased from 8.6 per cent in April to 10.6 per cent in May, due to higher prices for passenger transport by road, air and sea.

The ICP annual percentage change



The Index of Investment Prices (IIP)

Investment price inflation, as measured by the IIP, fell from 2.0 per cent in April to 1.8 per cent in May.

Downward pressure came from:

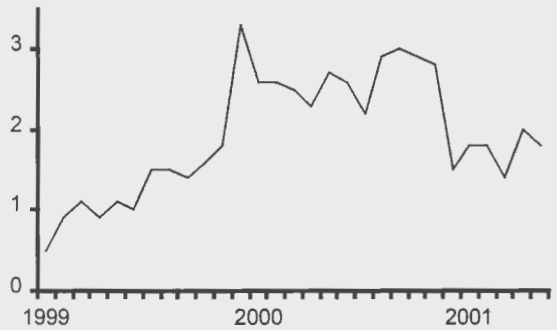
- Transport equipment, where the annual rate of inflation was more negative in May, at minus 1.2 per cent, than in the previous month at minus 0.2 per cent.

- Other machinery and equipment, where the annual rate of inflation was more negative in May, at minus 2.3 per cent, than in the previous month at minus 1.9 per cent.

Upward pressure came from:

- Transfer costs of land and buildings, where the annual rate of inflation increased from 10.5 per cent in April to 11.3 per cent in May.

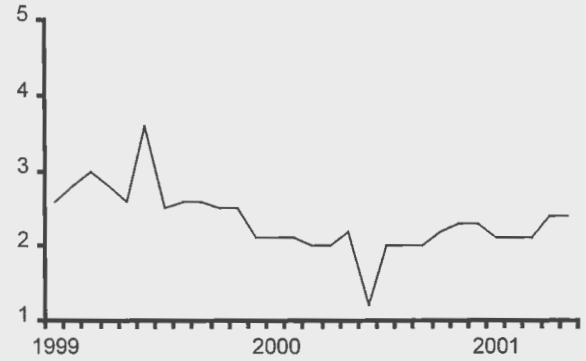
The IIP annual percentage change



The Index of Government Prices - IGP

The rate of inflation for the IGP was the same in May as in the previous month, at 2.4 per cent.

The IGP annual percentage change



Comparison between FEPI and other inflation measures

Table B

Measures of Inflation (annual percentage changes)

		FEPI	RPIX	HICP	ICP(FEPI)	PPI
2000	Dec	1.4	2.0	0.9	1.1	2.4
2001	Jan	1.4	1.8	0.9	1.1	1.8
	Feb	1.4	1.9	0.8	1.1	1.4
	Mar	1.4	1.9	1.0	1.1	1.0
	Apr	1.9	2.0	1.1	1.5	0.6
	May	2.1	2.4	1.7	2.0	0.6

NOTES

1. The headline measure of inflation is the Retail Prices Index (RPI). The RPI should be used as the main indicator of inflation affecting average households.

2. The Final Expenditure Prices Index (FEPI) is a measure of the change in the prices paid by UK households, businesses, government and non-profit institutions for final purchases of goods and services. Intermediate purchases by businesses are excluded. The FEPI is made up of four components:

The Index of Consumer Prices (ICP)
The Index of Investment Prices (IIP)
The Index of Government Prices (IGP)
The Index of Non-Profit Institutions Prices (INP).

3. The ICP measures inflation affecting all consumers in the UK. The price indicators used in the ICP are taken mainly from the Retail Prices Index (RPI).

4. The IIP is a measure of the change in the prices paid for capital goods by businesses and by government. It also covers new construction projects and dwellings built for consumers, businesses and government. The price indicators used are mainly Producer Price Indices (PPIs), implied import deflators, construction output price indices and average house price indicators.

5. The IGP measures inflation affecting government. It covers expenditure by central and local government on pay and on procurement. The price indicators used are mainly Average Earnings Indices (to reflect labour costs), PPIs and RPIs (to reflect the cost of goods consumed by government).

6. The INP measures inflation affecting non-profit institutions serving households (NPISHs); mainly universities, higher and further education colleges and charities. The price indicators used are mainly a higher education pay and prices index and an appropriate component of the Average Earnings Index.

7. The IGP(P) is a variant version of the IGP which incorporates government output prices for a number of areas of government expenditure (which comprise around 65% of general government final consumption expenditure) and therefore reflects movements in productivity. The most significant expenditure items covered by government output prices are health, education, local authority personal social services and social security administration. The IGP(P) feeds into a variant version of the FEPI, the FEPI(P), which differs from the FEPI solely because of the inclusion of government output prices. The IGP(P) and FEPI(P) are only available as annual indices.

8. An article providing further details about the FEPI appears on the National Statistics website:
[http://www.statistics.gov.uk/themes/economy/Articles/PricesAndInflation/FEPI.asp].

9. FEPI data are available in computer readable form from the National Statistics website:
[http://www.statistics.gov.uk/press_release/experimental.asp].

1 Final Expenditure Prices Index (FEPI) Summary Table

Experimental price indices

	Index of Consumer Prices ICP	Index of Investment Prices IIP	Index of Government Prices IGP	Index of NPISH Prices INP[1]	Final Expenditure Prices Index FEPI	Annual percentage changes ICP	IIP	IGP	INP	FEPI
January 1992=100										
Weights										
1998	601	178	198	23	1000					
1999	607	180	190	24	1000					
2000	605	186	185	24	1000					
2001	602	188	185	24	1000					
	VASH	CUSK	CUSO	ZIUS	CUSP	MKVB	CGBF	CGBJ	ZIUT	CGBK
1997 Apr	117.2	112.9	114.5	116.9	115.7	2.3	0.6	1.2	1.9	1.8
May	117.6	112.8	114.5	117.0	115.9	2.3	0.5	1.1	1.6	1.8
Jun	117.9	113.0	114.5	117.1	116.1	2.4	0.8	1.1	1.6	1.8
Jul	117.5	113.4	115.9	119.2	116.2	2.6	1.3	2.2	2.8	2.3
Aug	118.1	113.6	115.5	119.9	116.6	2.6	1.2	1.7	3.1	2.2
Sep	118.6	113.7	115.8	120.0	116.9	2.4	1.6	1.7	3.0	2.1
Oct	118.7	113.4	115.4	119.3	116.9	2.5	0.9	1.7	3.1	2.1
Nov	118.8	113.5	115.4	119.0	116.9	2.5	1.4	1.6	2.9	2.1
Dec	118.9	113.2	116.1	119.5	117.1	2.3	0.8	1.6	3.0	1.9
1998 Jan	118.4	113.2	116.2	119.6	116.8	2.1	0.8	1.6	3.0	1.7
Feb	119.0	112.8	116.0	119.7	117.1	2.3	0.2	1.6	2.8	1.8
Mar	119.5	113.2	115.7	119.6	117.4	2.4	0.5	1.6	2.7	1.9
Apr	120.2	113.7	117.0	120.5	118.2	2.6	0.7	2.2	3.1	2.2
May	120.8	113.7	117.3	120.9	118.6	2.7	0.8	2.4	3.3	2.3
Jun	120.7	114.1	117.4	121.2	118.6	2.4	1.0	2.5	3.5	2.2
Jul	120.0	114.0	117.8	122.1	118.3	2.1	0.5	1.6	2.4	1.8
Aug	120.5	113.9	117.9	122.6	118.6	2.0	0.3	2.1	2.3	1.7
Sep	121.1	114.0	118.1	122.7	119.0	2.1	0.3	2.0	2.2	1.8
Oct	121.2	113.9	117.9	122.4	119.0	2.1	0.4	2.2	2.6	1.8
Nov	121.3	113.9	118.1	122.3	119.1	2.1	0.4	2.3	2.8	1.9
Dec	121.6	113.4	118.8	122.9	119.4	2.3	0.2	2.3	2.8	2.0
1999 Jan	120.9	113.8	119.2	123.5	119.1	2.1	0.5	2.6	3.3	2.0
Feb	121.4	113.8	119.2	123.5	119.4	2.0	0.9	2.8	3.2	2.0
Mar	122.0	114.4	119.2	123.5	119.9	2.1	1.1	3.0	3.3	2.1
Apr	122.5	114.7	120.3	124.4	120.5	1.9	0.9	2.8	3.2	1.9
May	122.8	115.0	120.4	124.8	120.7	1.7	1.1	2.6	3.2	1.8
Jun	122.8	115.2	121.6	125.5	121.0	1.7	1.0	3.6	3.5	2.0
Jul	122.3	115.7	120.8	126.1	120.7	1.9	1.5	2.5	3.3	2.0
Aug	122.5	115.6	121.0	126.7	120.8	1.7	1.5	2.6	3.3	1.9
Sep	123.0	115.6	121.2	126.7	121.2	1.6	1.4	2.6	3.3	1.8
Oct	122.7	115.7	120.9	126.4	120.9	1.2	1.6	2.5	3.3	1.6
Nov	122.9	115.9	121.1	126.5	121.1	1.3	1.8	2.5	3.4	1.7
Dec	123.2	117.1	121.3	126.7	121.6	1.3	3.3	2.1	3.1	1.8
2000 Jan	122.4	116.8	121.7	126.7	121.1	1.2	2.6	2.1	2.6	1.7
Feb	122.9	116.8	121.7	126.8	121.4	1.2	2.6	2.1	2.7	1.7
Mar	123.2	117.3	121.6	126.8	121.7	1.0	2.5	2.0	2.7	1.5
Apr	123.7	117.3	122.7	127.8	122.2	1.0	2.3	2.0	2.7	1.4
May	124.1	118.1	123.0	128.0	122.6	1.1	2.7	2.2	2.6	1.6
Jun	124.2	118.2	123.1	128.4	122.8	1.1	2.6	1.2	2.3	1.5
Jul	123.6	118.2	123.2	129.3	122.4	1.1	2.2	2.0	2.5	1.4
Aug	123.6	118.9	123.4	129.7	122.6	0.9	2.9	2.0	2.4	1.5
Sep	124.3	119.1	123.6	129.8	123.1	1.1	3.0	2.0	2.4	1.6
Oct	124.3	119.1	123.6	129.6	123.1	1.3	2.9	2.2	2.5	1.8
Nov	124.5	119.2	123.9	129.7	123.3	1.3	2.8	2.3	2.5	1.8
Dec	124.5	118.8	124.1	130.0	123.3	1.1	1.5	2.3	2.6	1.4
2001 Jan	123.7	118.9	124.2	130.4	122.8†	1.1	1.8	2.1	2.9	1.4†
Feb	124.2	118.9	124.2†	130.5	123.1	1.1	1.8	2.1	2.9	1.4
Mar	124.6	119.0	124.2	130.7	123.4	1.1	1.4	2.1	3.1	1.4
Apr	125.6	119.6†	125.6	132.4†	124.5	1.5	2.0†	2.4†	3.6†	1.9
May	126.6	120.2	126.0	132.7	125.2	2.0	1.8	2.4	3.7	2.1

† indicates earliest revision.

1 NPISH = Non-profit institutions serving households.

2 Final Expenditure Prices Index (FEPI) Index of Consumer Prices (ICP)

Experimental price indices

	Food and Non-alcoholic Beverages	Alcoholic Beverages	Tobacco	Clothing and Footwear	Actual Rentals for Housing	Housing Goods and Services[1]	Electricity, Gas and Other Household Fuels	Furnishings, Household Equipment, etc.	Health	Purchase and Operation of Vehicles[2]	Fuels and Lubricants for Vehicles
January 1992=100											
COICOP Division	**01**	**02**	**02**	**03**	**04**	**04**	**04**	**05**	**06**	**07**	**07**
Weights											
1998	124	19	29	69	46	28	38	64	17	80	30
1999	118	19	28	68	46	29	34	64	17	85	30
2000	115	19	28	66	47	30	30	64	17	85	30
2001	112	20	28	66	47	30	28	64	17	82	30
	VARP	VARQ	VARR	VARS	VART	VARU	VARV	VARW	VARX	VARY	VARZ
1999 May	113.7	115.3	180.7	103.2	145.5	136.4	97.1	113.6	149.9	117.1	165.4
Jun	113.2	116.1	181.2	103.1	145.5	136.9	97.1	112.9	150.2	117.0	164.8
Jul	112.3	115.3	184.2	98.2	145.7	137.1	97.4	110.7	153.1	116.3	167.1
Aug	111.8	115.7	184.6	99.6	146.0	137.3	97.5	112.0	153.4	115.6	171.7
Sep	111.8	115.5	184.7	103.5	146.3	137.1	97.8	113.0	153.7	115.2	171.5
Oct	111.7	115.7	184.6	102.6	146.5	137.1	97.9	112.0	154.7	114.6	173.0
Nov	112.2	114.7	184.7	102.8	146.6	137.6	98.2	113.5	155.0	113.8	172.3
Dec	112.4	113.6	184.7	102.0	146.9	137.9	98.9	115.5	155.2	113.0	176.7
2000 Jan	112.3	115.8	184.8	95.2	147.2	138.8	98.7	109.9	156.2	114.1	176.3
Feb	112.2	115.7	186.7	98.4	147.2	139.0	98.8	110.9	156.5	114.2	176.2
Mar	111.5	115.8	186.8	99.8	147.2	138.9	98.8	112.1	156.6	114.7	182.7
Apr	111.1	115.3	198.4	100.8	149.8	134.6	97.6	112.0	157.9	115.0	186.6
May	112.2	115.4	198.6	100.7	149.9	134.7	96.9	112.4	158.2	115.5	185.7
Jun	112.4	115.5	198.9	100.0	150.2	134.7	96.4	111.9	158.4	114.9	194.9
Jul	113.4	115.1	199.0	93.0	150.7	135.0	96.4	109.8	159.9	114.1	196.5
Aug	112.5	114.9	200.2	94.6	150.9	135.5	96.4	110.5	160.2	113.5	188.1
Sep	112.7	115.4	201.5	98.0	151.2	135.7	97.2	112.2	160.4	113.2	191.7
Oct	112.9	115.2	201.6	98.0	151.6	136.0	97.6	111.0	161.7	112.8	186.8
Nov	113.5	114.9	201.6	98.5	151.8	136.2	97.4	112.4	161.8	112.3	191.6
Dec	113.7	113.6	201.6	97.8	152.0	136.7	97.2	114.2	162.3	112.0	188.3
2001 Jan	113.9	115.7	201.6	91.7	152.2	136.9	96.8	109.8	164.1	113.6	180.4
Feb	114.0	116.0	203.6	94.4	152.2	137.5	96.9	111.3	164.2	113.8	181.1
Mar	115.3	116.0	206.4	96.0	152.3	137.3	96.8	112.9	165.6	114.3	175.8
Apr	115.8	116.2	207.2	95.1	155.5	140.3	98.2	112.4	167.8	114.8	177.5
May	118.8	115.9	207.3	95.2	155.8	140.5	98.4	113.2	168.6	115.5	182.7

Annual Percentage Changes

	Food and Non-alcoholic Beverages	Alcoholic Beverages	Tobacco	Clothing and Footwear	Actual Rentals for Housing	Housing Goods and Services[1]	Electricity, Gas and Other Household Fuels	Furnishings, Household Equipment, etc.	Health	Purchase and Operation of Vehicles[2]	Fuels and Lubricants for Vehicles
	VASK	VASL	VASM	VASN	VASO	VASP	MKUP	MKUQ	MKUR	MKUS	MKUT
1999 May	1.0	0.6	11.1	–3.0	3.3	2.5	–1.1	0.6	6.1	–0.7	6.4
Jun	1.0	1.8	11.3	–2.8	3.1	2.9	–0.4	0.6	5.8	–0.7	6.5
Jul	0.4	0.7	13.0	–1.6	3.1	2.9	0.2	–0.1	7.1	–0.9	7.5
Aug	–1.1	1.0	13.2	–2.3	3.1	2.9	0.4	0.4	7.3	–1.4	10.4
Sep	–0.8	0.6	13.2	–2.9	3.0	2.6	0.6	0.5	7.5	–1.9	10.9
Oct	–1.1	0.6	13.0	–2.7	2.9	2.4	0.4	0.4	6.0	–1.9	12.2
Nov	–0.4	1.0	13.0	–3.2	2.8	2.5	0.8	0.3	6.2	–2.0	12.5
Dec	–1.1	0.4	9.8	–3.4	2.8	2.8	1.7	–0.3	6.3	–1.9	17.1
2000 Jan	–1.7	0.6	7.4	–3.4	3.1	3.2	1.5	–0.4	6.8	–2.3	17.9
Feb	–1.9	0.2	8.5	–2.4	3.2	3.5	1.6	–1.0	6.8	–2.2	18.3
Mar	–1.9	0.5	4.9	–2.6	3.1	3.3	1.4	–1.6	6.8	–1.9	16.1
Apr	–1.7	0.3	9.8	–1.8	3.0	–1.3	0.3	–0.3	5.5	–2.0	12.7
May	–1.3	0.1	9.9	–2.4	3.0	–1.2	–0.2	–1.1	5.5	–1.4	12.3
Jun	–0.7	–0.5	9.8	–3.0	3.2	–1.6	–0.7	–0.9	5.5	–1.8	18.3
Jul	1.0	–0.2	8.0	–5.3	3.4	–1.5	–1.0	–0.8	4.4	–1.9	17.6
Aug	0.6	–0.7	8.5	–5.0	3.4	–1.3	–1.1	–1.3	4.4	–1.8	9.6
Sep	0.8	–0.1	9.1	–5.3	3.3	–1.0	–0.6	–0.7	4.4	–1.7	11.8
Oct	1.1	–0.4	9.2	–4.5	3.5	–0.8	–0.3	–0.9	4.5	–1.6	8.0
Nov	1.2	0.2	9.1	–4.2	3.5	–1.0	–0.8	–1.0	4.4	–1.3	11.2
Dec	1.2	–	9.1	–4.1	3.5	–0.9	–1.7	–1.1	4.6	–0.9	6.6
2001 Jan	1.4	–0.1	9.1	–3.7	3.4	–1.4	–1.9	–0.1	5.1	–0.4	2.3
Feb	1.6	0.3	9.1	–4.1	3.4	–1.1	–1.9	0.4	4.9	–0.4	2.8
Mar	3.4	0.2	10.5	–3.8	3.5	–1.2	–2.0	0.7	5.7	–0.3	–3.8
Apr	4.2	0.8	4.4	–5.7	3.8	4.2	0.6	0.4	6.3	–0.2	–4.9
May	5.9	0.4	4.4	–5.5	3.9	4.3	1.5	0.7	6.6	–	–1.6

† indicates earliest revision.

1 Includes materials and services for maintenance and repair of the dwelling and other housing services excluding household fuels.
2 Excludes fuels and lubricants.

2 Final Expenditure Prices Index (FEPI) Index of Consumer Prices (ICP)

continued

Experimental price indices

	Transport Services	Communication	Major Durables for Recreation and Culture	Other Recreation and Culture	Education	Restaurants and Hotels	Miscellaneous Goods and Services	Index of Consumer Prices ICP	*Of which: goods*	*Of which: services*
January 1992=100										
COICOP Division	**07**	**08**	**09**	**09**	**10**	**11**	**12**			
Weights										
1998	38	22	29	99	15	126	129	1000	556	444
1999	39	22	31	100	16	126	128	1000	554	446
2000	41	22	34	100	16	126	130	1000	548	452
2001	42	23	35	101	15	129	131	1000	544	456
	VASA	VASB	VASC	VASD	VASE	VASF	VASG	VASH	VASI	VASJ
1999 May	129.2	85.5	85.0	121.1	139.0	134.1	133.0	122.8	115.6	132.7
Jun	129.8	85.2	84.1	121.0	139.0	134.6	133.3	122.8	115.3	133.0
Jul	130.1	84.8	82.9	120.5	139.0	134.7	134.7	122.3	114.1	133.5
Aug	130.2	85.0	81.8	120.4	139.0	135.0	134.7	122.5	114.4	133.6
Sep	130.0	84.5	81.2	120.4	145.0	135.2	135.0	123.0	114.8	134.1
Oct	129.5	83.2	80.7	120.7	146.5	135.5	133.8	122.7	114.5	133.9
Nov	129.6	83.3	80.3	120.8	146.5	135.6	134.3	122.9	114.5	134.3
Dec	129.7	83.8	80.3	120.8	146.5	135.7	134.8	123.2	114.8	134.5
2000 Jan	130.3	83.6	79.6	120.5	146.5	136.2	135.1	122.4	113.2	135.0
Feb	130.4	83.2	79.4	120.9	146.5	136.5	135.3	122.9	113.8	135.2
Mar	130.4	83.1	78.6	121.1	146.5	136.9	135.7	123.2	114.2	135.5
Apr	132.7	82.5	78.6	121.6	146.5	137.7	135.5	123.7	114.7	136.1
May	133.1	82.1	78.5	122.0	146.5	138.6	136.0	124.1	114.9	136.6
Jun	133.5	81.9	77.2	122.0	146.5	139.0	136.3	124.2	114.9	137.0
Jul	134.5	82.8	76.2	121.7	146.5	139.6	136.0	123.6	113.6	137.3
Aug	135.1	81.2	76.5	121.7	146.5	140.3	136.3	123.6	113.4	137.6
Sep	134.7	80.6	76.0	122.3	150.5	140.7	136.9	124.3	114.3	138.0
Oct	135.4	80.3	75.6	122.4	153.9	141.0	136.9	124.3	114.0	138.4
Nov	135.3	80.4	75.2	121.8	153.9	141.3	137.3	124.5	114.4	138.5
Dec	135.4	79.4	74.4	121.9	153.9	141.5	137.3	124.5	114.3	138.5
2001 Jan	137.0	77.1	73.2	121.6	153.9	141.7	137.9	123.7	112.6	139.0
Feb	133.4	76.2	73.8	122.1	153.9	142.0	138.5	124.2	113.5	138.9
Mar	134.3	75.0	73.8	122.2	153.9	142.6	138.5	124.6	114.2	139.1
Apr	144.1	74.7	73.3	122.9	153.9	143.6	139.8	125.6	114.3	141.3
May	147.2	75.0	73.8	123.2	153.9	144.2	140.6	126.6	115.4	142.1

Annual Percentage Changes

	Transport Services	Communication	Major Durables for Recreation and Culture	Other Recreation and Culture	Education	Restaurants and Hotels	Miscellaneous Goods and Services	Index of Consumer Prices ICP	*Of which: goods*	*Of which: services*
	MKUU	MKUV	MKUW	MKUX	MKUY	MKUZ	MKVA	MKVB	MKVC	MKVD
1999 May	2.7	–2.7	–7.6	1.7	5.7	4.1	2.9	1.7	0.3	3.3
Jun	2.9	–3.0	–7.9	1.8	5.7	4.2	3.1	1.7	0.4	3.4
Jul	2.8	–3.1	–8.6	1.6	5.7	3.7	4.3	1.9	0.4	3.6
Aug	2.8	–1.8	–9.2	1.3	5.7	3.4	4.2	1.7	0.2	3.6
Sep	2.8	–2.3	–9.1	1.0	5.4	3.2	4.4	1.6	–	3.6
Oct	3.0	–3.8	–8.9	1.0	5.4	3.2	2.5	1.2	–0.1	3.0
Nov	3.0	–3.6	–9.3	1.0	5.4	3.0	2.4	1.3	–0.2	3.1
Dec	3.1	–3.0	–9.0	0.9	5.4	2.8	2.5	1.3	–0.3	3.1
2000 Jan	2.8	–3.2	–8.5	0.8	5.4	2.9	3.1	1.2	–0.4	3.3
Feb	2.4	–3.7	–8.0	0.9	5.4	2.9	3.0	1.2	–0.4	3.3
Mar	2.4	–3.8	–8.4	0.7	5.4	3.0	3.0	1.0	–0.8	3.3
Apr	3.1	–4.2	–7.7	0.6	5.4	3.1	2.0	1.0	–0.4	2.8
May	3.0	–4.0	–7.6	0.7	5.4	3.4	2.3	1.1	–0.6	2.9
Jun	2.9	–3.9	–8.2	0.8	5.4	3.3	2.3	1.1	–0.3	3.0
Jul	3.4	–2.4	–8.1	1.0	5.4	3.6	1.0	1.1	–0.4	2.8
Aug	3.8	–4.5	–6.5	1.1	5.4	3.9	1.2	0.9	–0.9	3.0
Sep	3.6	–4.6	–6.4	1.6	3.8	4.1	1.4	1.1	–0.4	2.9
Oct	4.6	–3.5	–6.3	1.4	5.1	4.1	2.3	1.3	–0.4	3.4
Nov	4.4	–3.5	–6.4	0.8	5.1	4.2	2.2	1.3	–0.1	3.1
Dec	4.4	–5.3	–7.3	0.9	5.1	4.3	1.9	1.1	–0.4	3.0
2001 Jan	5.1	–7.8	–8.0	0.9	5.1	4.0	2.1	1.1	–0.5	3.0
Feb	2.3	–8.4	–7.1	1.0	5.1	4.0	2.4	1.1	–0.3	2.7
Mar	3.0	–9.7	–6.1	0.9	5.1	4.2	2.1	1.1	–	2.7
Apr	8.6	–9.5	–6.7	1.1	5.1	4.3	3.2	1.5	–0.3	3.8
May	10.6	–8.6	–6.0	1.0	5.1	4.0	3.4	2.0	0.4	4.0

† indicates earliest revision.

3 Final Expenditure Prices Index (FEPI) Index of Investment Prices (IIP)

Experimental price indices

	Equipment				Construction				
	Transport Equipment	Other Machinery and Equipment	Intangible Fixed Assets[1]	Total Equipment	Dwellings	Other Buildings and Structures	Transfer Costs of Land and Buildings	Total Construction	Index of Investment Prices IIP
January 1992=100									
Weights									
1998	97	392	33	521	181	263	35	479	1000
1999	98	389	32	519	178	260	42	481	1000
2000	99	382	32	513	179	267	41	487	1000
2001	109	376	28	514	174	263	49	486	1000
	CUSH	CUSG	MJYL	ZIWS	CUSJ	CUSF	CUSI	ZIWT	CUSK
1999 May	120.6	96.2	125.1	102.3	126.4	125.1	187.3	129.8	115.0
Jun	120.7	95.9	125.4	102.1	127.6	125.5	189.3	130.6	115.2
Jul	120.4	95.4	125.8	101.7	131.0	125.9	191.1	132.3	115.7
Aug	121.1	94.4	125.2	101.0	132.0	126.3	192.4	132.9	115.6
Sep	120.9	93.9	124.9	100.5	133.4	126.5	193.7	133.7	115.6
Oct	121.0	93.2	124.9	100.0	134.0	126.7	199.0	134.4	115.7
Nov	122.5	93.8	124.5	100.7	133.1	127.0	196.5	134.0	115.9
Dec	123.1	94.0	124.5	101.0	138.6	127.1	201.4	136.5	117.1
2000 Jan	121.7	93.6	125.9	100.5	137.3	127.3	205.4	136.4	116.8
Feb	121.8	93.8	126.1	100.7	137.0	127.5	203.2	136.3	116.8
Mar	121.7	93.1	125.8	100.1	140.7	127.9	209.1	138.1	117.3
Apr	119.9	92.4	126.4	99.3	142.4	128.3	215.9	139.4	117.3
May	120.7	93.1	127.4	100.0	143.7	128.7	217.1	140.2	118.1
Jun	121.5	92.8	127.3	99.9	143.8	129.1	218.5	140.5	118.2
Jul	122.2	92.6	127.1	99.9	143.4	129.6	218.6	140.7	118.2
Aug	121.3	93.1	126.8	100.1	145.9	130.0	222.1	142.1	118.9
Sep	122.1	93.3	127.1	100.4	145.4	130.3	224.3	142.2	119.1
Oct	121.6	92.8	126.9	99.9	146.7	130.6	225.0	142.9	119.1
Nov	119.9†	92.5†	127.7	99.4†	147.8	131.4†	226.4	143.8†	119.2
Dec	120.2	92.0	128.0	99.1	146.4	131.6	223.7	143.2	118.8
2001 Jan	119.8	91.7	127.7†	98.7	147.2	131.9	227.0	143.9	118.9
Feb	119.9	91.5	128.9	98.7	146.8	132.1	228.4	144.0	118.9
Mar	120.2	91.1	129.1	98.4	148.1	132.4	230.5	144.7	119.0
Apr	119.7	90.6	130.7	98.0	152.3†	132.6	238.5†	146.9	119.6†
May	119.3	91.0	131.4	98.3	154.0	132.9	241.6	147.8	120.2

Annual Percentage Changes

	Equipment				Construction				
	Transport Equipment	Other Machinery and Equipment	Intangible Fixed Assets[1]	Total Equipment	Dwellings	Other Buildings and Structures	Transfer Costs of Land and Buildings	Total Construction	Index of Investment Prices IIP
	CGBC	CGBB	MJYM	ZIWU	CGBE	CGBA	CGBD	ZIWV	CGBF
1999 May	2.6	–5.6	1.4	–3.7	9.0	3.3	12.6	6.2	1.1
Jun	3.1	–4.9	2.2	–2.9	6.5	3.1	12.2	5.2	1.0
Jul	2.4	–4.6	2.5	–2.9	9.3	2.9	11.9	6.1	1.5
Aug	2.5	–4.8	2.4	–3.0	9.7	2.9	12.8	6.2	1.5
Sep	2.3	–4.5	1.5	–2.8	9.5	2.7	12.6	6.1	1.4
Oct	1.9	–4.8	1.6	–3.2	10.5	2.7	14.9	6.7	1.6
Nov	2.5	–4.0	0.9	–2.4	10.0	2.7	13.8	6.3	1.8
Dec	2.6	–3.3	0.5	–1.9	16.6	2.6	17.9	9.0	3.3
2000 Jan	1.6	–4.0	1.2	–2.6	14.3	2.6	18.0	8.3	2.6
Feb	1.1	–3.7	0.9	–2.5	14.6	2.6	16.2	8.3	2.6
Mar	1.1	–4.0	0.9	–2.7	14.6	2.6	16.4	8.2	2.5
Apr	–0.5	–4.5	1.1	–3.4	14.6	2.8	17.2	8.4	2.3
May	0.1	–3.2	1.8	–2.2	13.7	2.9	15.9	8.0	2.7
Jun	0.7	–3.2	1.5	–2.2	12.7	2.9	15.4	7.6	2.6
Jul	1.5	–2.9	1.0	–1.8	9.5	2.9	14.4	6.3	2.2
Aug	0.2	–1.4	1.3	–0.9	10.5	2.9	15.4	6.9	2.9
Sep	1.0	–0.6	1.8	–0.1	9.0	3.0	15.8	6.4	3.0
Oct	0.5	–0.4	1.6	–0.1	9.5	3.1	13.1	6.3	2.9
Nov	–2.1†	–1.4†	2.6	–1.3†	11.0	3.5†	15.2	7.3†	2.8
Dec	–2.4	–2.1	2.8	–1.9	5.6	3.5	11.1	4.9	1.5
2001 Jan	–1.6	–2.0	1.4	–1.8	7.2	3.6	10.5	5.5	1.8
Feb	–1.6	–2.5	2.2	–2.0	7.2	3.6	12.4	5.6	1.8
Mar	–1.2	–2.1	2.6	–1.7	5.3	3.5	10.2	4.8	1.4
Apr	–0.2	–1.9	3.4†	–1.3	7.0†	3.4	10.5†	5.4	2.0†
May	–1.2	–2.3	3.1	–1.7	7.2	3.3	11.3	5.4	1.8

† indicates earliest revision.

1 This covers mineral exploration, computer software and entertainment, literary and artistic originals.

4 Final Expenditure Prices Index - FEPI
Index of Government Prices - IGP

Experimental price indices

				Annual percentage changes		
	Local Government Pay & Procurement	Central Government Pay & Procurement	Index of Government Prices	Local Government Pay & Procurement	Central Government Pay & Procurement	Index of Government Prices
January 1992=100						
Weights						
1998	383	617	1000			
1999	382	618	1000			
2000	382	618	1000			
2001	393	607	1000			
	CUSL	CUSM	CUSO	CGBG	CGBH	CGBJ
1999 May	123.9	118.2	120.4	2.7	2.6	2.6
Jun	126.1	118.8	121.6	4.5	3.0	3.6
Jul	124.6	118.5	120.8	3.1	2.2	2.5
Aug	124.7	118.7	121.0	3.1	2.3	2.6
Sep	125.3	118.7	121.2	3.2	2.2	2.6
Oct	125.2	118.2	120.9	3.3	2.1	2.5
Nov	125.4	118.4	121.1	3.3	2.0	2.5
Dec	125.5	118.8	121.3	2.6	1.9	2.1
2000 Jan	125.6	119.4	121.7	2.7	1.8	2.1
Feb	125.6	119.3	121.7	2.8	1.7	2.1
Mar	125.5	119.2	121.6	2.6	1.6	2.0
Apr	127.7	119.7	122.7	3.0	1.4	2.0
May	127.8	120.0	123.0	3.1	1.5	2.2
Jun	127.9	120.1	123.1	1.4	1.1	1.2
Jul	127.9	120.2	123.2	2.6	1.4	2.0
Aug	128.0	120.5	123.4	2.6	1.5	2.0
Sep	128.5	120.6	123.6	2.6	1.6	2.0
Oct	128.5	120.6	123.6	2.6	2.0	2.2
Nov	128.8	120.9	123.9	2.7	2.1	2.3
Dec	128.8	121.2	124.1	2.6	2.0	2.3
2001 Jan	128.8	121.4	124.2	2.5	1.7	2.1
Feb	128.9	121.4	124.2†	2.6	1.8	2.1
Mar	128.8	121.3†	124.2	2.6	1.8	2.1
Apr	130.6†	122.6	125.6	2.3†	2.4†	2.4†
May	130.8	123.1	126.0	2.3	2.6	2.4

† indicates earliest revision.

5 Final Expenditure Prices Index - FEPI(P) Incorporating implied government output prices

Experimental price indices

	Index of Consumer Prices ICP	Index of Investment Prices IIP	Index of Government Prices IGP(P)	Index of NPISH Prices INP[1]	Final Expenditure Prices Index FEPI(P)	Annual percentage changes ICP	IIP	IGP(P)	INP	FEPI(P)
January 1992=100										
Weights										
1998	601	178	198	23	1000					
1999	607	180	190	24	1000					
2000	605	186	185	24	1000					
2001	602	188	185	24	1000					
	VASH	CUSK	LGTZ	ZIUS	LGUA	MKVB	CGBF	GXVN	ZIUT	GXVO
1992	102.1	98.8	101.0	102.0	101.2	..	..	..	..	..
1993	105.5	99.8	103.8	106.3	104.0	3.3	1.0	2.8	4.2	2.8
1994	108.2	103.0	106.1	109.4	106.7	2.6	3.2	2.2	2.9	2.6
1995	111.6	108.5	107.9	112.4	110.1	3.1	5.3	1.7	2.7	3.2
1996	114.8	111.8	110.4	115.3	113.2	2.9	3.0	2.3	2.6	2.8
1997	117.7	113.1	111.2	118.1	115.3	2.5	1.2	0.7	2.4	1.9
1998	120.4	113.7	113.5	121.4	117.6	2.3	0.5	2.1	2.8	2.0
1999	122.4	115.2	118.2	125.4	120.1	1.7	1.3	4.1	3.3	2.1
2000	123.8	118.2	122.1	128.6	122.3	1.1	2.6	3.3	2.6	1.8

† indicates earliest revision.

1 NPISH = Non-profit institutions serving households.

6 Final Expenditure Prices Index - FEPI(P) Index of Government Prices incorporating implied output prices - IGP(P)

Experimental price indices

	Local Government Pay & Procurement	Central Government Pay & Procurement	Index of Government Prices	Annual percentage changes Local Government Pay & Procurement	Central Government Pay & Procurement	Index of Government Prices
January 1992=100						
Weights						
1998	383	617	1000			
1999	382	618	1000			
2000	382	618	1000			
2001	393	607	1000			
	LGTU	LGTX	LGTZ	GXVL	GXVM	GXVN
1992	100.1	101.6	101.0	..	..	..
1993	101.1	105.5	103.8	1.0	3.8	2.8
1994	103.7	107.7	106.1	2.6	2.1	2.2
1995	106.2	109.0	107.9	2.4	1.2	1.7
1996	108.4	111.7	110.4	2.1	2.5	2.3
1997	110.0	112.0	111.2	1.5	0.3	0.7
1998	112.2	114.5	113.5	2.0	2.2	2.1
1999	116.0	119.6	118.2	3.4	4.5	4.1
2000	120.5	123.1	122.1	3.9	2.9	3.3

† indicates earliest revision.

National Statistics Website

Your introduction to National Statistics key products and services.

Data free online

Use official statistics? Now spend less time searching for the data you need. Access National Statistics online. Visit the new website which brings together a broad range of statistics from Government departments. The site is organised into thirteen subjects - "Themes" - and offers a simple and quick route map to all our products and services as well as free access to both PDFs of our books as well as a database full of statistical information and data.

www.statistics.gov.uk

national STATISTICS

E-Commerce Inquiry to Business 2000

Magdalen Williams
Financial, International and Innovation Inquiries Division
Office for National Statistics
Room D.256
Government Buildings
Cardiff Road
NEWPORT NP10 8XG
Tel: 01633 812004
Fax: 020 7389 9805
E-mail: magdalen.williams@ons.gov.uk

Introduction

E-commerce is likely to have a huge impact on the way we do business. It has the potential to lead to dramatic growth in trade, increase markets, improve efficiency and effectiveness and transform business processes. In recognition of its significance in the future performance of the economy, the UK Government set itself the target of becoming 'the best environment in the world to do e-commerce.'[1]

In response to this policy need, as reported in *Economic Trends* in March, the Office for National Statistics (ONS) has developed a package of measures that will help monitor the UK's progress towards this aim. One strand of the strategy is a survey of UK business that asks about their use of, and attitude to, the internet and e-commerce. This article sets out some of the results of the first annual E-commerce Inquiry (covering the year 2000), which were published on 15 May 2001, as well as some additional analysis. A further article is planned for September's *Economic Trends* to publish the results of other e-commerce work which is in hand.

The ONS's E-commerce Inquiry

The ONS's E-commerce Inquiry is part of an European Union (EU) initiative to produce comparable data for the EU countries. This comparison is due to be published by the Statistical Office of the EU (Eurostat) by the end of 2001. The UK element was a survey of 9,000 businesses randomly sampled from the Interdepartmental Business Register, stratified by employment size. The sampling methodology ensured wide coverage of the UK economy and the estimates produced cover all sectors except agriculture, fishing, mining, construction and the public sector, and all businesses with employment of 10 or more.[2]

The survey used the definition of e-commerce that was agreed by the Organisation for Economic Co-operation and Development (OECD) and the EU:

> "the sale or purchase of goods or services, where agreement between buyer and seller to transfer ownership occurs over a computer-mediated network."

In other words, it is the method by which the order is placed which determines whether a transaction is e-commerce - not the payment or delivery channels. The survey attempted to capture the level of wider electronic transactions including electronic data interchange (EDI), as well as those via the internet itself.

The E-commerce Inquiry was carried out in line with the rigorous standards of all National Statistics. However, it is important to realise that many businesses do not separately monitor e-commerce transactions (at least not in the same way) and could provide only estimates of the levels of their e-commerce sales and purchases.

Results of the survey

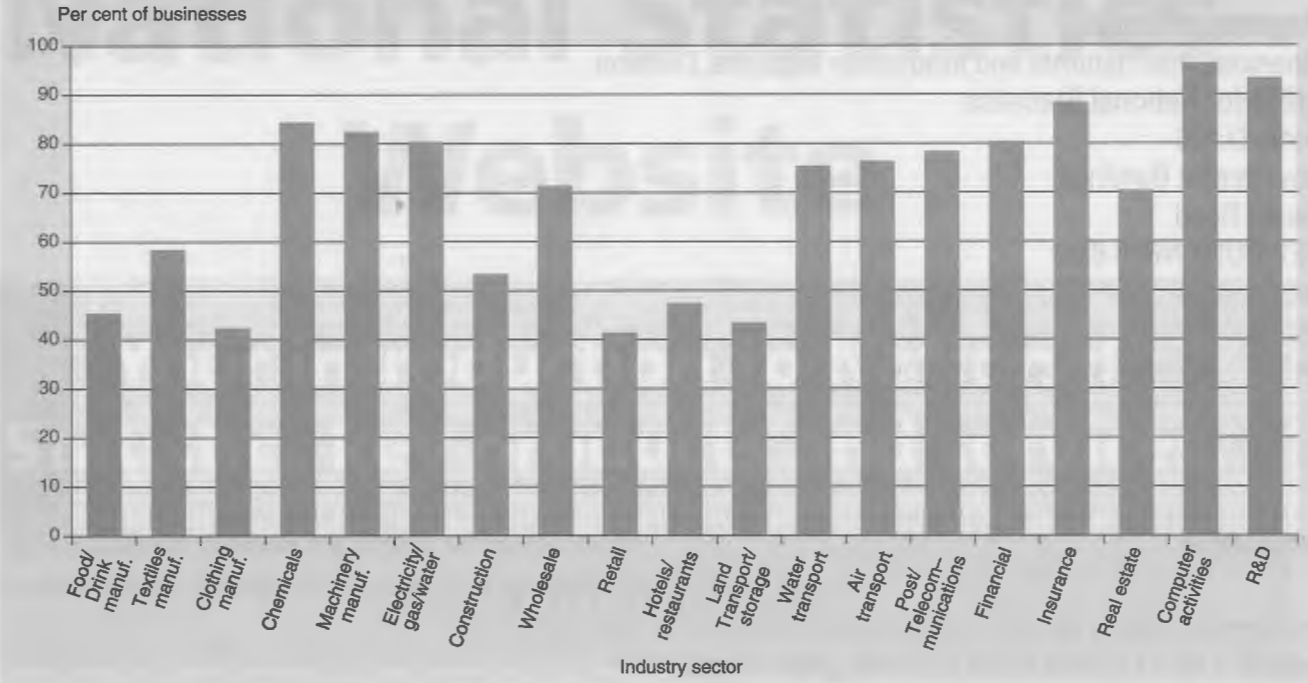
Use of the internet

The results of the E-commerce Inquiry show that 92 per cent of UK businesses now use PCs, workstations or terminals. If the data are weighted according to the size of the business[3], this figure rises to 98 per cent. The picture is consistent across most industries and most size of businesses and the only exceptions appear in smaller businesses in the manufacturing and hotel and catering sectors where the figure is around 70 per cent.

The overall percentage web access is lower at 63 per cent[4]. This masks major variations (see Chart 1). For example, less than half of

Chart **1**

Businesses with web access



food and clothing manufacturers, retail, catering and transportion have access to the web. Meanwhile, over 90 per cent of the computing industry have access and the figure for the largest businesses across all sectors is 94 per cent.

Most businesses have been using the web for about a year, with this increasing to two years for those with more than 250 employees. Perhaps surprisingly, only 11 per cent more businesses plan to start using the web during the next year, with the remaining 25 per cent of respondents saying that they did not have any plans for it in 2001. This reluctance is most marked in the smallest companies surveyed (Chart 2).

Websites

61 per cent of businesses now have their own, or third party, websites[5], with a further 19 per cent planning to set one up within a year[6]. There are some sector variations as Chart 3 shows. More than a third of respondents with less than 50 employees stated that they will not set up a website in the next year.

Chart **2**

Planned web access

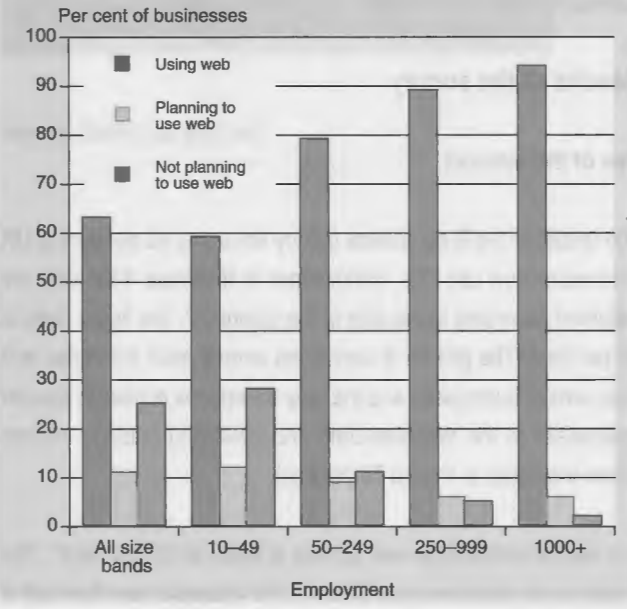
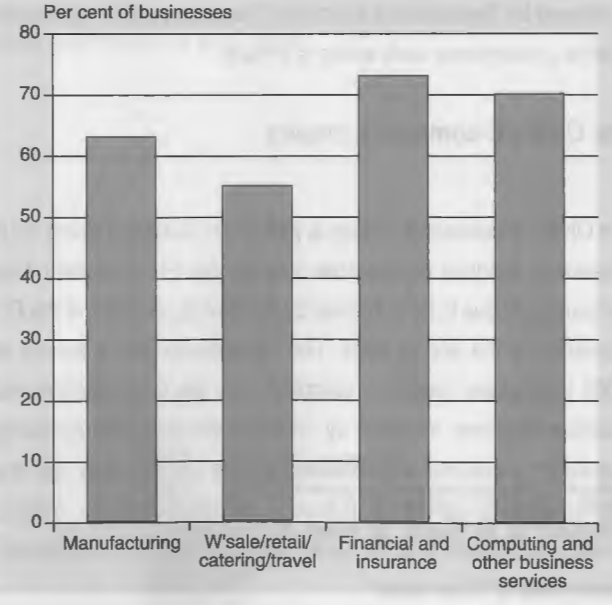


Chart **3**

Businesses with own or third party web site

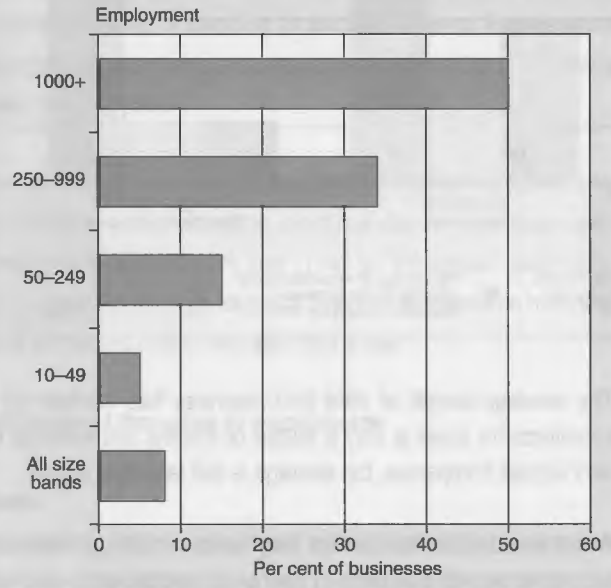


Type of internet connection

Of the businesses who have internet access, 46 per cent use dial-up connections and 32 per cent use ISDN lines. Only 8 per cent have broadband connections. The level of broadband connection varies from 5 per cent for the smallest companies surveyed to 50 per cent for those with 1000+ employees[7] (Chart 4).

Chart **4**

Per cent of businesses using broadband connection



Barriers to using the internet

The survey asked respondents to indicate which of the suggested reasons were barriers their business faced in using the internet. Around 50 per cent of respondents said the following were of some importance or very important:

- cost of provision and access charges;
- lack of knowledge;
- no perceived benefits;
- lost working time through 'surfing';
- slow or unstable data communication.

These problems were almost equally important across industry and size of business. The barrier that was of most importance was the lack of security through viruses and hackers. 64 per cent of respondents overall said this was a barrier to them, increasing to 80 per cent for those with 1,000+ employees.

Sales by e-commerce

Businesses were asked whether they used the internet or other computer-mediated networks (such as EDI) to make sales. Overall, 16 per cent already did[8], 12 per cent planned to in the next year and nearly 70 per cent did not plan to use e-commerce for sales within a year. This however varies with the size of business (Chart 5) and sector of industry (Chart 6).

Chart **5**

Internet usage for sales

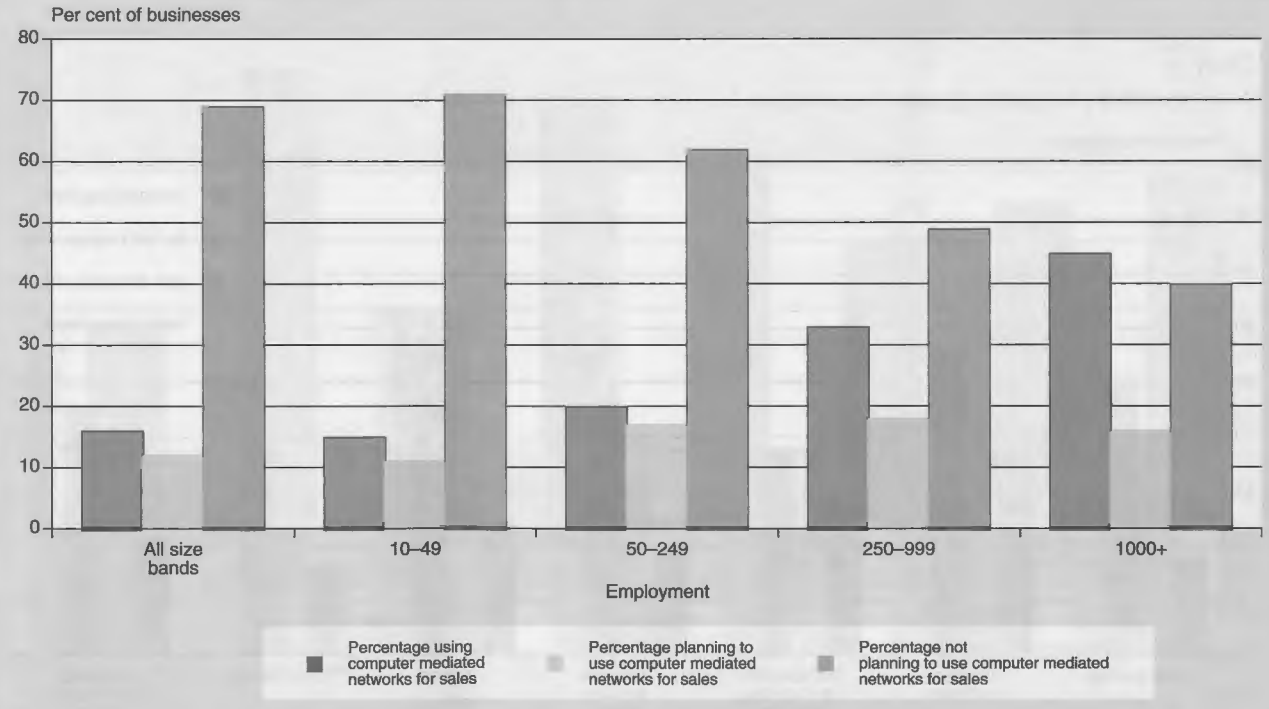
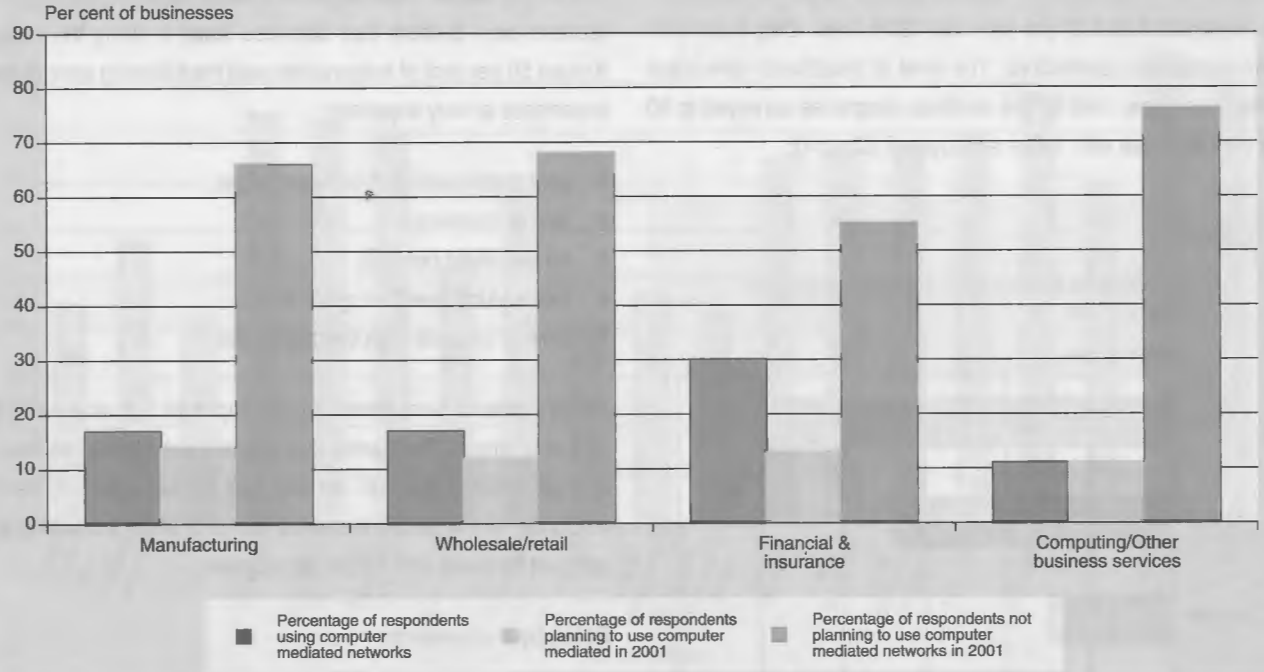


Chart 6
Use of computer mediated networks for sales

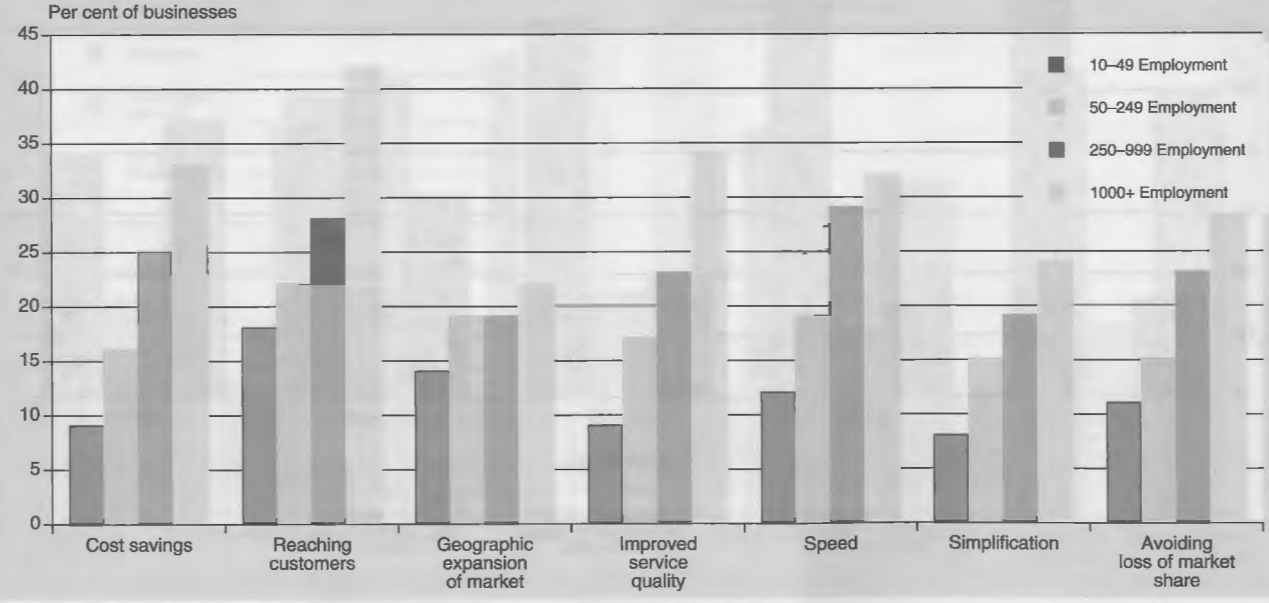


Despite the relatively small percentages of businesses already using computer-mediated networks for sales, a large number have no plans to start doing so in the next year. Two-thirds of manufacturing, wholesaling and retailing have no intention of using e-commerce for sales. This rises to three-quarters for those in computing and other business services. At a lower level of industry detail, the insurance, air travel and computing and office machinery manufacturing industries carry out the highest levels of e-commerce – around 30 to 40 per cent of their sales are via electronic networks.

The average length of time that business has carried out e-commerce for sales is only a matter of months and even for the very largest companies, the average is still less than a year.

When asked about the barriers they faced in making sales using e-commerce, 40 per cent or more of respondents said that uncertainty with contracts and/or the cost of developing and maintaining the system were of most importance. The most commonly perceived benefit of e-commerce sales for all sizes of companies was the potential to reach more customers, but far fewer smaller companies saw any benefits (Chart 7).

Chart 7
Benefits of making sales by e-commerce



Purchases by e-commerce

Twice as many businesses (33 per cent) used e-commerce for purchases than they did for sales[9]. A further 9 per cent intend to use it in the next year, while 58 per cent do not. The computing (74 per cent) and insurance (60 per cent) sectors used the highest level of e-commerce for purchases.

Manufacturers, wholesalers and retailers had similar levels for e-commerce purchases as they did for sales. The biggest difference is in the computing and other business services sectors where the percentage using, or planning to use, e-commerce for purchases rises to over 50 per cent, compared with 22 per cent for e-commerce sales (see Chart 8).

One in five respondents saw the benefit of using e-commerce for purchases as cost savings and one in four saw the benefit as speed. These levels rose to nearly one in two for the largest businesses. Once again the average length of time that e-commerce had been used for placing orders was less than a year.

Estimates of the value of e-commerce

Sales

Respondents to the survey were asked to provide an estimate of the percentage of their sales and purchases that they carried out using e-commerce. They were asked for two figures: transactions carried out using the internet; and transactions carried out using all electronic networks, including EDI[10].

From the responses given, internet sales are estimated to be worth £56.6 billion[11]. This represents 2.04 per cent of total sales for the sectors covered. Sales via all electronic networks are estimated to be worth £161.8 billion, or 5.83 per cent of total sales.

Table 1 shows how the overall levels of e-commerce are split between different sized businesses and by sector. The larger businesses account for nearly 80 per cent of all of e-commerce sales, while the financial sector account for 77 per cent of all of e-commerce sales. If the financial sector are removed, the value of internet sales drops to £12.9 billion which represents 0.94 per cent of all sales excluding the financial sector (Chart 9).

Less than one fifth of internet sales were to households, with an estimated value of £10 billion (Table 2). The financial sector accounts for most of this and, when removed, internet sales to household are £1.2 billion which represents less than 0.1 per cent of all sales. At a lower level industry split, the air transport, insurance and pension sectors carried out the greatest volume of their internet sales to households.

Overseas internet sales are very low, amounting to £1.3 billion or 0.05 per cent of total sales in the sectors surveyed (Table 3). The air transport industry carries out the largest percentage of overseas internet sales at 0.7 per cent of its total sales.

Chart 8

Use of computer mediated networks for purchases

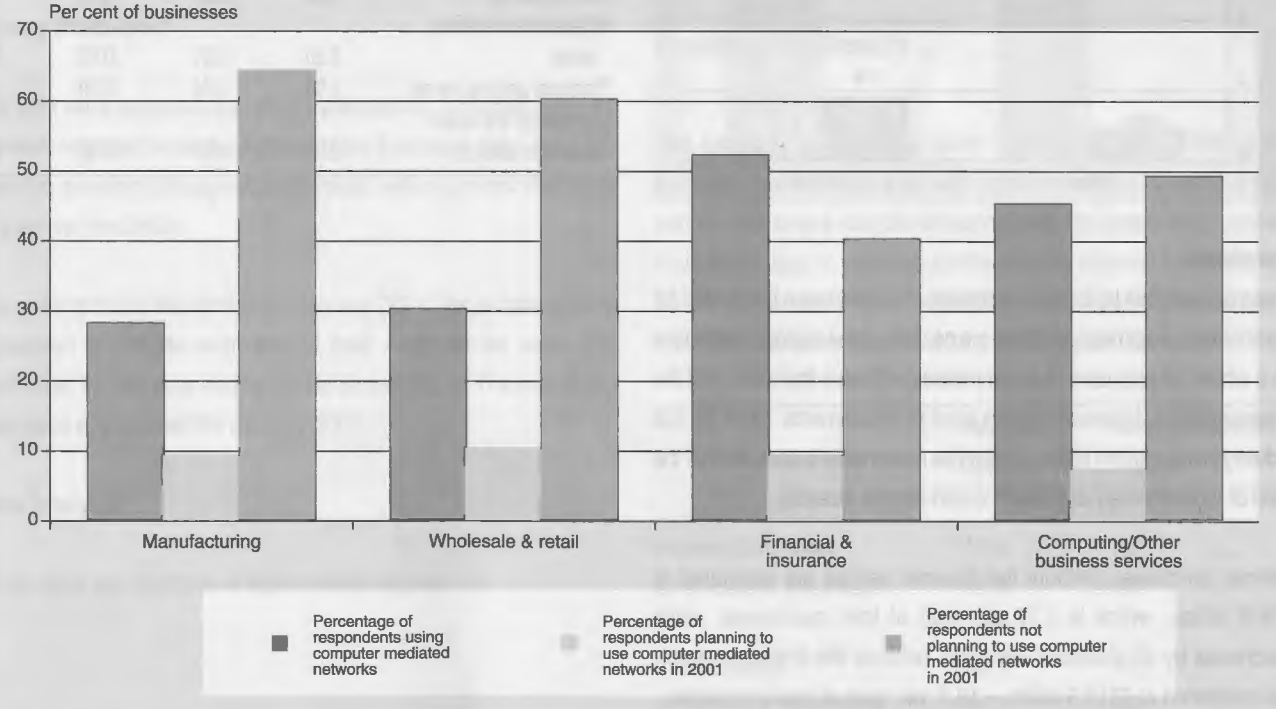


Table 1: Value of e-commerce sales split by sizeband and sector

	Internet Sales		All electronic networks	
	£ bn	per cent	£ bn	per cent
Total	**56.6**	**2.04**	**161.75**	**5.83**
Sizeband of business				
10–49	3.43	0.12	5.97	0.21
50–249	8.11	0.29	24.27	0.87
250–999	23.21	0.84	58.17	2.10
1000+	21.88	0.79	73.35	2.64
Sector of business				
Manufacturing	3.99	0.14	49.46	1.78
W'sale/retail/catering/ travel	7.61	0.27	29.65	1.07
Financial and insurance	43.74	1.58	79.90	2.88
Computing and other business services	1.28	0.05	2.75	0.10

Table 2: E-commerce sales to households

	Internet Sales		All electronic networks	
	£ bn	per cent	£ bn	per cent
Total households	**9.9**	**0.36**	**24.30**	**0.88**
Sizeband of business				
10–49	0.11	0.00	0.19	0.01
50–249	0.40	0.01	0.86	0.03
250–999	3.00	0.11	6.57	0.24
1000+	6.38	0.23	16.68	0.60
Sector of business				
Manufacturing	0.10	0.00	3.59	0.13
W'sale/retail/catering/ travel	1.12	0.04	2.72	0.10
Financial and insurance	8.66	0.31	17.66	0.64
Computing and other business services	0.01	0.00	0.32	0.01

Chart **9**

Per cent of sales and purchases carried out using e-commerce (excluding financial sector)

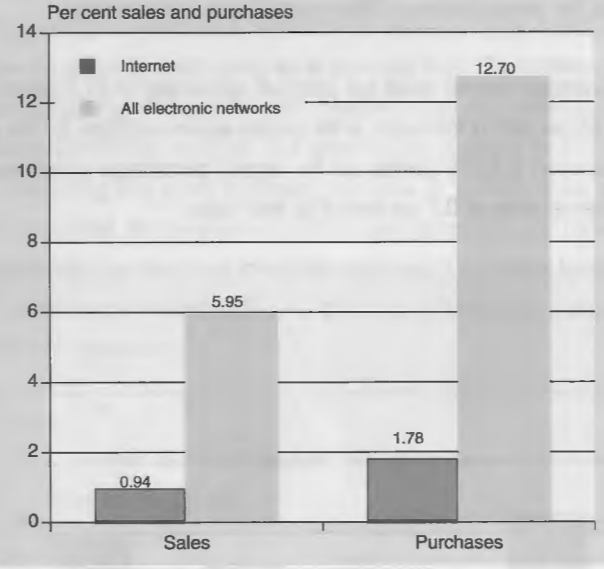


Table 3: E-commerce sales to overseas

	Internet Sales		All electronic networks	
	£ bn	%	£ bn	%
Total overseas	**1.3**	**0.05**	**6.45**	**0.23**
Sizeband of business				
10–49	0.04	0.00	0.08	0.00
50–249	0.11	0.00	0.48	0.02
250–999	0.69	0.02	2.39	0.09
1000+	0.46	0.02	3.50	0.13
Sector of business				
Manufacturing	0.08	0.00	3.18	0.11
W'sale/retail/catering/ travel	0.20	0.01	0.66	0.02
Financial and insurance	1.00	0.04	2.29	0.08
Computing and other business services	0.02	0.00	0.32	0.01

Purchases

It was not possible to produce estimates of e-commerce purchases for the financial sector because there are no data on the sector's purchases as a whole; all estimates of e-commerce purchases therefore omit the financial sector. However, as the level of e-commerce sales by this industry is around £44 billion, it would be reasonable to assume that the level of e-commerce purchases[12] would also be sizeable.

Internet purchases (without the financial sector) are estimated at £16.6 billion, which is 1.78 per cent of total purchases, while purchases by all electronic networks (without the financial sector) are estimated at £118.5 billion – 12.7 per cent of total purchases.

Methodology Note

Definitions

The definitions of e-commerce and electronic networks used in the E-commerce Inquiry are in line with those agreed by OECD and the statistical office of the EU (Eurostat).

Sample Design

The E-commerce Inquiry was a random sample survey of 9,000 businesses. The sample was selected from the Interdepartmental Business Register (IDBR) which holds records on all UK businesses registered for VAT and PAYE .

The sectors included in the sample were: manufacturing; electricity, gas and water supply; wholesale and retail; hotel and catering; transport; financial services; and other business services. This equates to 43 divisions of the UK Standard Industrial Classification - SIC(92).

The sample was further stratified by four employment size bands:

Size band 1:	10–49
Size band 2:	50–249
Size band 3:	250–999
Size band 4:	1,000+

Businesses with less than 10 employees were excluded in line with the policy to reduce the burden on small businesses. All of those in the relevant industries with more than 1,000 employees were included.

Survey Instrument

The data were collected by postal questionnaire. As it was part of an EU-wide initiative to produce comparable European data, the ONS used the questionnaire agreed by Eurostat, with only minor variations to improve readability.

The questionnaire was sent out in January 2001. Respondents were requested to provide estimates of their e-commerce sales and purchases for the year ending 31 December 2000. The rest of the data gave a 'snapshot' for January 2000.

Data Analysis

There were two methods of data analysis carried out:

Tick box data

(This was everything apart from e-commerce sales and purchases). To produce estimates by sizeband for each sector surveyed, the average percentage of all those surveyed was multiplied by the population totals of businesses in that sizeband and sector. The population totals were obtained from the Interdepartmental Business Register (IDBR).

For selected variables, employment weighted data were produced in parallel. These results give more importance to the results from bigger businesses, rather than to those strata with large numbers of smaller businesses.

Sales and purchases data

Each survey response was employment weighted to produce estimated percentages for e-commerce sales and purchases for each SIC (92) division and sizeband. This e-commerce percentage was multiplied by the estimated sales and purchases for the cell to produce e-commerce estimates for sizeband, industry and overall economy. The sales and purchases information is collected by the ONS's Annual Business Inquiry (ABI) which surveys 70,000 businesses.

However, the ABI does not survey SIC(92) division 65, 'Financial Intermediation Without Insurance and Pensions'. Turnover data held on the IDBR were used to produce estimated e-commerce sales for this SIC, which should be treated with due caution. As there are no purchases data held by ONS on this SIC(92) division, no estimates of e-commerce purchases for the financial sector could be produced.

Quality of the Results

The levels of e-commerce sales and purchases published are estimates for UK businesses with employment of 10 or more. As the survey was only a sample of businesses, the responses received have been used to estimate for the sectors covered by the survey. As with all surveys, these estimates have an associated sampling error that has been estimated for this survey as follows:

	estimate £ billion	**standard deviation** £ billion
internet purchases	19.6	1.5
all electronic purchases	124.6	5.6
internet sales	56.1	4.9
all electronic purchases	161.8	8.9

It is normally assumed that 95 per cent of values will lie within two standard deviations of the estimate. In other words, we are 95 per cent confident that internet purchases lie between £16.6 billion and £22.6 billion and that internet sales lie between £46.3 billion and £65.9 billion.

References

1. DTI 1998 White Paper *Our Competitive Future: Building the Knowledge-Driven Economy* CM4176.
2. Full methodology at end of article.
3. Weighting by size of business gives more weight, or importance, to larger businesses and less to the smaller businesses that tend to have slower take-up of technology.
4. This figures rises, if size-weighting is used, to 85 per cent.
5 The size-weighted figure is 96 per cent.
6. Some businesses reported having both their own and a third-party website, so there is some overlap and the percentages will add to more than 100 per cent.
7. There may be some overlap if companies said they had more than one type of broadband access.
8. Size-weighted = 38 per cent.
9. Size-weighted = 51 per cent.
10. See Methodology Note for definitions.
11. There are no sales data held by ONS for much of the financial sector and so 'turnover' from administrative sources was used to produce estimates from the percentages supplied by business. This means that estimates for e-commerce in the financial sector must be treated with due caution. For information, in the National Accounts the effect of the financial sector is measured through output or value added and so the figures here cannot be compared with those.
12. Respondents in the financial sector estimated that 10 per cent of their purchases were via the internet.

UK atmospheric emissions and energy use accounts, 1990 – 1999

Rocky Harris
Office for National Statistics
Zone D4/16
1 Drummond Gate
LONDON SW1V 2QQ
Tel: 020 7533 5916
E-mail: rocky.harris@ons.gov.uk

Overview

This article presents atmospheric emissions and energy use accounts for the UK for 1990 to 1999, first published in an Office for National Statistics (ONS) News Release on 28 June 2001. The accounts are based on the National Atmospheric Emissions Inventory, but the results are adjusted onto a National Accounts basis so that the emissions and energy use are attributed to the economic sectors directly responsible. The atmospheric emissions accounts show the contribution of each industry to atmospheric pollution in 1999 and changes in emissions since 1990, while the energy accounts show the underlying use of fossil fuels by each industrial sector, together with their total energy consumption for the years 1990 to 1999.

Introduction

Environmental accounts are "satellite" accounts to the main national accounts. They provide information on the environmental impact of economic activity (in particular on the emissions of pollutants) and on the use of natural resources by the economy. Because they use similar concepts and classifications of industries to those employed in the National Accounts, the results can be integrated with the economic data generated by the National Accounts.

The latest figures for atmospheric emissions and energy use were published by the ONS on 28 June 2001. They cover the years 1990 to 1999 and show estimated changes in emissions and energy use by the different sectors of the UK economy. In this article the main results are discussed, and some summary tables together with technical notes are presented. More detailed results can be obtained from the National Statistics website at *http://www.statistics.gov.uk/themes/environment/Articles/ environmental_accounts.asp.*

Main Results

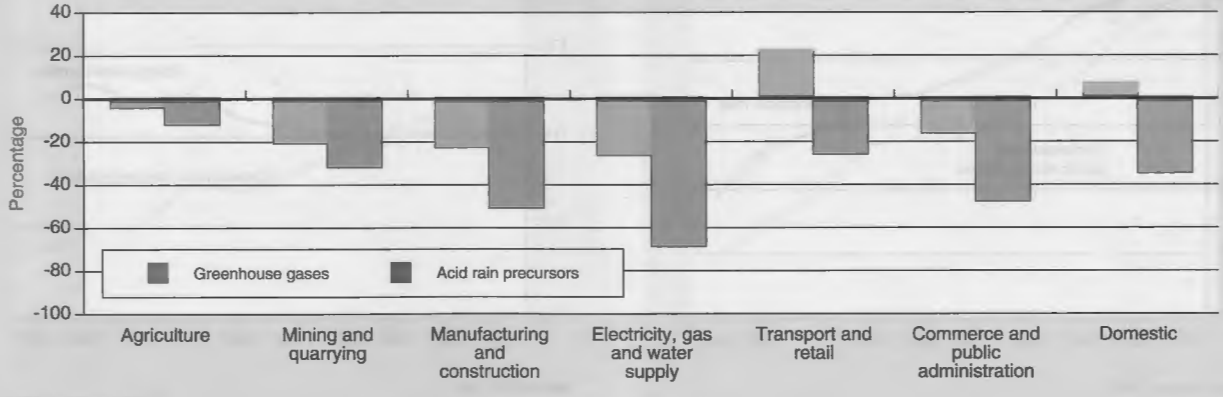
Estimated emissions of greenhouse gases for the non-domestic sector[1] of the UK economy, weighted by global warming potential, fell by 16½ per cent between 1990 and 1999. However, emissions from households increased by 6½ per cent over the same period, mainly due to increases in energy use in the home.

Non-domestic emissions of the pollutants which contribute to acid rain (sulphur dioxide, nitrogen oxides and ammonia) have decreased by 53 per cent between 1990 and 1999, with significant reductions across all sectors.

Chart 1 below shows that the electricity, gas and water supply sector has achieved the largest reductions, although it remains the biggest

Chart 1

Atmospheric emissions of greenhouse gases and acid rain precursors, percentage change 1990–1999



Source: Netcen, ONS

contributor to both greenhouse gas and acid rain precursor emissions. This sector's share of UK totals over the period has fallen from 28 per cent to 23 per cent for greenhouse gases, and from 50 per cent to 32 per cent for acid rain precursors. The main reason for this is a shift away from the use of coal and oil in power stations.

All sectors show a substantial reduction in acid rain precursor emissions since 1990, partly as a result of reductions in emissions of nitrogen oxides from road transport reflecting increased use of catalytic converters and low sulphur DERV.

By combining the atmospheric emissions estimates with estimates of output from the national accounts, it is possible to see how emissions have changed in relation to economic activity. As Chart 2 shows, most non-domestic sectors have achieved improvements in the ratio of greenhouse gas emissions to output (gross value added at 1995 constant prices). However, there has been no overall improvement for the transport and retail sector, with emissions from the transport sector increasing from 1,160 tonnes carbon dioxide equivalent per £ million output in 1990 to 1,340 tonnes carbon dioxide equivalent in 1999.

Emissions for the manufacturing and construction industry show a steady decline over most of this period, but the reduction between 1998 and 1999 has been much sharper. This is due in particular to falls in carbon dioxide, nitrous oxide and hydro-fluorocarbon emissions.

Estimates of greenhouse gas and acid rain precursor emissions by the main economic sectors for 1990 to 1999 are given in Table 1. Details of other air emissions by each sector for 1999 are given in Table 2.

Energy use accounts

The energy accounts show estimates of the underlying use of fossil fuels by each industrial sector, together with their total energy consumption. Chart 3 shows that energy consumption by the non-domestic sector of the UK economy increased by 4 per cent between 1990 and 1999, while output (Gross Domestic Product in 1995 market prices) rose by 20 per cent. Hence energy intensity (energy consumed per unit of output) decreased by 13 per cent over the period.

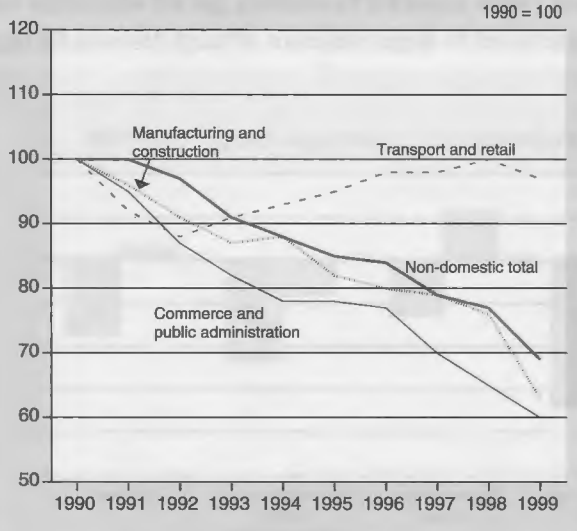
The public and other services sectors show the greatest improvement in energy intensity, reducing from 107 tonnes of oil equivalent per unit of output (£ million of gross value added in 1995 prices) in 1990 to 71 tonnes of oil equivalent per unit of output in 1999. On the other hand energy intensity in the mining and quarrying, and transport and communications sectors, has increased by 30 per cent and 16 per cent respectively over the same period.

Total energy consumption by UK producers and consumers has increased by 5½ per cent between 1990 and 1999, including an increase in the consumption of energy by households of 9 per cent over that period. However, the proportion of energy derived from fossil fuels has decreased from 92 per cent in 1990 to 89½ per cent in 1999, partly due to increases in the use of renewable energy.

Estimates of energy consumption by the main economic sectors for 1990 to 1999 are given in Table 3.

Chart 2

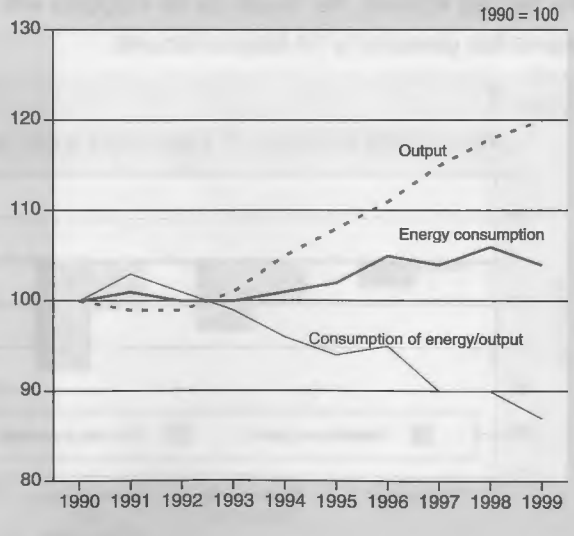
Greenhouse gas emissions/Output (Gross value added at constant prices)



Source: Netcen, ONS

Chart 3

Non-domestic energy consumption by output (Gross domestic product at constant prices)



Source: DTI, ONS

References

1. Greenhouse gas emissions have been estimated on a National Account basis, which is different to the basis used to measure progress against the Kyoto Protocol target for the reduction of greenhouse gases.

Table 1 Greenhouse gas and acid rain precursor emissions, 1990–1999

Units: thousand tonnes

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Greenhouse gases- CO_2, CH_4, N_2O, HFCs, PFCs and SF_6[1]										
Agriculture	59,300	60,400	58,600	57,200	58,200	58,200	58,900	58,800	58,500	56,800
Mining and quarrying	42,600	41,000	40,900	39,100	36,800	36,900	38,200	36,800	36,300	33,700
Manufacturing	173,300	169,500	162,300	159,000	165,500	162,300	166,000	168,100	163,400	132,800
Electricity, gas and water supply	212,100	209,100	198,600	180,600	177,000	175,800	173,600	159,100	163,700	155,700
Construction	4,900	5,000	5,000	4,900	4,900	4,800	4,900	4,800	4,400	4,700
Wholesale and retail trade	12,900	12,900	12,100	12,600	12,700	12,800	13,800	14,100	15,000	15,000
Transport and communication	57,000	57,100	57,500	59,500	61,400	63,500	66,500	68,700	71,900	70,300
Financial intermediation	10,200	10,800	11,200	11,600	12,200	12,700	13,400	12,400	13,400	13,400
Public administration	11,400	10,900	10,900	10,900	10,900	11,000	11,000	10,400	9,300	9,000
Education, health and social work	12,900	13,200	14,200	12,800	12,200	12,000	12,900	12,600	12,000	11,100
Other services	29,500	28,900	27,800	26,700	25,800	25,000	24,300	22,700	21,300	20,000
Domestic	138,900	146,900	144,900	149,100	143,100	137,500	151,900	145,900	147,300	147,900
Total greenhouse gas emissions	**765,000**	**765,700**	**744,000**	**724,000**	**720,700**	**712,500**	**735,400**	**714,400**	**716,500**	**670,400**
Of which, emissions from road transport	110,600	109,900	111,400	113,000	114,100	113,500	118,200	120,100	119,800	119,200
Acid rain precursor emissions- SO_2, NOx, NH_3[2]										
Agriculture	670	660	630	620	620	600	590	590	600	590
Mining and quarrying	130	120	120	120	120	90	100	100	90	90
Manufacturing	940	940	920	900	830	730	670	620	540	450
Electricity, gas and water supply	3,280	3,020	2,900	2,490	2,140	1,950	1,640	1,290	1,330	1,020
Construction	40	40	40	40	40	40	30	30	30	30
Wholesale and retail trade	90	80	80	70	70	60	50	50	50	40
Transport and communication	570	560	550	540	520	520	520	530	520	450
Financial intermediation	50	50	50	50	50	50	50	40	40	30
Public administration	60	60	60	60	60	50	50	50	40	30
Education, health and social work	60	60	70	70	60	50	40	40	30	20
Other services	50	50	50	50	50	50	50	40	40	30
Domestic	640	640	620	600	550	500	510	480	440	410
Total acid rain precursor emissions	**6,580**	**6,280**	**6,090**	**5,610**	**5,110**	**4,690**	**4,300**	**3,860**	**3,750**	**3,190**
Of which, emissions from road transport	970	950	920	860	830	760	720	670	600	550

Source: NETCEN, ONS

1. Carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride expressed in thousand tonnes of carbon dioxide equivalent
2. Sulphur dioxide, nitrogen oxides and ammonia expressed in thousand tonnes of sulphur dioxide equivalent

Table 2 Atmospheric emissions, 1999

Units: thousand tonnes

	Greenhouse gases	Acid rain precursors	Emissions affecting air quality							
	CO_2, CH_4, N_2O, HFC, PFC, SF_6, $KtCO_2$ equiv[1]	SO_2, NOx, NH_3, $KtSO_2$ equiv[2]	PM10[3]	CO[4]	NMVOC[5]	Benzene	1,3-Butadiene	Lead (tonnes)	Cadmium (tonnes)	Mercury (tonnes)
Agriculture	56,800	590	20.4	71.0	15.6	0.4	0.1	4.3	0.02	0.00
Mining and quarrying	33,700	90	30.7	155.1	194.3	0.5	0.1	3.2	0.04	0.02
Manufacturing	132,800	450	32.7	724.1	483.5	4.0	0.6	183.7	4.54	3.83
Electricity, gas and water supply	155,700	1,020	19.4	81.4	30.1	0.1	0.0	17.8	0.51	1.68
Construction	4,700	30	7.5	183.1	65.8	0.6	0.2	2.4	0.01	0.00
Wholesale and retail trade	15,000	40	5.2	177.9	135.6	1.4	0.4	14.6	0.03	0.00
Transport and communication	70,300	450	16.6	346.7	114.0	2.6	2.3	19.1	0.21	0.02
Financial intermediation	13,400	30	4.0	203.0	26.4	1.2	0.2	17.2	0.03	0.00
Public administration	9,000	30	1.3	16.9	2.6	0.1	0.0	1.5	0.01	0.05
Education, health and social work	11,100	20	2.1	34.7	5.5	0.2	0.0	4.0	0.02	0.09
Other services	20,000	30	1.3	24.8	16.7	0.2	0.1	5.5	0.66	2.23
Domestic	147,900	410	48.7	2,848.8	537.3	20.3	3.1	281.0	0.50	0.63
Totals	**670,400**	**3,190**	**189.9**	**4,867.5**	**1,627.3**	**31.7**	**7.3**	**554.4**	**6.58**	**8.55**
Of which, emissions from road transport	119,200	550	36.3	3,292.4	472.6	21.0	5.3	327.3	0.37	0.00

Source: NETCEN, ONS

1. Carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride expressed in thousand tonnes of carbon dioxide equivalent
2. Sulphur dioxide, nitrogen oxides and ammonia expressed in thousand tonnes of sulphur dioxide equivalent
3. PM10s are carbon particles in air arising from incomplete combustion
4. Carbon monoxide
5. Non-methane Volatile Organic Compounds including benzene and 1,3-butadiene

Table 3 Energy consumption, 1990–1999

Units: million tonnes of oil equivalent

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Direct use of energy from fossil fuels										
Agriculture	1.7	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	1.8
Mining and quarrying	6.0	6.1	6.2	6.3	6.7	6.5	7.2	7.3	7.7	7.5
Manufacturing	41.8	41.5	40.5	40.6	41.5	41.5	42.4	42.5	42.5	42.0
Electricity, gas and water supply	56.7	56.4	53.8	50.7	50.5	51.8	52.8	50.3	52.7	52.0
Construction	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.3	1.5
Wholesale and retail trade	4.9	4.9	4.6	4.8	4.7	4.7	5.1	5.1	5.4	5.4
Transport and communication	19.7	19.7	19.8	20.5	21.2	21.9	22.9	23.6	24.7	24.2
Financial intermediation	3.9	4.2	4.3	4.5	4.7	4.8	5.1	4.6	5.0	5.0
Public administration	4.0	3.9	3.9	4.0	4.0	4.1	4.1	3.9	3.5	3.4
Education, health and social work	4.8	5.0	5.4	4.9	4.7	4.7	5.1	5.0	4.8	4.5
Other services	1.9	2.1	2.0	1.9	1.8	1.8	1.8	1.4	1.3	1.3
Domestic	53.3	56.6	56.0	57.5	55.3	53.5	59.4	56.7	57.3	57.3
Total use of energy from fossil fuels	200.2	204.1	200.3	199.3	198.7	198.9	209.6	203.9	208.2	206.1
Energy from other sources[1]	17.7	19.2	20.4	23.3	23.1	23.3	23.5	24.4	24.7	23.9
Total energy consumption of primary fuels and equivalents	**217.9**	**223.4**	**220.7**	**222.6**	**221.9**	**222.2**	**233.1**	**228.4**	**232.9**	**230.0**
Direct use of energy including electricity										
Agriculture	2.0	2.5	2.5	2.5	2.4	2.4	2.5	2.3	2.3	2.2
Mining and quarrying	6.6	6.7	6.7	6.8	7.0	6.8	7.6	7.7	8.0	7.8
Manufacturing	48.7	48.5	47.3	47.9	48.5	48.4	49.4	49.8	49.7	49.3
Electricity, gas and water supply	52.0	52.5	50.8	50.0	49.9	51.1	51.5	49.6	51.9	50.3
of which - transformation losses by major power producers	*46.5*	*46.9*	*45.5*	*45.1*	*44.5*	*45.1*	*45.1*	*44.0*	*45.5*	*43.3*
- distribution losses of electricity supply	*2.3*	*2.4*	*2.5*	*2.0*	*2.3*	*2.6*	*2.4*	*2.5*	*2.4*	*2.4*
Construction	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.5
Wholesale and retail trade	6.7	6.6	6.4	6.7	6.7	6.7	7.1	7.4	7.8	7.8
Transport and communication	20.4	20.4	20.5	21.5	22.0	22.8	23.9	24.7	25.8	25.3
Financial intermediation	5.7	6.1	6.2	6.5	6.7	6.9	7.3	7.0	7.4	7.4
Public administration	4.7	4.6	4.6	4.5	4.7	4.9	4.9	4.6	4.3	4.2
Education, health and social work	5.9	6.3	6.9	6.1	6.0	5.9	6.3	6.2	6.0	5.7
Other services	2.4	2.5	2.5	2.4	2.3	2.3	2.3	1.8	1.7	1.7
Domestic	61.3	65.0	64.6	66.1	63.9	62.3	68.7	65.7	66.7	66.8
Total energy consumption of primary fuels and equivalents	**217.9**	**223.4**	**220.7**	**222.6**	**221.9**	**222.2**	**233.1**	**228.4**	**232.9**	**230.0**
Reallocated use of energy										
Energy industry electricity transformation losses and distribution losses allocated to final consumer										
Agriculture	2.6	3.1	3.0	3.0	3.0	2.9	3.0	2.8	2.9	2.7
Mining and quarrying	7.7	7.6	7.6	7.6	7.6	7.4	8.2	8.2	8.5	8.3
Manufacturing	61.3	60.9	58.9	60.0	60.3	60.1	61.0	61.3	61.3	60.3
Electricity, gas and water supply	11.4	11.3	10.8	9.8	10.2	10.8	11.0	9.9	10.9	11.2
Construction	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.4	1.6
Wholesale and retail trade	10.1	9.8	9.5	10.1	10.0	10.1	10.6	11.2	11.7	11.5
Transport and communication	21.7	21.7	21.7	23.1	23.5	24.3	25.4	26.4	27.5	26.9
Financial intermediation	9.0	9.4	9.4	9.8	10.1	10.5	10.8	10.8	11.2	11.0
Public administration	5.8	5.9	5.8	5.5	5.8	6.2	6.1	5.7	5.4	5.3
Education, health and social work	7.7	8.5	9.5	8.3	8.2	7.9	8.4	8.0	7.8	7.5
Other services	3.1	3.3	3.4	3.2	3.1	3.0	3.0	2.5	2.4	2.3
Domestic	75.9	80.1	79.3	80.6	78.4	77.2	83.8	79.9	81.9	81.3
Total energy consumption of primary fuels and equivalents	**217.9**	**223.4**	**220.7**	**222.6**	**221.9**	**222.2**	**233.1**	**228.4**	**232.9**	**230.0**
Energy from renewable sources[2]	1.2	1.2	1.4	1.6	2.1	2.1	2.1	2.3	2.7	2.9
Percentage from renewable sources[2]	0.5%	0.5%	0.6%	0.7%	0.9%	1.0%	0.9%	1.0%	1.1%	1.3%

Source: NETCEN, Department of Trade and Industry, ONS

1. Nuclear power, hydroelectric power and imports of electricity
2. Renewable sources include solar power and energy from wind, wave and tide, hydroelectricity, wood, straw and sewage gas. Landfill gas and municipal solid waste combustion have also been included within this definition.

Notes to the tables

Atmospheric emissions (Tables 1 & 2)

Atmospheric emissions can be aggregated according to their contribution to environmental themes such as greenhouse gases and acid rain. A description of the pollutants covered and the methodology used to calculate environmental themes is given in the annex to these notes.

The disaggregation of national estimates of emissions to industrial sectors is based upon an initial disaggregation provided by the National Environmental Technology Centre (NETCEN) which maintains the National Atmospheric Emissions Inventory (NAEI). Emissions were estimated by multiplying fuel consumption by emissions factors and adding releases unrelated to fuel use such as methane arising from landfill.

The NAEI data is used to identify the main processes and industries responsible for the emissions, which are then allocated to individual sectors on the basis of information from a variety of sources. A full description of the methods and sources used is available on request from the Environmental Accounts branch, Office for National Statistics.

Tables 1 and 2 give estimates of pollutants directly emitted to the atmosphere, by industrial sector. The figures are on a National Accounts basis and differ from the basis used to monitor progress against the Kyoto Protocol, in that they include estimated emissions from fuels purchased in the UK and used by international shipping and aircraft on international flights (marine and air bunkers).

A further minor difference is that the base year used in the Kyoto Protocol for hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride is 1995 rather than 1990.

Emissions from road haulage are given on an 'own account' basis, i.e. attributed to the sector owning the transport rather than to the sector of the goods being transported. Similarly emissions from households' use of private cars are allocated to the domestic sector. Figures for total road transport emissions are provided separately.

Energy consumption (Table 3)

Table 3 gives estimates of total energy used by each industrial sector and the proportion of total energy used from renewable resources, for the years 1990 to 1999. The unit of measurement is tonne of oil equivalent (toe), which enables different fuels to be compared and aggregated. It should be regarded as a measure of energy content rather than a physical quantity.

Consumption of fossil fuels, energy used in transformation processes and losses in distribution

The consumption of fossil fuels, and the related consumption of energy, can be analysed from a number of different perspectives. In terms of atmospheric emissions, it may be helpful to identify which industrial sectors are actually consuming the fossil fuels that give rise to emissions. From this perspective, fuels used by the electricity generation sector are attributed entirely to that sector, even though some of the energy is transformed into electricity. This analysis is shown in Part 1 of Table 3.

In terms of energy consumption, it is possible to attribute energy used during the process of transformation into electricity, and the energy lost in distributing electricity to end users, either *directly* to the electricity generation sector, or *indirectly* to the consumers of energy. Parts 2 and 3 of Table 3 consider energy consumption from both points of view. Part 2 allocates the consumption of energy directly to the immediate consumer of the energy, while Part 3 allocates these "electricity overheads" to the user of the electricity.

Sources and methods for estimating consumption of energy by industrial sector

Data for estimating fuel consumption by industrial sectors are collected by the DTI and underlie the figures given in the *Digest of UK Energy Statistics* published by the Department of Trade and Industry. The figures shown in Table 3 differ from those given in the *Digest of UK Energy Statistics* (DUKES) in that:

- fuels used by international shipping (marine bunkers) under international bunker contracts are included;
- non-energy uses of fuels, for example, chemical feedstocks, solvents, lubricants and road-making material are excluded;
- the classification of industrial sectors used in environmental accounts differs from that used in DUKES. In particular, the transport sector is defined to include only enterprises that provide transport services to other consumers (i.e. public transport operators, freight haulage companies, etc.). The energy consumed by households's use of private cars is allocated to the domestic sector.

Annex: Atmospheric pollutants and environmental themes

Greenhouse gases

The greenhouse gases included in the atmospheric emissions accounts are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O) and the gases covered by the Kyoto Protocol (hydrofluorocarbons – HFCs, perfluorocarbons – PFCs, sulphur hexafluoride – SF_6).

The main source of **carbon dioxide (CO_2)** is from the combustion of fossil fuels, but it is also produced in some industrial processes such as the manufacture of cement. **Methane (CH_4)** is produced when organic matter is broken down in the absence of oxygen. Large quantities are generated by enteric fermentation in cattle and sheep, by the spreading of animal manure and from organic waste deposited in landfill sites. Methane is also emitted in coal mining, oil and gas extraction and gas distribution activities. **Nitrous oxide (N_2O)** is released in a few industrial processes and from the soil when nitrogenous fertilisers are applied in agriculture and horticulture.

Hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) are artificial fluids that contain chlorine and/or fluorine. Because of their low reactivity and non-toxicity they are widely used as refrigerants, foam blowing agents, aerosol propellants and solvents.

To aggregate the gases covered in the accounts, a weighting based on the relative global warming effect of each of the gases is applied, using the effect of CO_2 over a 100 year period as a reference. This gives methane a weight of 21 relative to CO_2 and nitrous oxide a weight of 310 relative to CO_2. The global warming effect of the Kyoto gases (HFCs, PFCs and SF_6) varies according to the processes used.

Greenhouse gas emissions are sometimes shown in terms of tonnes of carbon equivalent rather than CO_2 equivalent. To convert from CO_2 equivalent to carbon equivalent it is necessary to multiply by 12/44.

Acid Rain

The term 'acid rain' covers various chemical reactions which acidic gases and particles undergo in the atmosphere. The gases may be transported long distances before being deposited as wet or dry deposition. When deposited, hydrogen ions may be released, forming dilute acids, which damage ecosystems and buildings.

The gases covered are sulphur dioxide (SO_2), nitrogen oxides (NOx) and ammonia (NH_3). They are weighted together using their relative acidifying effects. The weights, given relative to SO_2, are 0.7 for NOx and 1.9 for NH_3. This is a simplification of the chemistry involved, and there are a number of factors which can affect the eventual deposition and effect of acid rain

Sulphur dioxide (SO_2) is produced when coal and some petroleum products containing sulphur impurities are burnt. It is an acid gas that can cause respiratory irritation and it can damage ecosystems and buildings directly. **Nitrogen oxides (NOx)** arise when fossil fuels are burnt under certain conditions. High concentrations are harmful to health and reduce plant growth. **Ammonia (NH_3)** is an acid rain precursor predominantly emitted from spreading animal manure and some fertilisers.

Other air pollutants

PM10s are smoke particles whose diameter is less than 10 microns. They are regarded as responsible for some physiological damage and have been linked to premature mortality from respiratory diseases.

Carbon monoxide (CO) is produced in small quantities when fossil fuels are burnt with insufficient oxygen for complete combustion. At high concentrations carbon monoxide is toxic.

Non-methane volatile organic compounds (NMVOCs) cover a variety of chemicals, many of which are known carcinogens. Emissions of NMVOCs arise from the deliberate and incidental evaporation of solvents (e.g. in paints and cleaning products), from accidental spillage and from non-combustion of petroleum products. The environmental accounts include natural emissions of NMVOCs from managed forests. NMVOCs play a role in the formation of ground level ozone, which can have an adverse effect on health. The NMVOC emissions include **benzene** which is released largely from the distribution and combustion of petrol and **1,3-butadiene** which arise from combustion of petroleum products and in the manufacture of synthetic rubber, nylon and latex paints in the chemical industry. The increasing use of catalytic converters through the 1990's has caused a significant reduction in 1,3-butadiene emissions from the road transport sector.

Heavy metals

The main sources of **lead** emissions are from the combustion of petrol, coal combustion and metal works. Emissions of lead are

expected to have fallen to negligible levels in 2000, mainly as a result of the ban on the sale of leaded petrol from 1 Jan 2000.

The main sources of **cadmium** emissions are from waste incineration, and iron and steel manufacture. Emissions of cadmium have declined over recent years; this is mainly attributable to the decline in coal combustion.

The main sources of **mercury** emissions are waste incineration, the manufacture of chlorine in mercury cells, non-ferrous metal production and coal combustion. Emissions of mercury have declined over recent years due to improved controls on mercury cells and their replacement by diaphragm cells and the decline of coal use.

ICT Deflation and Growth: A Sensitivity Analysis

Prabhat Vaze, Economic Methodology Branch – Office for National Statistics

D4/19, 1 Drummond Gate,

London SW1V 2QQ

Tel: 020 7533 5911

e-mail: Prabhat.Vaze@ons.gov.uk

Summary of results

There have been a number of studies making use of US-style computer deflators on UK data, to test sensitivity. Because US deflators fall faster, the GDP growth rate calculated is higher. ONS analysts used US computer deflators to illustrate this in the first National Statistics Quality Review on the Short Term Output Indicators (ONS, 2000a). They tried a simple comparison, by applying the US deflator for computers to parts of the Index of Production (IoP). The result of this sensitivity analysis was to raise the index of production by 2-6% in total over 1995-1999. This is equivalent to an annualised growth rate difference in the whole economy of up to 0.3% under the most extreme assumptions.

This simple approach neglects two features:

a. In order to measure changes in real value added, the most rigorous method is to "double deflate" - i.e. to deflate both outputs and inputs to obtain an estimate of real value added as a residual. Adopting this method and using the US deflator to deflate both inputs and outputs will reduce the effect of the US deflator on the growth of value added, as inputs as well as outputs will be increased in real terms.

b. It is also possible to approach measurement of GDP from the expenditure approach, and this entails deflating each component of final expenditure by the appropriate deflator and then subtracting the deflated measure of imports. Again the effect of using the US deflator to deflate components of expenditure such as capital formation will be mitigated by the subtraction of imported ICT goods - this will also be higher in real terms if the US deflate is used to deflate imports.

This study uses the current price supply-use balances underlying the UK national accounts to combine both of the above approaches to produce an approximation to a coherent set of real accounts. The results show that the overall effect of substituting the UK PPI by the US equivalent to test sensitivity has much less effect on the measure of UK GDP than that suggested by the STOIR analysis. The rise of approximately one third percentage points per annum over the period 1995 - 1999 is reduced to about 0.1% for the period 1992-98 in this study.

This study therefore reassures us that in terms of GDP growth, the illustrative use of the US PPI, when taken through the UK accounts, does not result in dramatic revisions to GDP growth as at first suggested by the STOIR results. There does remain the issue that current methods on the output side would generate the changes suggested by the STOIR results, and this can only be resolved through the creation and use of a coherent framework of real indicators underlying the current price supply-use tables - this will not be fully implemented until 2003 when annual chain-linking is also introduced.

However, the recent revision to the UK PPI reflecting improvements to the quotes provided by manufacturers results in a profile for the UK PPI which is much closer to the US deflator. This revision will be incorporated into the short-term growth measured of the national accounts published in September 2001.

Introduction

The rapid quality improvements in information and communication technology (ICT) goods present a number of measurement difficulties in estimating economic growth. In pricing the goods, conventional indices use the matched model approach and rely on pricing the same good each month. However, with ICT goods, there is considerable product change, with products dropping out of the basket. Replacement items often have quite different characteristics to the original item and the differences must be valued when assessing the change in price from the previous item. The UK quality adjusts all its computer price indices. Techniques used to value quality changes have received much attention in recent months as a number of studies have highlighted that differences in price indices impact quite significantly on GDP growth (Eurostat, 1999). The ONS first quality review noted the significant impact of using US computer deflators in deflating the short-term indicator for output of the computer industry (ONS, 2000a).

A second issue raised is to correctly identify where the various ICT goods appear in the national accounts aggregates. UK production of ICT goods such as computers is mostly supplied to capital formation, so that quality improvements increase the expenditure measures of gross domestic product. Work at the Bank of England has highlighted other differences between US and UK measures associated with the computing industry (Wadhwani, 2001). The products of computing services present the most challenging problems of definition. This is a large and growing sector of the economy

and some of its output falls in capital formation, which adds to GDP, and some in intermediate consumption, which does not. The correct allocation between the two categories is necessary to avoid biases on the level and growth of GDP.

This article sets out the results of a sensitivity analysis, showing the impact on UK growth of using different indicator for ICT prices (e.g. UK PPI vs. US Bureau of Economic Analysis deflator). The analysis includes all aspects of the effect of deflators on growth estimates – both double deflation and expenditure components allowing for imports.

The role of ICT in national income

OECD (2000) indicates the industries and products that can be classified as ICT. Using the OECD definition, ICT industries produce approximately 3% of the output measure of gross domestic product, GDP(O), in 1998. Indices of output for these industries show rapid growth during the past few years. A substantial portion of the volume growth is attributable to the fall in prices of the goods produced. For example, the index of production for computers shows the volume of output has risen by 68% in the period 1995-99, with falls in the producer price index contributing over 40% of this growth.

The short-term output indicators use turnover data to approximate the growth in value-added, on the assumption that the production process is constant in the short term, so that changes in turnover are equal to changes in value-added. The short-term output indicators cannot take full account of changes in the intermediate consumption of ICT goods (although some adjustments are made to computer services to try to account for this). Schreyer (2000) notes that the generally positive effect on growth of the fast falling ICT deflators will be countered by the increased volume of ICT goods used as intermediate inputs to the production process. Many ICT intermediate goods, such as semiconductors, are exhibiting price falls greater than those of the products in which they are incorporated. The growth in the output of industries using electronic components ought to deduct this from overall real gross value added, through deflation of both outputs and inputs to the production process (double deflation), transferring the semiconductor quality improvements to the value added by the components industry. To the extent that the components are imported, this would transfer the value added from UK industry to overseas suppliers.

In the expenditure measure of GDP, ICT goods are significant in the UK's gross fixed capital formation. ONS latest figures for 1998 suggest that almost half of UK gross fixed capital formation in plant and machinery can be classified as ICT, equal to 2.9% of GDP (see table 1). Comparisons across countries are problematic because of differences in classification, but work by Didier and Marinez (2000) using an OECD definition of the ICT sector for France and the US suggests that this estimate is reasonable. Also included in the expenditure measure are consumer expenditure and net exports of ICT goods. For the UK, net exports are significant and sometimes negative in some of the ICT goods, particularly electronic components

Measurement of ICT prices for deflation

The traditional price index is a matched model index, using price quotes that track the price of the same good each month. With a product like a computer, changes in products are frequent as old models are withdrawn and new, improved varieties replace these. When this occurs, some splicing factor must be calculated to join the prices of the new items to those of the old item. This is done by comparing the characteristics of the old item with the new one, and valuing the changes. The values for the features can be calculated by a variety of methods. The ONS uses a combination of two methods called option costing and manufacturer costing, with the

Table 1

ICT Gross fixed capital formation 1998

SIC	Products	GFCF (%)	GFCF (£mil)
3000	Office machinery and computers	8	11811
3220	Telegraph and telephone apparatus and equipment, and electronic capital goods	6.2	9204
3230	Television and radio receivers, sound or video recording and reproducing apparatus and associated goods	0.2	307
3320	Instruments and appliances for measuring, checking, testing and navigating and other purposes, except industrial process control equipment	0.1	102
3330	Industrial process control equipment	0.5	767
7220	Computer software, incl. Produced on own account	1.5	2250
	Purchases of capitalised services	1.5	2301
	Total	16.6	24441
	Whole economy	100	147629

Source: ONS, 2000b. Purchases of capitalised services includes some software.

latter more common in the producer price index. Some countries, particularly the United States, use an hedonic regression to estimate the value of the change in characteristics for computers and a number of other goods (see Landefeld and Grimm, 2000). The Annex provides further details of various countries' approaches to quality adjustment. The next section looks at the recent UK work on the use of the different ICT price indices in deflation.

ICT deflators

Quality adjusted ICT deflators generally fall over time. This translates into higher constant price growth rates in the industries producing the ICT goods. However, there is a large degree of variation between countries in the rate at which producer price indices fall for ICT goods (such as computers) . Indices for computers fall annually by as much as 27% a year for the US, 16% for France, 13% for the UK (16% after the revision – see paragraph below) and 6% for Germany over 1995-99 (Schreyer, 2000). Some analysts have argued that most ICT goods are internationally traded so that price falls across countries should not diverge greatly in the medium term and that the divergence might result from difference in quality adjustment method.

However, whilst it is true that different approaches to quality adjustment may significantly impact on ICT deflators, a number of other factors also need to be taken into account. A currency conversion is necessary for international comparisons. Further, the producer prices of each country may reflect a different mix of products produced in each country - e.g. a country may specialise in types of ICT goods experiencing particular price movements. A measurement complication is the handling of discounts and getting reliable, representative up-to-date contributor price quotes. These problems are accentuated for high tech products. Few countries publish a detailed PPI for computers - either due to the difficulties in measurement at the disaggregate level or due to a lack of home producers (or both).

In the UK, as a follow up to the Short Term Output Indicators Review (STOIR), the ONS has conducted a study of some of these factors, working with key manufacturers. An article by Martin Brand details revisions to the UK PPI which are due mainly to the correction of information provided by contributors (Brand, 2001). The effect of these changes is a substantial downwards revision to the UK PPI, bringing it close to the RPI and closer to the US PPI. These changes will be reflected within the National Accounts in September when they will be incorporated into various improvements and revisions within the 2001 Blue Book (see Tse, 2001, for details). The modelling work within this article is therefore based on the pre-revision PPI given that the effect of the revision is yet to be felt within the National Accounts.

Growth Estimates and Deflators

There have been a number of studies making use of US-style deflators on UK data, to test sensitivity. As US deflators fall faster, the GDP growth rate calculated is higher. ONS analysts used US computer deflators to illustrate this in the first National Statistics Quality Review on the Short Term Output Indicators (ONS, 2000a). They tried a simple comparison, by applying the US PPI for personal computers to the relevant parts of the Index of Production (IoP) for computers and other information processing equipment. The results of this simple sensitivity analysis was, under fairly extreme assumptions, to raise the index of production by 6% in total over 1995-1999, equivalent to an annualised growth rate difference in the whole economy of 0.3%. Work at the Bank of England has found similar results (Oulton, 2001) for computers, and explored the issue further looking at telecommunications and electronic components.

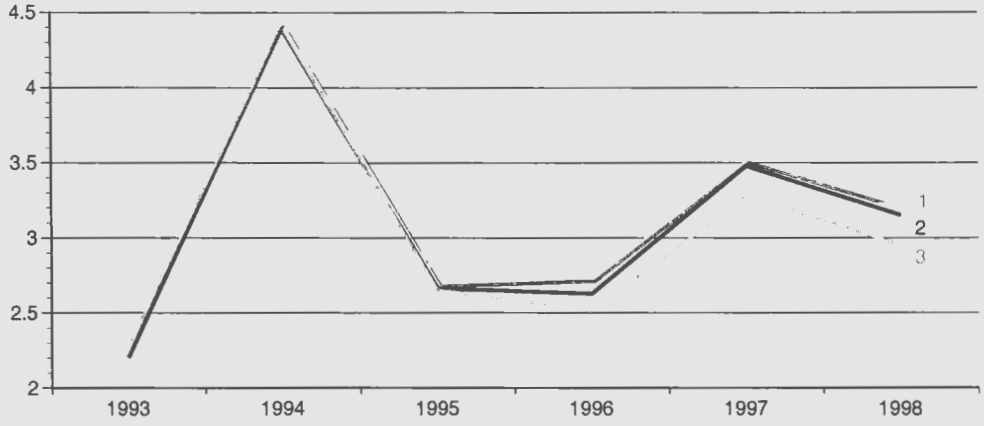
Schreyer (2000) considers the conceptual issues in such studies. He indicates how the overall impact on growth of using faster falling deflators is the sum of a number of different effects, some with a negative impact on growth. A fast falling deflator applied to a good that is part of final consumption and is domestically produced would raise GDP. However, this would be offset if a good is imported and enters production as an input.

Schreyer (2000) indicates the effect of chain-linking constant price estimates where the prices of some goods are falling rapidly. Though the rapidly falling price of computers is accompanied by rising volumes, the impact on total nominal expenditures on computers may be small or negative. Schreyer shows that the effect of chain-linking is then to reduce growth rates in comparison to analyses using base-weighted indices. This finding is borne out in the US research (Landefeld and Grimm, 2000) and UK research (Oulton, 2001). Currently, ONS is implementing a chain-linking project to convert national accounts aggregates from fixed weights to chained weights in 2003.

Results of sensitivity analysis using US ICT deflators on UK growth

The previous two sections have looked at the measurement issues surrounding ICT goods and services. The impact of the difference between ICT deflators on UK GDP is analysed in this section using two alternative techniques, both using US deflators to test the sensitivity of growth. The price indices considered are those for the goods: computers, electronic components and telecommunication equipment. The approach used in the ONS short-term output indicators review did not assess the impact of price falls on intermediate consumption. The first approach used includes the effect of deflating intermediate consumption. The section then looks at an alternative approach using UK expenditure data. It analyses the impact of using US price indices to replace the corresponding UK series

Chart 1
GVA whole economy growth: Output Approach
annual percentage change



Key:
1 – UK GVA growth replacing UK with US deflators for computers and telecomm;

2 – UK GVA growth replacing UK with US deflators for computers, telecomm and components;

3 – UK GVA growth, using UK deflators (ONS published series ABMM).

on the capital formation, consumer expenditure, exports and imports aggregates produced by ONS. Finally, the various approaches are discussed. It should be noted that the analysis uses the PPI for the UK before the revision referred to in Brand (2001), since the effect of the revision is yet to be felt within the national accounts. Further, the full national accounts balancing process takes account of the supply and demand of each product and this is not replicated in this sensitivity work.

Output approach

Output indicators are produced by the ONS monthly for production industries and Distribution industries, and quarterly for the rest of the economy (an experimental monthly index of services is also produced). A sample of firms in the production industries complete monthly production inquiry (MPI) forms. The data for the non-production firms come from a variety of sources. Many non-production sectors are surveyed by the ONS, but some industries are covered in returns made to other government departments, e.g. the construction industry is surveyed by DETR. Most surveyed firms are asked for the turnover of their business during the period. ONS uses this data to produce indices of gross value added (GVA). The turnover data is deflated using appropriate producer price indices (or other deflators) and then aggregated using weights based on value added of the industry in the base year (currently 1995). As part of the annual national accounts balancing process, an agreed annual growth in GDP in current prices is calculated using information from income, output and expenditure sources. The short-term output indicators are then aligned to the growth rate derived from the constant price expenditure measure of GDP.

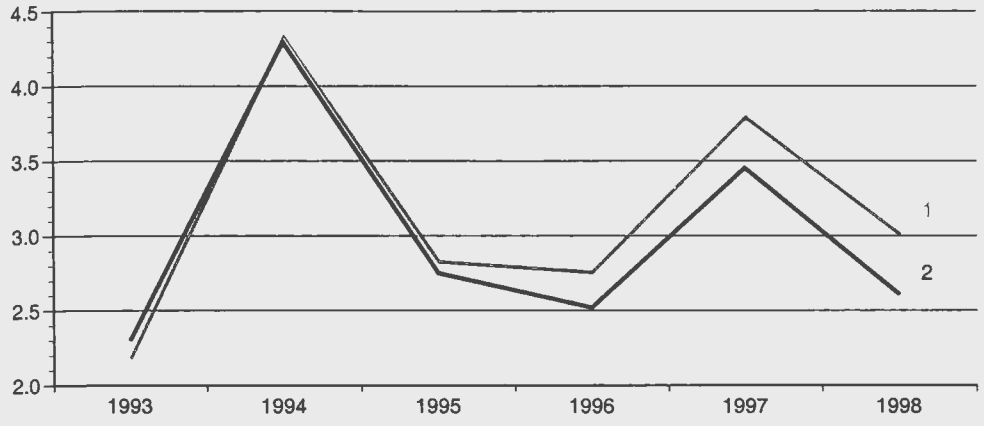
Replacing a deflator with a faster falling one is obviously going to increase growth of a short-term indicator. However, focusing on one sector – the electronic components industry – highlights the difficulty of this technique for assessing the impact of ICT goods on output. The UK is a net importer of electronic components in some years so the volume of imports is raised by the use of US deflators. Further, electronic components are intermediate consumption in the production process. Intuitively, a faster falling deflator would increase the volume of imported electronic components over and above the rise in the volume of UK production. The overall effect on UK growth due to changes in the prices of components should be negative.

This issue can be reconciled using double deflation, where both the output and the inputs of production are deflated, with the difference being a double deflated measure of value added. Currently, the ONS is developing constant price input-output tables where output and inputs are separately deflated. Using constant price input-output tables, output measures can be compared with deflated expenditure measures to give constant price GDP balanced at product and industry level. When analysing ICT goods and services, this disaggregated reconciliation is an ideal basis. The following section explores the change in this measure using US deflators for the ICT goods instead of the UK PPI. This is done at a more disaggregated level, following the double deflation approach.

The methodology used is necessarily a simple one. The domestic output of ICT products in current prices can be found in the supply-use tables. This can be deflated by the UK PPI and the alternative price measure with the difference in the two measures indicating the difference in the volume of domestically produced goods. The effect of changing the deflator on intermediate expenditures on ICT goods can be calculated by using a similar methodology on the total demand for ICT products as intermediates. This sums the value of components used as intermediate consumption across all industries. The constant price change in output less the constant price change in intermediates gives the change in gross value added resulting from the substitution of UK PPI's with the alternative deflators in the sensitivity analysis. This is added to the constant price GVA series. Chart 1 indicates the results.

The growth in the official published GVA series, at 1995 prices, is the lowest line on chart 1; it is compared to graphs of GVA estimates which

Chart 2
GDP Growth: Expenditure Approach
annual percentage change, year end



Key:
1 – UK Whole economy GDP growth using US deflators for computers, telecomm and components;

2 – UK Whole economy GDP growth, ONS published series ABMI.

replace UK PPI with US deflators for computers, and telecommunications equipment. The results prove smaller than that of the STOIR work, with growth raised by very little before 1995, but by 0.23% per annum afterwards. Using a second change series which adjusts for components as well, the change to growth 1995-98 is even more modest – no more than 0.17%. This is mainly because the approach used here can adjust for the imports of ICT goods. What is observed is that the intermediate expenditures on electronic components greatly exceeds the output of electronic components. This is much the same as saying that the UK is a net importer of electronic components as there is very little final consumption or capital formation in the products of that industry. In particular, the growth when only computers and telecomm equipment are deflated using US deflators can be compared to the situation when electronic components are included. Changes in growth are less when components are included.

Two assumptions underlie the results. Firstly, it is assumed that the composition of the intermediate goods is identical to total output. This allows the PPI to be used to deflate intermediate expenditures. This is essentially a weights issue and relies on the weights of industry outputs being similar to those of the intermediates. Generally, industries either produce final output or intermediate consumption goods. Therefore, for example, the output of the components industry is largely going to be used in intermediate consumption. The price movements should be close to the price movements of the components used as intermediates unless the composition of UK imports is very different to domestic production.

A second assumption is necessary on the appropriate treatment of wholesale and retail margins when deflating ICT goods at purchasers rather than producer prices. The current study assumes a deflator for the margin which does not reflect the steep decline of the ICT product price. Some adjustment for margins was made. The ICT margins, as given in the supply tables, were allocated to the UK output in proportion to the domestic share of supply of the good.

Expenditure approach

A common method to analyse the impact of US deflators has been to use the expenditure approach. ICT goods appear primarily in the capital formation and net exports part of final expenditure, though households remain a significant purchaser of computers. The deflation of these expenditures in national accounts is quite complex and the whole procedure is not replicated in this analysis. Instead, we use the supply-use table to deflate product expenditures firstly by the UK indices, then by the US. Some final expenditure – notably that made by consumers – is not deflated by PPI's and the appropriate RPI index has been used in this product. No attempt has been made to replace the RPI index by a US consumer price index. The difference is then added to the Blue Book GDP series (ABMI). The results of this analysis are indicated in chart 2 and indicates a growth rate difference of approximately 0.28% per annum for the period 1995-98 and negligible differences in 1993-95 means a small growth of 0.13% p.a. in the longer period of 1992-98. This is the largest difference of all the measures of impact in the paper. ICT expenditure does form a large portion of total expenditure. In 1995, expenditures on computers, components and telecomm products makes up about 1.9% of final expenditure, net of imports. This represents more than the amount of value added which was deflated using US deflators in the double deflation approach (chart 1) and indicates an explanation for why the expenditure approach gives the largest changes to the growth rate. In the output approach the amount of value added deflated by the ICT PPI's is less.

The explanation for this difference lies in the way the expenditure and output approaches treats the margins of the ICT industry. All expenditures on ICT are at purchaser prices, that is inclusive of retail and wholesale margins. The deflators for ICT goods are therefore applied to both the producer price of the good and the margins. The output approach does not deflate margins in the outputs of the industry. Also, the usage of the PPI

on intermediate expenditures means that the margins for intermediates are deflated by the ICT PPI's lessening the impact of the fast falling ICT deflators. The overall impact, without running a full constant price balancing process, would lie somewhere in the middle, perhaps somewhat closer to the expenditure approach given CPI's and PPI's move very similarly for the goods.

Issues regarding software investment

A number of studies have highlighted differences in the ratio of software to hardware capital expenditures across countries (Oulton 2001; Lequiller, 2001). These papers note that the typical US investment in computer hardware is accompanied by much larger investment in software than in the UK's, and in other major countries', national accounts. The 1995 European System of Accounts (ESA), moved software investment from intermediate consumption to gross capital formation, thus transferring the expenditures from intermediate consumption into value added. The US Bureau of Economic Analysis in the mid-1990s introduced similar changes to their National Income and Product Accounts. Development of software within a firm or organisation is also included in capital formation, with cost of production being a proxy for investment.

While the total output of the Computing services firms can be cross-checked against the total purchases of software, the allocation of purchases between capital and intermediate is more difficult. In the ESA, a good should be capitalised if its cost is greater than five hundred euros and the product lasts more than a year. When individual statistical agencies apply the ESA regulation to their accounts, the precise methodologies used have varied across countries and the implementation has also depended on the accuracy of the data reported by businesses. Overall software expenditures are quite large – in 1997 total demand for Computing services (industry 107 in UK supply-use tables, ONS, 1999) was 1.3% of UK total demand, which includes intermediate consumption. The classification of the expenditures can therefore have a significant impact on the level of GDP.

In the UK, firms now are asked the amount spent on capital goods, including computer software in their capital expenditure returns. They are asked to add the cost of producing software in-house. Telephone surveys in the mid-1990s found that firms had not always followed the instructions on the inclusion of software purchases in their capital expenditure returns (Rizki, 1999). However, own account software development was generally found to be under-reported. Rizki therefore provides details of how a consistent time-series investment is derived, taking account of these findings. An adjustment is then added to the returns made by firms regarding other software spends.

The US measurement technique is different (see Grimm and Parker, 1999). The level of software investment is identified through commodity flow analysis. Rather than exclusively relying on purchase data, the output of the software industry is used to identify capital goods. Within the Computing services industry, products that can be characterised as investment goods (e.g. software applications) can be distinguished from those products that are not (e.g. maintenance and servicing of hardware and software). The US then split the overall software investment figure into three categories:

- Packaged software
- Bespoke software
- Own account software

For the last category, the US uses the cost of production to estimate investment expenditures by valuing the main inputs into in-house software development, mainly labour.

There are some advantages to the US seller survey technique as it consistently identifies the products of computing services. However, there are also some advantages to the capital expenditure inquiry approach. By asking the firm the expenditures which it capitalises, the inquiry is closer to a firm's own valuation of software purchases. A number of complex measurement issues arise when categorising the purchases. The relative merits of the two approaches are currently being researched and this work will use the results of the new ONS surveys. The quarterly Capital Expenditure Surveys are now specifically asking respondents about software investment and the results will be published later in the year. The ONS has also recently surveyed computing services firms about the supply of software.

Conclusions

This paper reports on work following the ONS Quality Review of short-term output indicators. The report highlighted the impact US deflators for computers would have on UK growth as an extreme scenario to test sensitivity to ICT deflators. This paper has provided some results of further work in this area, using pre-revision UK PPI's. On the basis of the assumptions made, the impact on UK growth of using US deflators is about 0.1% per annum in 1992-98. This is much less than the figures indicated in the Short Term Output Indicators Review, and is similar in size to revisions made to GDP due to other methodological changes. The results should also be taken in the light that the US ICT prices are the fastest falling by some margin of all major countries.

The sensitivity of economic growth to the pace of price falls in ICT goods and services is well-known. This paper follows up and extends the results of earlier ONS work and other analysts. One conclusion of such work is very clear. Differences in the methods used for quality adjustment have

the scope to lead to non-trivial differences in growth rate comparisons between countries. ONS is currently engaged in examining quality adjustment methods for computers and some other key products.

A second key issue in this area is the difference between software output identified in capital formation estimates between countries. The UK estimates are about one third of the equivalent figures in the US, and further work is under way to understand the reason for this difference and if necessary to revise the UK estimates. To this end, the UK is currently investigating these issues with its European partners and in international work.

Reference:

Aizcorbe, A., C. Corrado and M. Doms, 2000, 'Constructing Price and Quantity Indexes for High Technology Goods'. Paper presented at the National Bureau of Economic Research Summer Institute 2000 session on Price, Output, and Productivity Measurement, Cambridge, MA, July.

Brand, M., 2001, 'Historical Revisions to Computer Producer Prices', Office for National Statistics Article, June 11, http://www.statistics.gov.uk

Didier, M. and R. Martinez, 2000, 'Le Poids des Technologies de l'Information et de la Communication dans l'Economie'. Paper in the Report on the New Economy to the Council for Economic Analysis.

Eurostat, 1999, 'Compendium of HICP Reference Documents: Harmonisation of Price Indices'. Eurostat, January.

Grimm, B. and Parker, R., 1999, 'Recognition of Business and Government Expenditures for Software as Investment: Methodology and Quantitative Impacts, 1959-98', *BEA Methodological Papers*, Bureau of Economic Analysis, Washington D.C.

Holdway, M., 2000, 'Quality adjusting computer prices in the producer price index: An overview', Bureau of Labor Statistics, http://www.bls.gov/ppicomqa.htm..

Landefeld, J.S. and Grimm, B., 2000, 'A Note on the Impact of Hedonics and Computers on Real GDP', *Survey of Current Business*, December.

Lequiller, F., 2001, 'The New Economy and Measurement of GDP Growth', *INSEE Working Paper, G2001-01*, Paris.

OECD, 2000, 'Measuring the ICT Sector', Organisation for Economic Co-operation and Development, Paris (available at http://www.oecd.org).

ONS, 1999, *United Kingdom Input-Output Annual Supply and Use Tables, 1997*, The Stationery Office, London.

ONS, 2000a, 'Short Term Output Indicators Review', *National Statistics Quality Review Series*, No.1, Office for National Statistics, London.

ONS, 2000b, *Capital expenditure – new annual survey*, Office for National Statistics, London.

Oulton, Nicholas, 2001, 'ICT and Productivity Growth in the UK', *Bank of England Working Paper*, forthcoming.

Rizki, Uzair, 1999, 'Investment in Computer Software and Large Databases', http://www.statistics.gov.uk.

Schreyer, Paul, 2000, 'Computer price indices and international growth comparisons'. Paper presented at the OECD/RSS seminar on Efforts to Measure the Hard to Measure', 25 October (available at http://www.oecd.org).

Tse, J., 2001, 'ONS plans for the 2001 and 2002 Blue and Pink Books and Supply & Use Tables', *Economic Trends*, May.

Wadhwani, S., 2001, 'The New Economy: Myths and Realities'. The Travers Lecture, Guildhall University, March (available at http://www.bankofengland.co.uk).

Annex: Hedonic indexes, option/manufacturer costing and UK deflators

The United Kingdom approach makes quality adjustments in its PPI for improved computer quality - but in a different way to the United States approach. The United Kingdom uses two possible approaches (for all products). The preferred method for producer prices is to ask the manufacturer for an estimate of the cost of upgrading the specification. This amount is fully taken into account in the quality adjustment of the price. If this is not possible, the manufacturer will be asked for the price of the change as an option – this amount is then halved to take into account the economies of scale in production.

In the Retail Price Index, a similar option pricing method is used for computers. The cost of an additional option to the computer is obtained from list prices and a half of this is taken to reflect a situation where some consumers would not necessarily have chosen to purchase the option at the cost given.

Hedonic regressions are used in the US to estimate the value of a change in the characteristics of a product. Landefeld and Grimm (2000) note the increasing use of hedonics in the US – components where hedonics are used account for 18% of GDP. However, while use is widespread, the paper also notes that impact is concentrated in only a few goods (computers and peripherals being the main case). The hedonic approach is based on the general idea that many goods and services can be viewed as bundles of characteristics or features. Statistical techniques are used to estimate the implicit prices of the individual characteristics using data on observed prices in the market place. This is achieved through a regression that estimates the price of a good in terms of its characteristics.

The behaviour of the UK PPI and RPI indices for computers can be compared with the US Bureau of Economic Analysis deflator and a US matched model index regularly weighting together all prices, taken from Aizcorbe et al. (2000). This analysis is complex due to the differences of definition. However, taking 1995 average as 100, by 1999 the US PPI had reached a fifth of this. The matched model price index, by regularly up-dating the basket using quarterly data on both price and quantity, tracks true price movements better. The comparison indicates that the US hedonic index falls in a similar fashion to the matched model. However, more interesting is that the RPI index, which uses option costing for its quality adjustment, tracks the matched model similarly to the US deflator.

UK methods of quality adjustment are considerably less resource intensive than the hedonic method of quality adjusting. It does involve collection of characteristics with each price quote as, when there is a drop-out, the characteristics of the new good need to be compared to the old to value any change in features. However, as the values are determined from list prices or discussions with manufacturers, rather than regression, the number of price quotes used for estimating adjustment values is less. For the hedonic regression in June 1999, the Bureau of Labor Statistics used 685 observations (Holdway, 2000) to determine the adjustment factors for the characteristics of a computer. Such a regression may have to be repeated a number of times in a year because the market prices move so rapidly. The larger data required for the hedonic approach compares to the few dozen value measures needed in the UK method.

Nevertheless, ONS is currently engaged in examining hedonic methods for computers and some other key products. ONS believes that it may need to consider the adoption of such methods (if found reliable and practical) in a European context, to maintain consistency with other countries' national accounts.

Acknowledgements

A version of this article went on the ONS website on June 11, 2001.

The author acknowledges the comments of ONS colleagues, in particular Robin Lynch, Martin Brand, Graham Jenkinson and Amanda Rowlatt, and help from Laura Kodres. The author is particularly grateful to Nick Oulton and Paul Schreyer for sending drafts of their work.