national STATISTICS

December 2001
No 577

Economic Trends

Managing Editor: Adèle Rowe
Editor: Paul Dickman

Contents

Page

Introduction, symbols and definitions used ... iv
Articles previously published in *Economic Trends* ... v
UK macro-economic statistics publications ... vi

Articles

In brief ... 1
Economic update ... 2
Forecast for the UK economy ... 7
International economic indicators ... 8
Final expenditure prices index (experimental) ... 20
Corporate services price index (experimental) ... 28
ONS and the inflation target ... 35
Implementing selective editing in a monthly business survey ... 41
International comparisons of productivity ... 46
Valuing household transport in the UK ... 53

Tables

1. Summary

1.1 Selected monthly indicators ... T1

2. UK Economic Accounts

2.1 National accounts aggregates ... T2
2.2 Gross domestic product: by category of expenditure ... T4
2.3 Gross domestic product and shares of income and expenditure ... T6
2.4 Income, product and spending per head ... T6
2.5 Households' disposable income and consumption ... T8
2.6 Households' final consumption expenditure at constant 1995 prices ... T8
2.7 Gross fixed capital formation ... T10
2.8 Gross value added at constant 1995 basic prices by category of output ... T12
2.9 Index numbers of gross value added at basic prices: service industries ... T14
2.10 Summary capital accounts and net lending/net borrowing ... T16

2.11 Private non-financial corporations: allocation of primary income account ... T18
2.12 Private non-financial corporations: secondary distribution of income account and capital account ... T20
2.13 Balance of payments: current account ... T22
2.14 Trade in goods (on a balance of payments basis) ... T24
2.15 Measures of UK competitiveness in trade in manufactures ... T26

3. Prices

3.1 Prices ... T28

4. Labour market

4.1 Labour market activity: seasonally adjusted ... T30
4.2 Labour market activity: not seasonally adjusted ... T32
4.3 Labour market activity by age: seasonally adjusted ... T36
4.4 Jobs and claimant count ... T38
4.5 Regional claimant count ... T40
4.5A International Labour Organisation unemployment rates ... T42
4.6 Average earnings ... T44
4.7 Productivity and unit wage costs ... T46

5. Selected output and demand indicators

5.1 Output of production industries ... T48
5.2 Engineering and Construction: output and orders ... T50
5.3 Motor vehicle production and steel production and consumption ... T52
5.4 Indicators of fixed investment in dwellings ... T54
5.5 Number of property transactions ... T56
5.6 Change in inventories at constant 1995 prices ... T58
5.7 Inventory ratios ... T58
5.8 Retail sales, new registrations of cars and credit business (Great Britain) ... T60
5.9 Inland energy consumption ... T62

6. Selected financial statistics

6.1 Sterling exchange rates and UK official reserves ... T64
6.2 Monetary aggregates ... T66
6.3 Counterparts to changes in money stock M4 ... T68
6.4 General government receipts and expenditure ... T70
6.5 Public sector key financial indicators ... T70
6.6 Consumer credit and other personal sector borrowing ... T72
6.7 Analysis of bank lending to UK residents amounts outstanding ... T74
6.8 Interest rates, security prices and yields ... T76
6.9 A selection of asset prices ... T78

Measures of variability of selected economic series ... T79
Index of sources ... T80

In Brief

Articles

This month we feature four articles.

Amanda Rowlatt of ONS summarises the responsibilities of the ONS with respect to the inflation target. ONS is responsible for measuring inflation and other economic statistics, but has no further input into the Bank of England's inflation projections. Current monetary policy processes in the UK can be depicted as a tripartite relationship between HM Treasury, the Bank of England and ONS. The first part of the article describes the institutional relationships in more detail, while the second discusses the construction of ONS's inflation statistics.

Ceri Underwood of ONS discusses the implementation of selective editing in a monthly business survey. Traditionally it was believed that focusing a large proportion of resources on data editing produces high quality survey data. Over the last decaade research has shown that overediting induces high costs, high respondent burden and may deliver lower quality data than anticipated. The ONS has undertaken research into a new selective editing system for one monthly business survey. Results from a recent trial suggest that the amount of data editing can be reduced without impacting adversely on data quality.

Craig Richardson of ONS provides a detailed discussion of the issues surrounding the International Comparisons of Productivity (ICP) system underlying the data released on the National Statistics website on 17th October. The original methodology used in the ICP system was developed by DTI, and published in January 1998 *Economic Trends*. However recent work by the ONS suggests that there are shortcomings in this system, notably in the treatment of hours worked and the source of the employment numbers used. Since the OECD have improved the comparability of their data series, the ONS and DTI have agreed to switch to using straight OECD data.

Sandra Short of ONS, describes a new methodology being developed to measure and value the output of the household production of transport. This includes all modes of transport, which are provided by the household and for all purposes where the cost is not already included in the UK National Accounts. The figures quoted in the article are provisional and should be interpreted cautiously, bearing in mind their sensitivity to some of the assumptions. More details of the results of the results and sensitivity tests can be found on the transport project pages at **www.statistics.gov.uk/hhsa.**

Recent economic publications

Annual

United Kingdom Balance of Payments 2001 (the Pink Book). The Stationery Office, ISBN 0 11 621469 4. Price £39.50.
United Kingdom Input-Output Analyses 2001. The Stationery Office, ISBN 0 11 621476 7. Price £39.50.
United Kingdom National Accounts 2001 (the Blue Book). The Stationery Office, ISBN 0 11 621470 8. Price £39.50.

Quarterly

Consumer Trends: 2001 quarter 2. Available for downloading from the National Statistics website **www.statistics.gov.uk/products/p242.asp**
UK Economic Accounts: 2001 quarter 2. The Stationery Office, ISBN 0 11 621402 3. Price £26.
UK Trade in Goods analysed in terms of industries (MQ10): 2001 quarter 2. Available for downloading from the National Statistics website **www.statistics.gov.uk/products/p731.asp**

Monthly

Financial Statistics: November 2001. The Stationery Office, ISBN 0 11 621310 8. Price £23.50.
Focus on Consumer Price Indices: September 2001. Available for downloading from the National Statistics website **www.statistics.gov.uk/products/p867.asp**
Monthly Review of External Trade Statistics (MM24): September 2001. Available for downloading from the National Statistics website **www.statistics.gov.uk/products/p613.asp**

The Stationery Office publications are available by telephoning 0870 600 5522, fax 0870 600 5533, e-mail **bookorders@theso.co.uk** or online at **www.clicktso.com**

Economic Update - December 2001

Geoff Tily, Macroeconomic Assessment - Office for National Statistics

Address: D4/20, 1 Drummond Gate, London, SW1V 2QQ, tel: 020 7533 6919, E-mail: geoff.tily@ONS.gov.uk

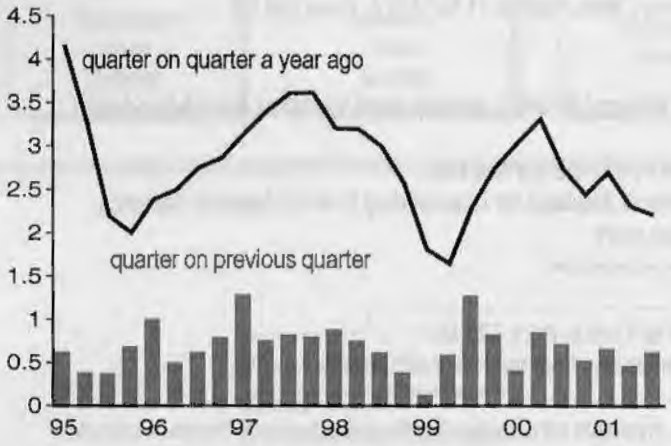
Overview

UK GDP has been fairly subdued throughout 2001, and significant effects are seen across a number of indicators from the global slump in ICT industries. The manufacturing sector is now in technical recession. While the recent shift into recession has been driven by a sharp contraction in the ICT sector, the non-ICT manufacturing has seen modest decline for some time. Third quarter figures perhaps suggest some slowdown in service sector growth for the first time, following robust growth in the first half of the year. Household demand continued to grow robustly in the third quarter, although may have weakened in September and October. Investment data now shows falls in investment and this comes against a background of falling measured profits and concerns about the indebtedness of the sector. Trade is deteriorating at a fast rate, with both exports and imports declining sharply in the second and third quarters. Labour market figures now show some deterioration, with Labour Force Survey data showing the employment rate falling and unemployment rate rising. Prices figures show inflation low. Earnings inflation slowed into the latest months and consumer prices are below the target. Producer prices show falling prices at the factory gate.

GDP activity

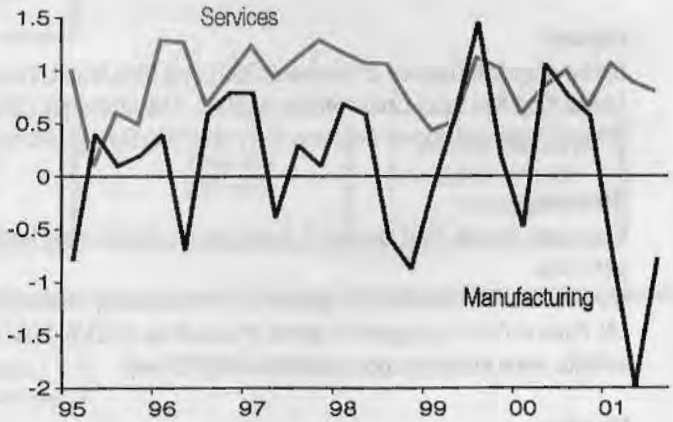
Quarterly GDP growth was 0.5 per cent in the third quarter of 2000, up slightly on 0.4 per cent in quarter two. Growth comparing the third quarter of 2001 with the same quarter a year ago was 2.1 per cent, down on 2.5 in the first quarter. This is the fourth consecutive more subdued quarter with weakness driven by a manufacturing sector now in recession and weaker service growth on the output side, falling trade and investment on the expenditure side and weak profits on the income side.

Chart 1
GDP growth
percentage change



This slowdown in the UK is set alongside a deteriorating global environment. In the third quarter GDP in the United States declined for the first time since the early 1990s, the Japanese economy declined in the second quarter and the EU economy has slowed significantly, with some Members States including Germany showing declines. From the corporate perspective, increasing numbers of companies have announced profit warnings and redundancies, credit agencies have reported higher level of debt default, spreads between corporate and government debt are at high levels and over the past year stock markets have seen large falls in value all over the world. The terrorist attack on 11 September may have exacerbated a number of these trends, although the falls in stock markets in the wake of the attacks have rebounded to pre-attack levels.

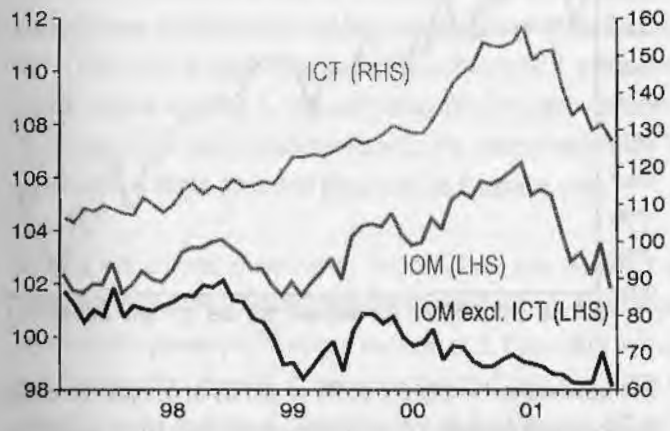
Chart 2
Output
percentage change, quarter on previous quarter



The manufacturing sector continues to drive the weakness in UK GDP. UK manufacturing output has been in decline since its most recent peak in December 2000 (chart 2). The decline was initially dominated by a sharp contraction in the output of the so-called information and communications technologies sectors (ICT, reflected by the NS series 'electrical and electronic engineering). However an index constructed by excluding the ICT sector shows the large part of the manufacturing sector has been in decline, apart from a brief spell of growth at the start of 1999, since the middle of 1998, perhaps in the wake of

the South East Asia crisis. While the rapidly increasing output of the ICT sector in this period meant that the overall manufacturing index continued to grow, this ceased to be the case when the ICT expansion ended (chart 3).

Chart 3
Indices of manufacturing



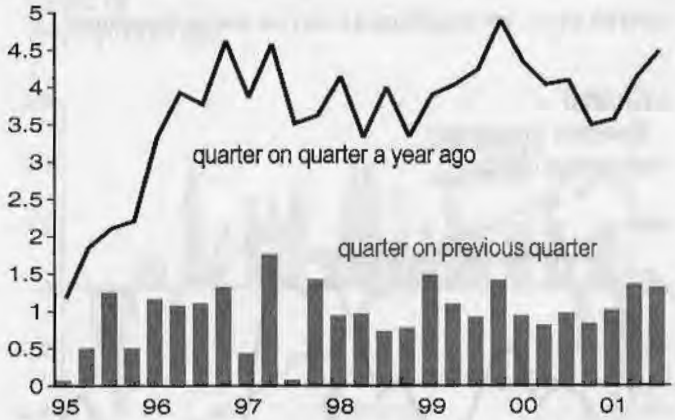
Turning to the third quarter of 2001, the overall decline in manufacturing output was 0.8 per cent from the previous quarter, a more modest decline than the 2.1 per cent decline in the second quarter (chart 2). The deceleration in decline has been dominated by a sharp increase in the output of motor vehicles, which grew by 8.7 per cent in the third quarter compared with a fall of 0.3 per cent in the second. Within the quarter, outside the motor vehicles data, the September IOM saw a particularly sharp decline, and thus there is little evidence that the deterioration in manufacturing sector as a whole has come to an end.

While manufacturing has declined quite substantially, growth in the service sector has remained robust, although there may now be evidence of activity weakening. Third quarter of 2001 figures show quarterly growth in the service sector decline to 0.6 per cent from 0.3 per cent in the second quarter (chart2). The weakness has been driven by slower post and telecommunications growth, a continued decline in transport (partly due to the fall off in air travel after September 11) and weakness in computer, legal and recruitment services. At this stage it is too early to conclude that the deterioration in the manufacturing sector is spreading more widely, but the data clearly supports the evidence of weakness suggested by some service sector company announcements. Furthermore measures produced by other organisations suggest some weakness in the service sector. The British Chambers of Commerce data for the third quarter of 2001 were the weakest since the second quarter of 1999. The monthly Chartered Institute of Purchasing and Supply indicator has showed a quite sharp deterioration since the start of 2001, with particularly strong falls into September and October.

Domestic demand

Household demand has remained strong through the large part of 2001, although there may be slight evidence of weakening in some of the latest figures. National Accounts figures for the third quarter show household demand increasing by 1.3 per cent, the same growth as in the second quarter; growth comparing with the same quarter a year ago was 4.5 per cent (chart 4). The strength in the National Accounts measure follows retail sales figures for the third quarter showing quarterly growth of 1.5 per cent, as well as strong sales of motor vehicles.
The strong medium term growth in consumer demand has been accompanied and perhaps to some extent sustained by high levels of borrowing. The Bank of England have recently emphasised how the stock of household debt through bank lending (M4 lending) is at an unprecedented rate (in comparison to gross disposable income), and have questioned whether households have become too indebted.

Chart 4
Household final consumption expenditure
percentage change



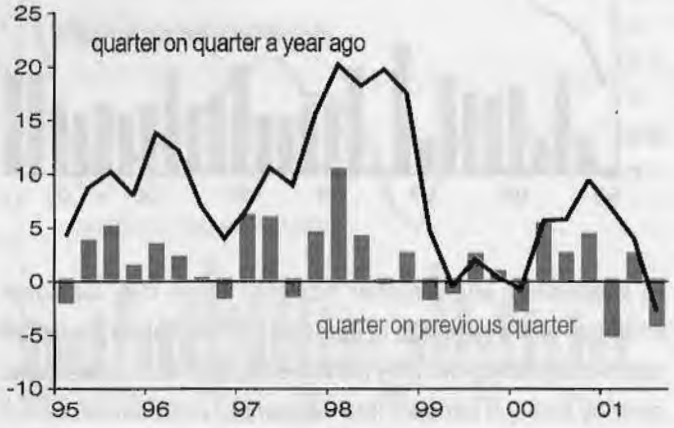
In September and October however there may be some evidence of a weakening in demand. While caution should be taken interpreting monthly movements, the retail sales index grew by only 0.3 per cent into September and then fell by 0.1 per cent into October (chart 5). This was to some extent echoed by the October CBI retailing figures, which showed a sharp slowdown in sales volumes in September (chart 5). Consumer confidence data showed sharp falls into the third quarter, although this may have been exacerbated by September 11. Lastly the growth in gross consumer credit was slower in the

third quarter, with quarterly growth of 1.9 per cent compared with 4.0 per cent in the second quarter.

Chart 5
Retail demand

Business investment demand has stalled quite abruptly in 2001. Third quarter figures show a fall in quarterly business investmet growth of 4.1 per cent compared with a rise of 2.5 per cent in the second quarter (chart 6). In the year to the third quarter of 2001 there was a decline of 2.7 per cent, the largest decline since 1993. Furthermore the figures both the second and third quarter figures are distorted by large imports of civil and military aircraft which are classified as service sector investment.

Chart 6
Business investment
percentage change

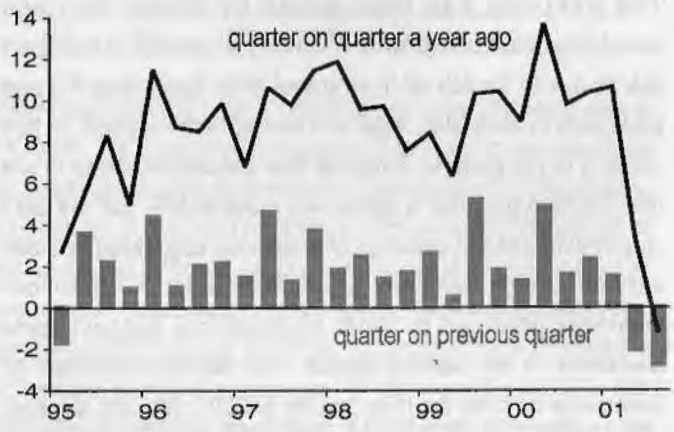


The main source of decline was sharp falls to investment in other machinery and equipment, which to some extent reflects the developments in the ICT sector. External indices echo weakness, with BCC manufacturing and services figures showing investment intentions slowing quite rapidly, and CBI manufacturing figures showing a similar story.

Chart 7
PNFCs' net financial assests
% of quarterly GDP

The weakening investment come as profits of companies are in decline, with overall corporations' gross operating surplus in the third quarter of 2001 standing 2.1 per cent below their level in the same quarter of 2000. This figure corroborates external figures showing sharp increases in the volume of corporate profit warnings. There has also been concern over the overall indebtedness of the private non-financial corporate sector (PNFC). Chart 7 shows that the PNFC net financial position has liabilities greatly outweighing assets, with the overall position deteriorating as a share of GDP through throughout the 1990s, with recent quarters only seeing recovery as the value of shares held as liabilities have fallen. It may be that investment is now being cut as borrowing conditions become more stringent, and companies as well as banks review the sustainability of overall indebtedness.

Chart 8
Imports
percentage change



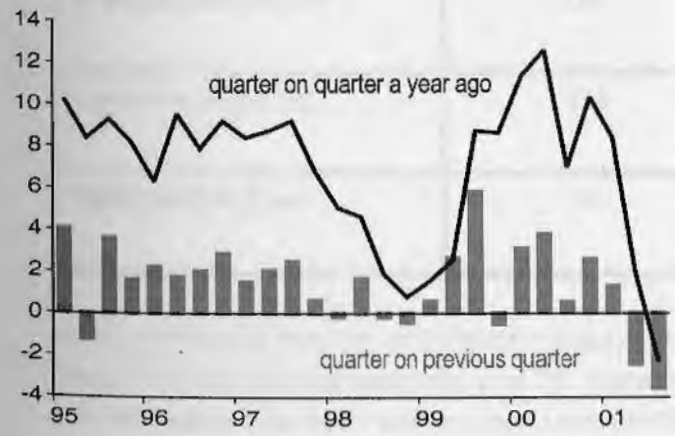
Government demand saw quarterly growth of 0.7 per cent into the third quarter, the same as in the second. Comparing with the same quarter a year ago growth was 1.7 per cent. This output figure remains considerably weaker than current price government expenditure, which grew by 6.0 per cent in the year to the third quarter. The figures diverge because present increases in cash expenditure are unlikely to have an immediate impact on government output. Reflecting the increased cash expenditure, public sector net borrowing figures show that so far in 2001-02 the government surplus is less than it was in the same period of 2000-1. The net repayment in April-October 2001 was £3.2 billion compared with the repayment of £9.3 billion in the same period of the previous financial year.

Finally on domestic demand, import data has showed a substantial decline. Overall import volumes fell by 2.8 per cent in the third quarter, following a decline of 2.1 per cent in the second quarter (chart 8). Comparing the third quarter of 2001 with the same quarter of 2000 the annual decline was 1.2 per cent, this is the largest annual decline since the recession of 1991. As with other aspects of the economy, part of the reason for this decline is falls in imports of products related to the ICT industries.

Overseas demand

In line with the global deterioration, UK export growth declined sharply into the second and third quarters of 2001, with sales slowing and falling to not just the US but to markets all over the world.

Chart 9
Exports
percentage change



In quarter three overall exports declined at a quarterly rate of 3.6 per cent following a decline of 2.4 per cent in the previous quarter (chart 9). As with imports, comparing the third quarter of 2001 with the same quarter of 2000 the annual decline of 2.3 per cent was the largest annual decline since the recession of 1991. Exports are declining to countries all over the world, with for example falls in the value of exports into the third quarter of over five per cent to all other G7 countries.

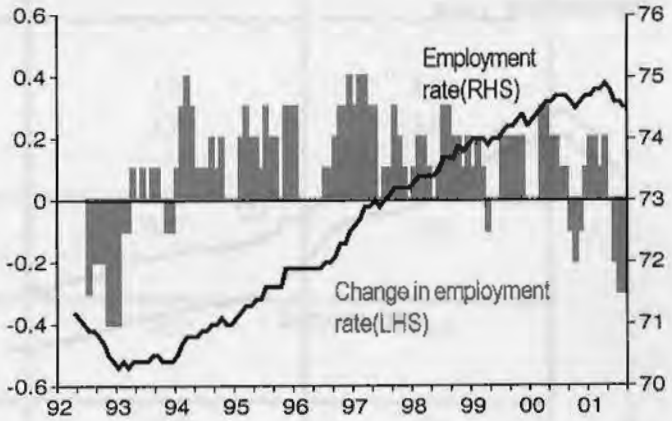
The medium term movements of imports and exports are such that the balance of trade has been on a widening trend since 1997; although the deficit recovered a little to £4.7 billion into the third quarter of 2001 from £5.4 billion in the second quarter, as imports fell faster than exports in value terms.

More generally, the UK balance of payments has been negative in every year since 1985. The International Investment Position, reflecting the cumulative effect of these deficits, shows net financial liabilities of the UK at £111.5 billion; a largely unprecedented position in the UK's financial relations with the rest of the world.

Labour Market

The latest Labour Force Survey figures now offer the strongest, but by no means conclusive, evidence for some time of a fall in employment and rise in unemployment.

Chart 10
Employment rate

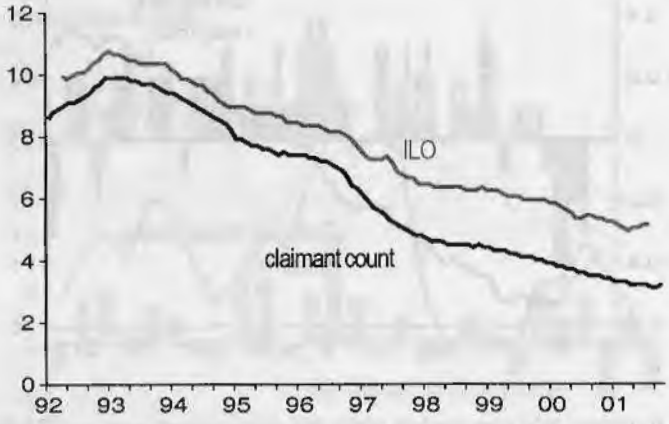


Between July-September 2001 the employment rate was 74.5 per cent, down from 74.8 per cent in the previous three-month period. Chart 10 shows that the 0.3 per cent fall over the two measured periods was the largest since the 1991 recession. Chart 11 shows that unemployment is now measured to have risen according to both the claimant count and LFS. Claimant count data showed a rise to 3.2 per cent in October from 3.1 per cent in September in the unemployment rate between

September and October 2001, and LFS figures showed the same rise between July-September 2001 and April-June 2001 the unemployment rate rose by 0.2 per cent to 5.1 per cent. However other figures in the labour market dataset continue to suggest improvement, with the claimant count in particular continuing to record falls in unemployment and standing at a rate of 3.1 per cent in September 2001.

The latest labour market data also reflects a turnaround in the two pictures of the labour market portrayed by the LFS and the workforce jobs employer survey data. Prior to the latest release workforce jobs showed a higher degree of slowdown than the LFS position, with the latest figures it is the LFS figures that show slowdown, while workforce jobs increase by 56,000 into the second quarter. However annual growth rates have now come more into line, with LFS employment growing by 0.6 per cent in the year to the latest three month period, and workforce jobs growing by 0.6 per cent in the year to the second quarter. Both these growth rates are low relative to the previous few years. Workforce jobs data shows that job losses remain concentrated in the manufacturing sector, where the deterioration has recently accelerated to a quarterly rate of decline of 1.1 per cent in September, down from 0.7 per cent three months before. There is a slowdown to the rate of job creation in the service sector, but annual growth is still fair at 1.3 per cent in the year to the second quarter.

Chart 11
Unemployment rates

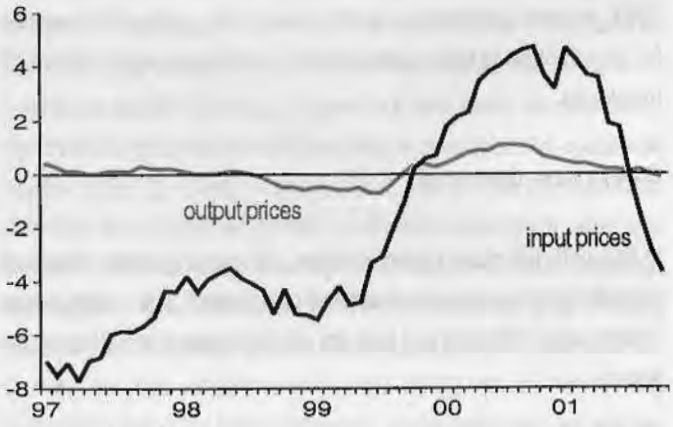


Perhaps reflecting the potentially deteriorating labour market position, average earnings growth has slowed over the latest few months. The headline rate was 4.4 per cent in September, down from 4.5 per cent in July and somewhat more subdued than the figures of over 5 per cent in the first quarter of 2001.

Prices

Inflation remains subdued, with RPIX inflation in October at 2.3 per cent remaining below the Government's inflation target of 2.5 per cent. Furthermore producer price figures suggest falling prices at the factory gate. Headline inflation rates in October 2001 show both input and output prices falling on the year, with output prices falling at an annual rate of 0.6 per cent and input prices falling at an annual rate of 9.0 per cent. Chart 12 shows the figures excluding food, beverages, tobacco and petroleum; here output price inflation has fallen to minus 0.1 per cent and input price inflation is minus 3.7 per cent. The deceleration in all series has been fairly abrupt following perhaps from the deteriorating global conditions with over-supply becoming an important phenomenon.

Chart 12
Producer price inflation, excluding food beverages tobacco and petroleum
growth, month on a year ago



Forecasts for the UK Economy

A comparison of independent forecasts, November 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)	2.2	1.9	2.7
Inflation rate (Q4: per cent)			
- RPI	1.5	1.0	2.6
- RPI excl MIPs	2.3	1.9	2.7
Unemployment (Q4, mn)	0.97	0.87	1.00
Current Account (£ bn)	-16.5	-23.3	-10.0
PSNB *(2001-02, £ bn)	-5.3	-11.1	4.0

	Independent Forecasts for 2002		
	Average	Lowest	Highest
GDP growth (per cent)	1.9	0.4	2.8
Inflation rate (Q4: per cent)			
- RPI	2.5	1.5	4.1
- RPI excl MIPs	2.3	1.7	3.5
Unemployment (Q4, mn)	1.08	0.87	1.30
Current Account (£ bn)	-23.6	-35.2	-16.0
PSNB* (2002-03, £ bn)	3.5	-9.3	13.5

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 B K Phamber, Public Enquiry Unit, HM Treasury, Room 88/2, Parliament Street, London SW1P 3AG (Tel: 020-7270 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 - December 2001

James Hope, Macroeconomic Assessment - National Statistics

Gladys Asogbon, Marcoeconomic Assessment - National Statistics

Address: D4/20, 1 Drummond Gate, London, SW1V 2QQ, tel: 020 7533 5925, E-mail: james.hope@ONS.gov.uk

Overview

The slowdown in the world's major economies is continuing, with some countries seeing unemployment increasing. EU15 quarterly GDP growth continued to slow in the second quarter of 2001 and growth in the labour market weakened. Consumer price and producer price inflation fell considerably in the major European economies in the third quarter of 2001. Unemployment rose in both Germany and France in the third quarter. In the US, quarterly GDP growth was negative in 2001 quarter three for the first time since 1993 quarter one, while unemployment continued to rise strongly and industrial production continued to shrink. In Japan, GDP growth was negative and industrial production fell very sharply, while the economy continued to suffer from deflationary pressures.

EU15

EU GDP growth continues to weaken, with quarterly growth of only 0.2 per cent in the second quarter of 2001 following growth of 0.5 per cent in quarter one. Households were the main drivers of growth, growing at 0.4 per cent on the quarter, with the government sector continuing at the same pace as in previous quarters. The main weakness was in trade and investment. Export growth was negative at minus 0.1 per cent. Continuing the weakness seen in the previous quarter, there was only a slight increase in the level of investment recorded in the second quarter. Stocks fell, whilst there was a minor pickup in import growth, although this was still just 0.1 per cent. Reflecting the above, sales recorded negative growth of minus 0.6 per cent on the previous quarter.

Index of Production data shows the potential source of the slowdown from the output perspective, with quarterly growth contracting by 1.2 per cent in 2001 quarter two, following only a small increase of 0.2 per cent in the previous quarter. The monthly figures are more erratic, with a strong decline of 1.2 per cent in July now being followed by an increase of 1.5 per cent in August. Growth on an annual basis was down to a meagre 0.5 per cent in the second quarter and to minus 0.3 per cent in August.

The third quarter of 2001 saw producer price growth collapse to just 0.7 per cent from 2.5 per cent in the second quarter of 2001. Growth in consumer prices also weakened, with the rate now down to 2.5 per cent from 2.9 per cent in the previous quarter. Latest monthly figures indicate that inflationary pressures on the producer side took a sharp fall towards the end of the quarter and likewise on the consumer side, so that inflation is moving closer to the ECB target of 2 per cent and therefore, gives more scope for interest rate cuts.

EU employment data continues to show growth but at a slightly reduced rate, with annual growth in the year to the second quarter at 1.2 per cent. Unemployment continued to improve but again at a slower rate with a fall to 7.6 per cent of the labour force in 2001Q3 down from 7.7 per cent in the previous quarter. Reflecting this more subdued labour market, EU average earnings growth, which had been stable at 3.5 per cent for three consecutive quarters, has now fallen to 3.4 per cent in the second quarter of 2001.

Germany

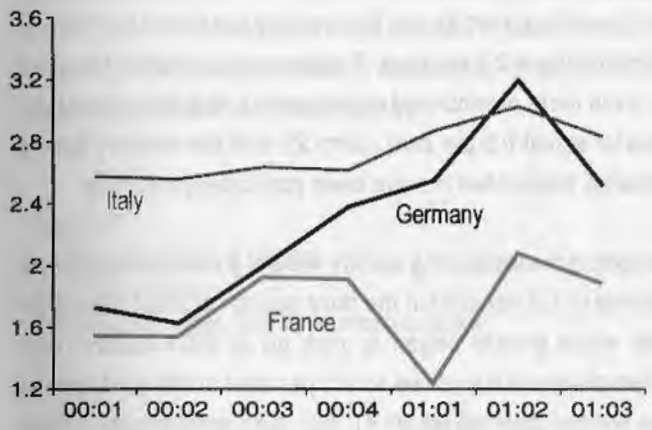
Quarterly GDP growth stalled in 2001 quarter two, showing zero growth. A second successive quarter of robust demand from households and a slight improvement on exports added to the economy. However, there were declines in all other areas notably a further 0.3 per cent fall in investment the same as the fall in the previous quarter and imports continued to drag down growth. Second quarter growth in sales was fairly robust, growing at 0.9 per cent on the previous quarter, although it was down to just 0.1 per cent on an annual basis (chart 3).

Quarterly growth in production declined by 1.7 per cent in the second quarter of 2001 following an increase of 1.1 per cent in the previous quarter. This is the weakest growth since 1995Q1, when quarterly production fell by 1.8 per cent.

Perhaps reflecting the slowdown in activity, producer and consumer prices saw major falls in 2001 quarter three. Consumer price inflation slowed to 2.5 per cent, down from 3.2

per cent in quarter two (chart 1). Producer price inflation saw a larger decline from 4.7 per cent in quarter two to 2.6 per cent in 2001 quarter three (chart 2). The monthly figures show that both measures slowed sharply as the third quarter progressed.

Chart 1
Consumer price inflation: France, Germany & Italy
percentage change, quarter on quarter a year ago



The slowdown in GDP in 2001 quarters one and two appears to be feeding through into the unemployment figures. Unemployment rose for the second time in nine months and is now at 7.9 per cent in the third quarter (chart 4).

In line with a deteriorating labour market, annual earnings growth moderated somewhat, from 3.3 per cent in 2000 quarter three, to 2.4 per cent in 2000 quarter four and 2.0 per cent in 2001 quarter one.

France

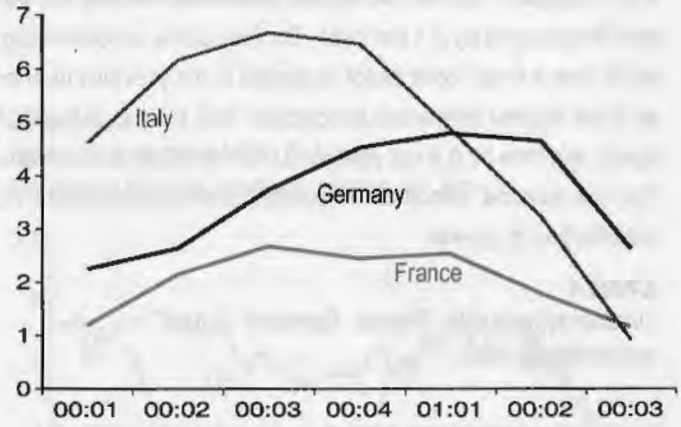
Data for the second quarter of 2001 show the French economy slowing into 2001. Quarterly GDP growth in 2001 quarter one slowed to 0.4 per cent and a similar rate of growth came in the second quarter, with GDP growing by 0.3 per cent.

The 2001 quarter two slowdown was dominated by declines in the contribution of exports and household consumption, with investment growth remaining weak. Export growth made a negative 0.4 per cent contribution to GDP and imports contributed to growth by declining by 0.3 per cent. The second quarter's consumption figure is more consistent with the decline in second quarter sales, which fell by 2.8 per cent and continued to fall in the third quarter although at a reduced rate of minus 0.7 per cent. On an annual basis, the decline in retail sales accelerated in the third quarter as sales fell by 0.8 per cent (chart 3).

Growth in quarterly industrial production remained weak in 2001 quarter two, at 0.1 per cent, slightly lower than the 0.3 per cent growth recorded in the previous quarter. Annual growth was down to 1.9 per cent in the second quarter and figures for the first two months of quarter three point to next quarter's figure being lower still, although France's production remains higher than its main competitors.

The inflationary position in France has improved, with respect to the ECB target, in the third quarter. Consumer price inflation fell to 1.9 per cent, down from 2.1 per cent in the previous quarter and is now back below the ECB target (chart1). Producer price inflation recorded another sharp fall, this time to 1.1 per cent, down from 1.8 per cent (chart2). The monthly figures show that the slowdown in inflationary pressures gained momentum through the quarter.

Chart 2
Producer price inflation: France,Germany & Italy - seasonally adjusted
percentage changes, quarter on quarter a year ago



Unemployment rose to 8.6 per cent in the third quarter of 2001 (chart 4), up from 8.5 per cent in the previous quarter and coupled with the rest of the data may suggest that this is not merely a blip. Employment grew by an annual rate of 2.2 per cent in 2001 quarter two; this was the lowest rate since 1999Q3, although still relatively high.

Reflecting this slowdown, annual earnings growth slowed to 4.2 per cent in 2001 quarter two, down from 4.3 per cent in the previous quarter and further away from the 5 per cent plus rates seen in 2000.

Italy

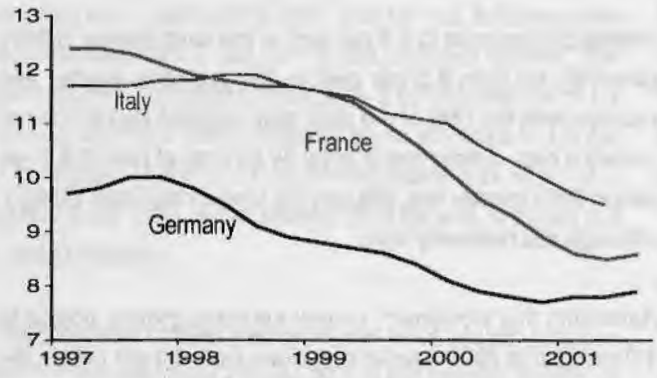
The Italian economy is now moving rapidly in the direction of

other EU economies, with quarterly growth of only 0.1 per cent in the second quarter, after strong growth in the previous quarter.

Chart 3
Retail sales growth: France, Grermany & Italy
seasonally adjusted
percentage changes, quarter on quarter a year ago

Whilst consumption rebounded in the second quarter, to record a rise of 0.4 per cent, investment and exports served to drag down growth and the contribution of the remaining components was negligible. On the downside, investment fell by 0.1 per cent and exports by 0.4 per cent. On the upside, stockbuilding, which was a major contributor to growth in the previous quarter as firms moved unwanted production into stocks, increased again, this time by 0.1 per cent, and imports fell by 0.1 per cent. For the second successive quarter government made no contribution to growth.

Chart 4
Unemployment rate, France, Germany & Italy
seasonally adjusted



Echoing weak consumption in quarter one, retail sales fell once again in the second quarter, albeit by only 0.3 per cent compared to the fall of 1.0 per cent seen in the first quarter of 2001. On an annual basis sales fell by 1.0 per cent in the second quarter (chart 3).

Growth in industrial production fell by 0.3 per cent in 2001 quarter one and this has continued into the second quarter, with the decline gathering pace with a fall of 1.4 per cent.

As in Germany and France, consumer price and especially producer price inflation have eased in Italy in the third quarter of 2001. Consumer price inflation fell to 2.8 per cent in the third quarter (chart 1) and this decline continued in October, with inflation at 2.5 per cent. Producer price inflation has seen an even more pronounced improvement, with the rate in third quarter at just 0.9 per cent (chart 2), with the monthly figures showing September to have been particularly subdued.

Reflecting the weakening activity, annual growth in employment slowed to 1.8 per cent in the third quarter of 2001, its lowest rate since growth began to pick up in 2001 quarter two. Unemployment was down to 9.5 per cent of the workforce in the second quarter (chart 4), but, with employment growth slowing it will be interesting to see how unemployment fares in the coming months.

Annual earnings growth has remained subdued and has fallen back significantly in the second quarter of 2001 to 1.3 per cent. This is an unprecedented rate for Italy and possibly an indication of how, with inflation less prevalent than was historically the case and unemployment remaining high, there is less pressure on wages to increase substantially each year.

USA

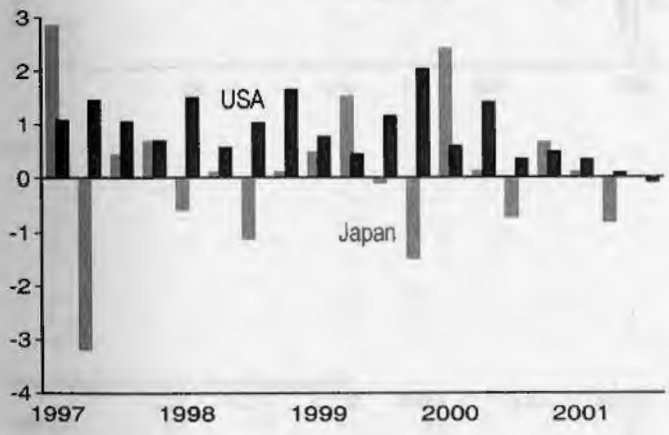
The most recent data for the US economy show that in the third quarter of 2001, the economy contracted for the first time since 1993 quarter one (chart 5). Quarterly GDP growth for 2001 quarter three was negative at 0.1 per cent. Annual GDP growth also fell to its lowest level since 1991 quarter four at 0.8 per cent in 2001 quarter three.

All contributors to change to GDP are weak, with the weakest two being investment expenditure and exports. Investment expenditure contracted further from 2001 quarter two, contributing a negative 0.5 per cent to quarterly GDP growth in 2001 quarter three. Exports also contracted, contributing a negative 0.5 per cent to quarterly GDP growth in 2001 quarter three. The contribution of change in stocks was flat. Private final consumption slowed but still made a positive contribution in 2001 quarter three of 0.2 per cent, down from 0.4 percent in

2001 quarter two. Government final consumption increased marginally quarter on quarter from a contribution to quarterly GDP of 0.1 per cent in 2001 quarter two to 0.2 per cent in 2001 quarter three, while a reduction in import growth served to moderate the deteriorating position.

While consumption has weakened, retail sales figures now show substantial declines with monthly figures showing annual growth of 4.4 per cent in August now declining to 1.4 per cent in September reflecting a fall of 2.6 per cent in sales in October. This may reflect the aftermath of September 11 as well as the ongoing increases to unemployment.

Chart 5
GDP growth, USA & Japan
seasonally adjusted
percentage changes, quarter on previous quarter



Industrial production has declined sharply in 2001 (chart 6). Quarterly growth fell by 1.7 per cent in 2001 quarter three following minus 1.0 per cent in 2001 quarter two. Annual growth figures show even larger and sharper contractions, as do the monthly figures. The latest monthly figures for industrial production growth for the twelve months to September show a contraction of 5.8 per cent, this decline is even larger than the steepest fall in the recession of the early 1990's. Continuing falls in manufacturing output, low capacity utilisation undercutting the incentive for new investment and previous over-investment may be reasons for these sharp declines.

The US labour market has also seen an increasing number of job loses in line with the slowdown in economic activity reflected in the GDP figures. The monthly figures show the unemployment rate increasing from 4.9 per cent in September 2001 to 5.4 per cent in October, a level of unemployment last seen in December 1996. Average earnings monthly growth has remained subdued since June this year at 3.4 per cent.

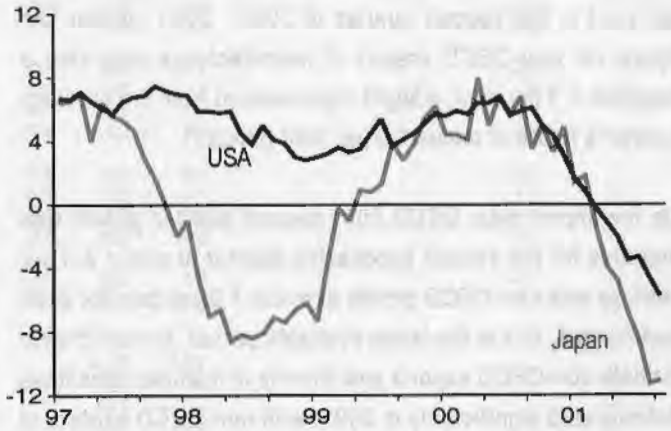
In line with weaker activity, annual consumer prices growth was 2.7 per cent in 2001 quarter three (3.4 per cent in 2001 quarter two). Annual producer prices growth was 0.7 per cent in 2001 quarter three down sharply from 2.1 per cent in 2001 quarter two.

Japan

Figures from the latest quarterly GDP data show the Japanese economy contracting by 0.8 per cent from a positive 0.1 per cent in 2001 quarter one (chart 5). The weakness in the Japanese economy is mainly twofold; the first is due to a fall in investment expenditure, which made a very sharp negative contribution to quarterly GDP growth in 2001 quarter two of 1.1 per cent. The second aspect is exports, which in line with the more general global economic slowdown, made a negative contribution of 0.3 per cent, compared with a negative contribution of 0.4 per cent in 2001 quarter one.

Private final consumption's contribution to quarterly GDP growth has remained positive but subdued at 0.3 per cent for 2001 quarter one and 2001 quarter two. Government consumption for the last two quarters has also remained basically flat.

Chart 6
Index of production,USA & Japan
Percentage changes, month on month a year ago



Japanese industrial production appears to have collapsed. Monthly figures show a contraction in the twelve months to September 2001 of 11.1 per cent (chart 6). This is the lowest annual growth figure seen since 1975 quarter two. Quarter on quarter production growth fell by minus 3.1 per cent in 2001 quarter one and minus 4.0 per cent in 2001 quarter two and 2001 quarter three. This substantial deterioration may reflect the structure of the Japanese economy. The economy's dependence on the high tech industry make it particularly

vulnerable to the vagaries of that industry and with the present downturn in many other economies, it is likely to experience difficulties in its trade position.

The weakening economy, reflected mainly by deteriorating industrial production, has led to severe job loses, with the unemployment rate now at 5.3 per cent of the population in September 2001, unprecedented since at least before 1960. Employment figures also show a similar situation, with quarter on quarter a year ago growth negative in 2001 quarter two and 2001 quarter three at 0.4 per cent and 0.8 per cent respectively. Subsequently, earnings growth also contracted considerably with negative annual growth in 2001 quarter three of minus 0.4 per cent from a positive 0.6 per cent in 2001 quarter two.

Reflecting the state of the Japanese economy, consumer and producer prices in 2000 and 2001 continue the deflation that began in mid-1998. 2001 quarter three show annual growth of consumer and producer prices of negative 0.8 per cent and negative 1.0 per cent respectively, with no sign of a reversal of this trend.

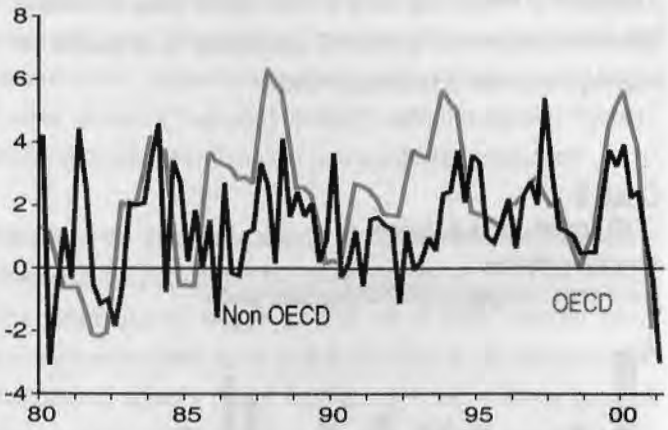
World Trade

With national figures showing weakness, world trade data now show contraction in the global economy. Quarter on quarter growth of OECD exports of manufactures fell by a negative 3.0 per cent in the second quarter of 2001. 2001 quarter two figure for non-OECD export of manufactures was also a negative 1.3 per cent, a slight improvement from the previous quarter's figure of minus 1.9 per cent (chart 7).

On the import side, OECD 2001 second quarter growth was negative for the second successive quarter at minus 2.3 per cent, as was non-OECD growth at minus 1.0 per cent for 2001 quarter one, this is the latest available period. Annual growth for both non-OECD exports and imports of manufactures have deteriorated significantly in 2001, with non-OECD exports of manufactures increasing by just 1.4 per cent in 2001 quarter two, compared to an increase of 7.5 in 2001 quarter two. Non-OECD import of manufactures grew by 10.6 percent in 2001 quarter one from 17.6 per growth in 2000 quarter four. The data for exports and imports of goods tell a very similar story of weaker growth in the most recent data periods.

In general, the slowdown in trade for both OECD and non-OECD countries in recent quarters reflects the sharp slowdown of the US economy, the fragility of the Japanese economy and the materialising slowdown in Europe.

Chart 7
OECD and Non OECD export of manufactures
seasonally adjusted
percentage changes
quarter on quarter a year ago



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 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 EU15, France, Germany, Italy, the USA and Japan are all avaliablle on an SNA93 basis. Cross country comparisms are now more valid.

1 European Union 15

	GDP	Contribution to change in 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	2.5	1.1	0.2	0.6	0.2	2.4	2.0	3.5	–0.3	3.1	4.5	3.4	0.6	10.7
1996	1.7	1.2	0.3	0.4	–0.5	1.5	1.2	0.6	0.5	2.5	0.7	4.0	0.5	10.8
1997	2.6	1.3	0.2	0.7	0.1	3.0	2.7	3.9	1.6	2.0	0.9	2.9	1.0	10.6
1998	2.9	1.9	0.3	1.3	0.4	2.1	3.0	3.7	2.8	1.8	–0.4	3.0	1.8	9.9
1999	2.6	2.0	0.4	1.0	–0.2	1.7	2.3	1.8	2.0	1.2	–	2.5	1.5	9.2
2000	3.4	1.7	0.4	1.0	–0.1	4.0	3.6	4.7	2.4	2.5	4.8	3.5	1.6	8.2
1998 Q3	2.8	2.1	0.3	1.4	0.3	1.6	2.8	3.2	2.9	1.6	–0.8	2.8	1.7	9.8
Q4	2.1	2.0	0.4	1.1	0.1	0.8	2.3	1.3	2.9	1.4	–1.7	2.8	1.8	9.6
1999 Q1	2.0	2.1	0.5	0.9	–0.2	0.6	1.9	0.6	2.3	1.1	–1.8	2.8	1.6	9.5
Q2	2.2	1.9	0.4	0.9	–0.2	1.0	1.8	0.6	1.2	1.1	–1.0	1.8	1.5	9.3
Q3	2.7	2.0	0.4	1.0	–0.3	2.0	2.4	2.2	1.9	1.2	0.5	2.7	1.7	9.0
Q4	3.5	2.0	0.5	1.1	–0.1	3.1	3.0	4.1	2.8	1.6	2.4	2.7	1.7	8.8
2000 Q1	3.6	1.8	0.4	1.1	–0.2	3.7	3.2	4.1	2.4	2.2	4.1	3.6	1.5	8.6
Q2	3.9	2.1	0.4	1.1	0.1	4.1	3.9	5.5	3.5	2.3	4.9	3.6	1.6	8.3
Q3	3.3	1.7	0.3	1.0	0.1	4.2	4.0	4.8	2.1	2.7	5.1	3.5	1.5	8.1
Q4	2.9	1.4	0.3	0.9	–0.1	4.1	3.6	4.1	1.6	2.8	5.1	3.5	1.6	7.9
2001 Q1	2.6	1.3	0.3	0.5	–0.2	3.3	2.6	3.8	2.5	2.7	3.3	3.5	1.5	7.7
Q2	1.9	1.3	0.3	0.3	–0.5	1.9	1.4	0.5	1.5	2.9	2.5	3.4	1.2	7.7
Q3	..	..	..	..	..	..	..	..	..	2.5	0.7	..	..	7.6
2000 Aug	..	..	..	..	..	..	..	5.0	1.9	2.5	4.8	..	..	8.1
Sep	..	..	..	..	..	..	..	4.5	2.8	2.9	5.4	..	..	8.0
Oct	..	..	..	..	..	..	..	3.7	0.9	2.8	5.6	..	..	7.9
Nov	..	..	..	..	..	..	..	3.7	1.8	2.9	5.3	..	..	7.9
Dec	..	..	..	..	..	..	..	5.1	1.8	2.7	4.4	..	..	7.8
2001 Jan	..	..	..	..	..	..	..	4.7	2.8	2.7	3.6	..	..	7.8
Feb	..	..	..	..	..	..	..	4.0	1.8	2.7	3.4	..	..	7.7
Mar	..	..	..	..	..	..	..	2.6	2.8	2.6	2.9	..	..	7.7
Apr	..	..	..	..	..	..	..	1.0	1.8	2.8	2.9	..	..	7.7
May	..	..	..	..	..	..	..	–0.3	–	3.2	2.6	..	..	7.7
Jun	..	..	..	..	..	..	..	1.0	2.8	2.9	2.1	..	..	7.7
Jul	..	..	..	..	..	..	..	–1.2	0.9	2.7	1.2	..	..	7.7
Aug	..	..	..	..	..	..	..	–0.3	1.8	2.7	0.9	..	..	7.6
Sep	..	..	..	..	..	..	..	..	..	2.3	0.2	..	..	7.6

Percentage change on previous quarter	ILGL	HUDY	HUDZ	HUEA	HUEB	HUEC	HUED	ILHF	ILHZ	ILIT
1998 Q3	0.6	0.5	0.1	0.2	–	0.1	0.3	0.2	1.0	0.7
Q4	0.2	0.5	0.1	0.2	0.1	–0.2	0.4	–0.6	0.3	0.3
1999 Q1	0.7	0.7	0.2	0.3	–0.1	0.3	0.7	0.4	0.7	–0.5
Q2	0.6	0.2	–	0.2	–0.2	0.8	0.5	0.7	–0.7	1.0
Q3	1.1	0.6	0.1	0.3	–0.1	1.0	0.9	1.7	1.6	1.0
Q4	1.0	0.5	0.1	0.2	0.2	0.9	1.0	1.2	1.2	0.3
2000 Q1	0.9	0.5	0.1	0.3	–0.2	0.9	0.8	0.4	0.3	–0.7
Q2	0.9	0.4	0.1	0.2	0.1	1.2	1.2	2.0	0.4	1.0
Q3	0.5	0.2	0.1	0.2	–0.1	1.1	0.9	1.0	0.3	0.8
Q4	0.6	0.2	0.1	0.1	–	0.9	0.6	0.5	0.6	0.4
2001 Q1	0.5	0.5	0.1	–0.1	–0.2	0.1	–0.1	0.2	1.2	–0.7
Q2	0.2	0.4	0.1	0.1	–0.1	–0.1	0.1	–1.2	–0.6	0.7

Percentage change on previous month	ILKF	ILKP
2000 Sep	–0.3	–
Oct	–0.2	–
Nov	0.7	0.9
Dec	1.0	–
2001 Jan	–1.0	0.9
Feb	0.7	–
Mar	–0.7	–
Apr	–0.9	–0.9
May	–0.3	–
Jun	0.5	0.9
Jul	–1.2	–0.9
Aug	1.5	0.9
Sep	..	..

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

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

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	0.3	1.4	1.3	0.9	0.9	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	0.1	0.2	–	2.9	2.0	3.7	–1.6	1.9	1.1	1.5	–0.3	9.9
1998	1.7	0.9	0.2	0.5	0.5	1.8	2.2	4.1	1.0	1.0	–0.4	1.8	1.5	9.3
1999	1.7	1.7	0.3	0.8	–0.4	1.5	2.3	1.5	0.5	0.6	–1.0	2.6	0.8	8.6
2000	3.2	0.9	0.2	0.6	0.3	4.2	3.1	6.3	1.0	1.9	3.4	2.7	0.5	7.9
1998 Q3	1.6	1.2	0.3	0.5	0.3	1.2	2.0	4.4	2.4	0.7	–0.8	2.1	1.1	9.1
Q4	0.6	1.4	0.5	–	0.2	0.1	1.6	1.2	2.0	0.4	–1.7	2.2	2.0	8.9
1999 Q1	0.7	1.8	0.4	0.3	–0.4	0.1	1.6	–0.6	1.6	0.3	–2.4	2.5	1.1	8.8
Q2	1.0	1.7	0.2	0.7	–0.5	0.7	1.9	0.5	–0.3	0.5	–1.7	2.4	0.3	8.7
Q3	2.0	1.7	0.3	1.0	–0.5	2.0	2.5	2.0	–0.2	0.7	–0.7	2.7	1.4	8.6
Q4	3.0	1.6	0.4	1.2	–0.4	3.3	3.0	4.1	0.8	1.0	0.6	3.0	0.7	8.4
2000 Q1	2.9	0.6	0.3	0.9	–0.5	4.3	2.6	5.2	–0.9	1.7	2.3	2.8	0.4	8.1
Q2	4.3	1.8	0.4	0.8	0.3	4.0	2.8	6.7	3.8	1.6	2.6	2.4	0.6	7.9
Q3	3.2	1.1	0.1	0.6	0.3	4.2	3.0	7.1	1.7	2.0	3.7	3.3	0.3	7.8
Q4	2.5	0.4	0.2	0.4	1.1	4.5	4.1	5.9	–0.5	2.4	4.5	2.4	0.5	7.7
2001 Q1	1.8	0.8	0.3	–0.2	0.1	3.0	2.1	5.7	1.2	2.5	4.8	2.0	0.3	7.8
Q2	0.6	0.7	0.2	–0.5	–0.6	2.4	1.5	1.3	0.1	3.2	4.7	..	0.1	7.8
Q3	..	..	..	..	..	..	..	..	..	2.5	2.6	..	..	7.9
2000 Aug	..	..	..	..	..	..	..	6.4	1.3	1.8	3.5	..	..	7.8
Sep	..	..	..	..	..	..	..	7.3	4.4	2.5	4.3	..	..	7.8
Oct	..	..	..	..	..	..	..	5.8	–2.4	2.4	4.6	..	..	7.7
Nov	..	..	..	..	..	..	..	5.5	0.2	2.4	4.7	..	..	7.7
Dec	..	..	..	..	..	..	..	6.4	0.6	2.2	4.2	..	..	7.7
2001 Jan	..	..	..	..	..	..	..	7.5	1.9	2.4	4.6	..	..	7.7
Feb	..	..	..	..	..	..	..	6.0	–0.8	2.6	4.7	..	..	7.8
Mar	..	..	..	..	..	..	..	3.7	2.6	2.5	4.9	..	..	7.8
Apr	..	..	..	..	..	..	..	1.4	–	2.9	5.0	..	..	7.8
May	..	..	..	..	..	..	..	0.3	–2.3	3.5	4.6	..	..	7.8
Jun	..	..	..	..	..	..	..	2.2	2.8	3.1	4.3	..	..	7.9
Jul	..	..	..	..	..	..	..	–2.2	–0.5	2.6	3.1	..	..	7.9
Aug	..	..	..	..	..	..	..	–0.2	0.7	2.6	2.7	..	..	7.9
Sep	..	..	..	..	..	..	..	..	..	2.1	1.9	..	..	7.9
Percentage change on previous quarter														
	ILGI	HUCC	HUCD	HUCE	HUCF	HUCG	HUCH	ILHC	ILHW				ILIQ	
1998 Q3	0.2	0.5	0.1	0.2	–0.2	–0.4	–	0.4	0.8				–0.1	
Q4	–0.1	0.6	–	–0.2	–	–0.4	0.1	–1.2	0.6				1.2	
1999 Q1	1.1	1.2	0.2	0.6	–0.3	0.4	0.9	0.2	1.0				–1.5	
Q2	–0.2	–0.6	–0.1	0.2	–	1.1	0.8	1.1	–2.6				0.7	
Q3	1.3	0.5	0.2	0.4	–0.2	0.9	0.6	1.9	0.8				1.0	
Q4	0.8	0.4	0.1	–	0.2	0.8	0.6	0.8	1.7				0.5	
2000 Q1	1.0	0.2	0.1	0.3	–0.4	1.4	0.5	1.2	–0.7				–1.8	
Q2	1.2	0.6	–	0.1	0.7	0.8	1.0	2.5	2.0				0.9	
Q3	0.1	–0.2	–0.1	0.2	–0.1	1.1	0.9	2.3	–1.3				0.7	
Q4	0.2	–0.3	0.2	–0.2	0.9	1.1	1.6	–0.3	–0.5				0.7	
2001 Q1	0.4	0.6	0.2	–0.3	–1.4	–0.1	–1.3	1.1	1.1				–1.9	
Q2	–	0.5	–0.1	–0.3	–0.1	0.2	0.3	–1.7	0.9				0.7	
Percentage change on previous month														
								ILKC	ILKM					
2000 Sep								–0.1	0.1					
Oct								–0.5	–1.6					
Nov								–0.2	0.4					
Dec								0.8	1.1					
2001 Jan								0.9	0.3					
Feb								0.2	–0.8					
Mar								–1.6	1.3					
Apr								–0.8	–0.2					
May								0.1	0.7					
Jun								0.2	0.1					
Jul								–1.5	–2.9					
Aug								2.3	2.3					
Sep								..	..					

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

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

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	1.8	0.8	–	0.4	0.5	1.7	1.6	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	0.1	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	2.0	–	1.3	0.8	2.1	2.6	5.2	2.6	0.8	–0.9	2.2	1.5	11.8
1999	3.0	1.7	0.5	1.2	–0.4	1.0	1.0	2.1	2.4	0.5	–1.6	2.5	2.2	11.2
2000	3.4	1.5	0.5	1.2	0.3	3.6	3.7	3.4	0.6	1.7	2.1	5.2	2.5	9.5
1998 Q3	3.6	2.1	–0.1	1.5	0.5	1.9	2.3	3.9	2.4	0.7	–1.4	2.1	1.6	11.7
Q4	2.9	2.0	–	1.3	0.6	0.6	1.7	2.5	2.7	0.4	–2.3	2.0	1.8	11.7
1999 Q1	2.8	1.8	0.3	1.4	–0.1	0.2	0.8	1.0	3.3	0.2	–2.7	2.0	1.9	11.6
Q2	2.5	1.5	0.4	1.1	–0.5	0.5	0.5	0.5	1.8	0.4	–2.3	2.0	2.0	11.4
Q3	3.0	1.8	0.5	1.0	–0.8	1.3	1.0	2.4	2.3	0.5	–1.6	2.7	2.1	11.0
Q4	3.7	1.8	0.6	1.1	–0.2	2.1	1.8	4.2	2.0	1.0	–	3.4	2.4	10.6
2000 Q1	3.6	1.9	0.5	1.1	0.2	3.1	3.0	4.2	2.1	1.5	1.2	5.2	2.5	10.1
Q2	3.5	1.6	0.5	1.1	0.1	3.7	3.6	3.8	1.4	1.5	2.1	5.4	2.7	9.6
Q3	3.4	1.4	0.6	1.2	0.9	3.4	4.1	3.4	–	1.9	2.7	5.2	2.4	9.3
Q4	3.1	1.0	0.5	1.4	0.1	4.0	4.0	2.2	–1.4	1.9	2.4	5.0	2.4	8.9
2001 Q1	2.8	1.5	0.5	1.1	–0.9	2.8	2.2	2.3	1.4	1.2	2.5	4.3	2.3	8.6
Q2	2.3	1.4	0.4	0.7	–0.4	1.1	0.9	1.9	–0.4	2.1	1.8	4.2	2.2	8.5
Q3	..	..	..	..	..	..	..	..	–0.8	1.9	1.1	..	..	8.6
2000 Aug	..	..	..	..	..	..	..	3.8	1.7	1.8	2.7	..	..	9.3
Sep	..	..	..	..	..	..	..	2.6	0.1	2.2	2.7	..	..	9.2
Oct	..	..	..	..	..	..	..	2.4	–1.2	1.9	2.5	..	..	9.0
Nov	..	..	..	..	..	..	..	1.5	–1.4	2.2	2.4	..	..	8.9
Dec	..	..	..	..	..	..	..	2.8	–1.4	1.5	2.5	..	..	8.8
2001 Jan	..	..	..	..	..	..	..	3.0	2.1	1.1	2.6	..	..	8.7
Feb	..	..	..	..	..	..	..	2.4	0.3	1.3	2.6	..	..	8.6
Mar	..	..	..	..	..	..	..	1.5	1.8	1.2	2.4	..	..	8.6
Apr	..	..	..	..	..	..	..	1.6	–0.5	1.8	2.0	..	..	8.6
May	..	..	..	..	..	..	..	2.1	–2.4	2.3	1.8	..	..	8.5
Jun	..	..	..	..	..	..	..	2.2	1.9	2.1	1.7	..	..	8.5
Jul	..	..	..	..	..	..	..	1.5	–1.0	2.1	1.3	..	..	8.5
Aug	..	..	..	..	..	..	..	1.5	–0.1	1.9	1.1	..	..	8.6
Sep	..	..	..	..	..	..	..	..	–1.2	1.5	0.8	..	..	8.6
Percentage change on previous quarter														
	ILGJ	HUBQ	HUBR	HUBS	HUBT	HUBU	HUBV	ILHD	ILHX				ILIR	
1998 Q3	0.5	0.3	–	0.2	–0.1	0.1	–	–0.5	0.7				0.5	
Q4	0.3	0.5	0.1	0.1	0.2	–0.5	–	–0.1	1.1				0.4	
1999 Q1	0.8	0.2	0.2	0.4	–0.3	0.3	–	0.2	0.5				0.6	
Q2	0.9	0.5	0.1	0.3	–0.2	0.6	0.4	0.9	–0.4				0.5	
Q3	0.9	0.6	0.1	0.1	–0.4	1.0	0.5	1.4	1.1				0.7	
Q4	1.1	0.5	0.2	0.2	0.7	0.3	0.8	1.6	0.8				0.7	
2000 Q1	0.7	0.3	0.1	0.4	0.1	1.2	1.3	0.2	0.6				0.7	
Q2	0.8	0.2	0.2	0.4	–0.3	1.3	1.0	0.5	–1.0				0.7	
Q3	0.8	0.4	0.1	0.3	0.3	0.7	1.0	1.0	–0.3				0.4	
Q4	0.8	0.1	0.1	0.4	–0.1	0.8	0.6	0.4	–0.7				0.7	
2001 Q1	0.4	0.7	0.1	0.1	–0.9	–	–0.4	0.3	3.4				0.6	
Q2	0.3	0.2	0.1	–	0.2	–0.4	–0.3	0.1	–2.8				0.6	
Q3	..	..	..	..	..	..	..	..	–0.7				..	
Percentage change on previous month														
								ILKD	ILKN					
2000 Sep								–0.4	–0.3					
Oct								0.5	–0.9					
Nov								0.3	0.9					
Dec								–	–0.2					
2001 Jan								0.1	3.4					
Feb								0.3	–1.0					
Mar								–0.3	1.5					
Apr								–0.2	–4.7					
May								0.5	0.5					
Jun								0.1	3.3					
Jul								0.5	–3.0					
Aug								–	0.9					
Sep								..	–1.4					

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

Sales = Retail Sales volume
CPI = Consumer Prices, measurement not uniform among countries
PPI = Producer Prices (manufacturing)
Earnings = Average Wage Earnings (manufacturing), definitions of coverage

4 Italy

	GDP	PFC	GFC	GFCF	ChgStk	Exports	less Imports	IoP	Sales	CPI	PPI	Earnings	Empl	Unempl
		Contribution to change in GDP												
Percentage change on a year earlier														
	ILGA	HUCI	HUCJ	HUCK	HUCL	HUCM	HUCN	ILGU	ILHO	HYAA	ILAH	ILAQ	ILJI	GABE
1995	2.9	1.0	–0.4	1.1	0.2	3.1	2.1	5.8	0.6	5.3	7.9	3.1	–0.6	11.6
1996	1.1	0.7	0.2	0.7	–0.7	0.2	–0.1	–1.6	1.2	4.0	1.8	3.1	0.5	11.7
1997	2.0	1.9	–	0.4	0.3	1.7	2.3	3.8	0.9	2.0	1.3	3.6	0.4	11.7
1998	1.8	1.8	0.1	0.8	0.3	1.0	2.2	1.5	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	4.1	–0.6	2.5	5.9	2.1	1.9	10.5
1998 Q3	1.9	1.8	0.1	0.8	0.2	0.4	1.4	0.4	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	11.7
1999 Q1	1.0	1.9	0.2	0.5	0.7	–1.3	1.0	–1.3	1.3	1.2	–1.8	3.0	1.2	11.6
Q2	1.3	1.2	0.2	0.7	1.2	–0.9	1.1	–2.4	0.3	1.4	–1.4	2.1	1.3	11.5
Q3	1.4	1.3	0.3	1.0	–0.2	0.2	1.2	0.4	0.3	1.7	–	2.3	1.2	11.2
Q4	2.8	1.2	0.3	1.4	–0.2	2.0	2.0	3.1	2.3	2.1	2.2	1.8	1.4	11.1
2000 Q1	3.3	1.4	0.3	1.4	–0.7	2.0	1.1	3.4	–0.6	2.6	4.6	1.9	1.2	11.0
Q2	3.0	2.0	0.3	1.4	–0.4	2.4	2.8	5.7	–0.3	2.6	6.2	2.5	1.5	10.6
Q3	2.7	1.8	0.2	1.2	–1.3	3.9	3.2	3.7	–	2.6	6.7	2.0	2.1	10.3
Q4	2.6	1.7	0.2	0.8	–1.5	3.2	1.8	3.4	–1.3	2.6	6.5	1.9	2.8	10.0
2001 Q1	2.5	1.0	0.1	0.6	–0.8	3.8	2.3	2.5	–0.3	2.9	4.9	2.0	3.1	9.7
Q2	2.1	0.9	0.1	0.3	–1.0	2.6	0.7	–0.7	–1.0	3.0	3.2	1.3	2.1	9.5
Q3	..	..	..	..	..	..	..	..	..	2.8	0.9	..	1.8	..
2000 Aug	..	..	..	..	..	..	..	3.7	–1.9	2.6	6.5	2.0	..	10.3
Sep	..	..	..	..	..	..	..	4.1	1.0	2.6	6.8	2.0	..	10.2
Oct	..	..	..	..	..	..	..	2.3	–1.0	2.6	6.8	1.9	..	10.0
Nov	..	..	..	..	..	..	..	2.6	–1.9	2.7	6.7	1.9	..	10.0
Dec	..	..	..	..	..	..	..	5.4	–1.0	2.7	6.2	1.9	..	9.9
2001 Jan	..	..	..	..	..	..	..	3.6	–1.0	3.0	5.4	1.9	..	9.8
Feb	..	..	..	..	..	..	..	1.7	–	3.0	5.0	2.0	..	9.7
Mar	..	..	..	..	..	..	..	2.2	–	2.8	4.3	2.1	..	9.6
Apr	..	..	..	..	..	..	..	–	–1.0	3.1	4.4	1.6	..	9.5
May	..	..	..	..	..	..	..	–1.7	–1.0	3.0	2.9	1.0	..	9.5
Jun	..	..	..	..	..	..	..	–0.6	–1.0	3.0	2.4	1.1	..	9.5
Jul	..	..	..	..	..	..	..	–0.6	–2.9	2.9	1.4	1.7	..	9.4
Aug	..	..	..	..	..	..	..	–0.8	–	2.8	1.2	..	..	..
Sep	..	..	..	..	..	..	..	..	..	2.6	0.4	..	..	..
Oct	..	..	..	..	..	..	..	..	..	2.5	..	..	..	..
Percentage change on previous quarter														
	ILGK	HUCO	HUCP	HUCQ	HUCR	HUCS	HUCT	ILHE	ILHY				ILIS	
1998 Q3	0.6	0.3	–	0.1	0.5	–0.5	–0.2	–0.9	–				1.4	
Q4	–0.5	0.5	0.1	–	0.4	–0.7	0.7	–1.5	–0.6				–0.3	
1999 Q1	0.4	0.5	0.1	0.4	0.4	–0.2	0.8	0.4	1.0				–1.0	
Q2	0.8	–0.1	0.1	0.2	–0.1	0.5	–0.1	–0.4	–				1.2	
Q3	0.7	0.4	0.1	0.4	–0.9	0.6	–0.1	2.0	–				1.3	
Q4	0.9	0.4	0.1	0.4	0.3	1.1	1.4	1.2	1.3				–0.1	
2000 Q1	0.9	0.7	0.1	0.3	–0.1	–0.2	–0.1	0.7	–1.9				–1.2	
Q2	0.5	0.5	–	0.3	0.3	0.8	1.5	1.8	0.3				1.5	
Q3	0.4	0.2	0.1	0.2	–1.7	2.1	0.4	–	0.3				1.9	
Q4	0.8	0.3	0.1	–	0.1	0.4	–	0.9	–				0.6	
2001 Q1	0.8	–	–	0.2	0.6	0.5	0.4	–0.3	–1.0				–0.8	
Q2	0.1	0.4	–	–0.1	0.1	–0.4	–0.1	–1.4	–0.3				0.5	
Q3	..	..	..	..	..	..	..	..	..				1.6	
Percentage change on previous month														
								ILKE	ILKO					
2000 Sep								–	1.9					
Oct								–0.8	–1.0					
Nov								1.0	1.0					
Dec								2.1	–1.0					
2001 Jan								–2.0	–1.0					
Feb								–0.2	1.0					
Mar								0.5	–1.0					
Apr								–2.0	–					
May								0.5	–					
Jun								0.2	–					
Jul								–0.7	–1.0					
Aug								0.8	1.0					

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
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

5 USA

	Contribution to change in GDP													
	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	4.1	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	5.6	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	4.9	2.3	0.3	3.2	2.3	5.0
1998	4.3	3.2	0.2	2.0	0.2	0.3	1.6	4.7	7.1	1.6	–1.1	2.5	1.5	4.5
1999	4.1	3.3	0.3	1.6	–0.2	0.4	1.5	4.2	9.0	2.1	1.8	2.9	1.5	4.2
2000	4.1	3.3	0.4	1.4	–0.1	1.1	2.0	5.6	6.5	3.4	4.1	3.6	1.3	4.0
1998 Q3	3.8	3.1	0.1	1.7	0.2	–0.2	1.3	4.3	6.1	1.6	–1.0	2.5	1.1	4.5
Q4	4.8	3.4	0.3	2.1	0.2	0.3	1.5	3.2	8.5	1.5	–0.9	1.9	1.3	4.4
1999 Q1	4.0	3.3	0.4	1.8	–0.3	0.1	1.3	3.3	9.6	1.7	–	1.8	1.7	4.3
Q2	3.9	3.3	0.1	1.6	–0.1	0.3	1.4	3.8	8.2	2.2	1.1	2.4	1.4	4.3
Q3	4.0	3.4	0.3	1.6	–0.4	0.6	1.7	4.4	9.7	2.4	2.4	3.7	1.4	4.2
Q4	4.4	3.4	0.4	1.4	0.1	0.5	1.7	5.1	8.5	2.6	3.2	3.6	1.5	4.1
2000 Q1	4.2	3.6	0.3	1.6	–0.6	1.0	2.0	5.8	8.6	3.4	4.6	4.2	1.6	4.0
Q2	5.2	3.3	0.6	1.6	0.5	1.3	2.2	6.5	7.0	3.3	4.4	3.6	1.6	4.0
Q3	4.4	3.3	0.4	1.4	0.1	1.3	2.2	5.9	6.3	3.5	3.9	2.9	1.1	4.0
Q4	2.8	2.8	0.2	1.1	–0.5	0.8	1.8	4.2	4.2	3.4	3.4	3.5	1.0	4.0
2001 Q1	2.5	2.4	0.4	0.6	–0.6	0.5	0.9	0.7	2.7	3.2	2.1	2.6	0.7	4.2
Q2	1.2	2.2	0.3	–	–1.3	–0.2	–0.1	–2.2	4.0	3.4	2.1	3.2	–0.1	4.5
Q3	0.8	1.7	0.5	–0.6	–1.1	–1.1	–1.3	–4.6	3.3	2.7	0.7	3.4	–0.2	4.8
2000 Aug	..	..	..	..	..	..	..	5.9	6.0	3.4	3.6	2.7	1.0	4.1
Sep	..	..	..	..	..	..	..	6.1	6.5	3.4	3.8	2.6	1.1	3.9
Oct	..	..	..	..	..	..	..	5.0	6.2	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	2.4	3.4	2.9	3.5	1.1	4.0
2001 Jan	..	..	..	..	..	..	..	1.7	3.7	3.5	3.0	2.6	0.8	4.2
Feb	..	..	..	..	..	..	..	0.8	2.6	3.4	2.0	2.6	0.7	4.2
Mar	..	..	..	..	..	..	..	–0.2	2.0	2.8	1.2	2.6	0.6	4.3
Apr	..	..	..	..	..	..	..	–1.1	4.4	3.3	2.3	2.6	–0.1	4.5
May	..	..	..	..	..	..	..	–2.0	3.7	3.6	2.6	3.5	0.1	4.4
Jun	..	..	..	..	..	..	..	–3.5	3.9	3.3	1.4	3.4	–0.2	4.5
Jul	..	..	..	..	..	..	..	–3.3	4.0	2.7	0.6	3.4	0.2	4.5
Aug	..	..	..	..	..	..	..	–4.6	4.4	2.7	0.9	3.4	–0.6	4.9
Sep	..	..	..	..	..	..	..	–5.8	1.4	2.6	0.7	3.4	–0.1	4.9
Oct	..	..	..	..	..	..	..	..	..	..	..	3.4	–0.6	5.4
Percentage change on previous quarter														
	ILGM	HUDM	HUDN	HUDO	HUDP	HUDQ	HUDR	ILHG	ILIA				ILIU	
1998 Q3	1.0	0.6	–	0.3	0.4	–0.1	0.2	0.9	0.5				0.6	
Q4	1.6	0.8	0.2	0.5	0.1	0.4	0.4	0.8	3.3				0.2	
1999 Q1	0.8	0.8	–	0.4	–	–0.2	0.3	0.9	2.6				–0.6	
Q2	0.4	0.9	–	0.3	–0.6	0.1	0.5	1.2	1.7				1.2	
Q3	1.1	0.7	0.2	0.3	0.1	0.3	0.5	1.5	1.9				0.6	
Q4	2.0	0.9	0.2	0.3	0.6	0.3	0.4	1.4	2.1				0.3	
2000 Q1	0.6	1.0	–0.1	0.6	–0.7	0.3	0.6	1.6	2.6				–0.5	
Q2	1.4	0.6	0.3	0.3	0.5	0.4	0.6	1.9	0.1				1.2	
Q3	0.3	0.7	–0.1	0.1	–0.3	0.3	0.5	0.9	1.3				0.1	
Q4	0.5	0.5	0.1	0.1	–0.1	–0.1	–	–0.2	0.1				0.2	
2001 Q1	0.3	0.5	0.2	0.2	–0.8	–	–0.2	–1.8	1.2				–0.7	
Q2	0.1	0.4	0.1	–0.3	–0.1	–0.4	–0.4	–1.0	1.4				0.4	
Q3	–0.1	0.2	0.2	–0.5	–0.1	–0.5	–0.7	–1.7	0.5				–	
Percentage change on previous month														
								ILKG	ILKQ				ILLA	
2000 Sep								0.2	0.4				–0.5	
Oct								–0.2	–				0.6	
Nov								–0.3	–0.6				–	
Dec								–0.6	0.1				0.3	
2001 Jan								–0.9	1.4				–1.2	
Feb								–0.4	–				0.2	
Mar								–0.3	–0.1				0.4	
Apr								–0.2	1.4				–0.1	
May								–0.2	–				–	
Jun								–1.0	0.1				0.6	
Jul								–0.1	0.7				0.4	
Aug								–0.6	0.9				–1.1	
Sep								–1.0	–2.6				–	

GDP = Gross Domestic Product at constant market prices
PFC = Private Final Consumption at constant market prices
GFC = Government Final Consumption at constant market prices
Sales = Retail Sales volume
CPI = Consumer Prices, measurement not uniform among countries
PPI = Producer Prices (manufacturing)

6 Japan

	GDP	PFC	GFC	GFCF	ChgStk	Exports	less Imports	IoP[1]	Sales	CPI	PPI	Earnings[2]	Empl	Unempl
	Contribution to change in GDP													
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	–1.4	–0.7	–0.8	4.7
2000	1.5	0.3	0.6	0.2	0.1	1.2	0.8	5.2	–1.6	–0.7	0.1	1.7	–0.3	4.7
1998 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	–2.2	–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	–1.7	–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	–	–1.3	–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	–0.5	–0.5	–0.2	4.7
2000 Q1	2.4	1.0	0.6	0.2	–	1.2	0.7	4.3	–2.9	–0.6	0.1	2.0	–0.5	4.8
Q2	1.0	–	0.6	–0.3	0.1	1.4	0.8	6.6	–1.8	–0.7	0.3	2.3	–0.4	4.7
Q3	0.3	–0.7	0.5	–	0.1	1.2	0.8	5.3	–1.1	–0.6	0.2	1.6	–0.4	4.7
Q4	2.5	0.8	0.6	0.8	0.2	1.0	0.9	4.4	–0.7	–0.8	–0.1	1.1	0.2	4.8
2001 Q1	0.2	0.1	0.4	0.2	0.1	0.2	0.7	0.6	3.0	–0.5	–0.4	0.5	0.5	4.8
Q2	–0.7	0.3	0.4	–0.6	–	–0.6	0.2	–5.2	–0.7	–0.7	–0.6	0.6	–0.4	4.9
Q3	..	..	..	..	..	..	..	–10.4	–2.2	–0.8	–1.0	–0.4	–0.8	5.1
2000 Aug	..	..	..	..	..	..	..	6.8	–1.1	–0.5	0.2	2.1	–0.4	4.6
Sep	..	..	..	..	..	..	..	3.5	–1.1	–0.9	–	1.4	–0.5	4.7
Oct	..	..	..	..	..	..	..	5.0	–1.1	–1.1	–	1.1	0.1	4.7
Nov	..	..	..	..	..	..	..	3.3	–	–0.8	–0.1	–0.2	0.3	4.8
Dec	..	..	..	..	..	..	..	4.9	–1.1	–0.4	–0.1	2.3	0.2	4.9
2001 Jan	..	..	..	..	..	..	..	1.4	2.2	–0.3	–0.3	0.1	0.1	4.9
Feb	..	..	..	..	..	..	..	1.8	4.5	–0.3	–0.4	0.8	0.7	4.7
Mar	..	..	..	..	..	..	..	–1.4	2.2	–0.7	–0.4	0.5	0.5	4.7
Apr	..	..	..	..	..	..	..	–3.9	–	–0.7	–0.6	–	–0.2	4.8
May	..	..	..	..	..	..	..	–4.8	–1.1	–0.7	–0.6	–0.2	–0.4	4.9
Jun	..	..	..	..	..	..	..	–6.9	–1.1	–0.8	–0.7	2.1	–0.6	4.9
Jul	..	..	..	..	..	..	..	–8.6	–2.2	–0.8	–0.8	0.6	–0.6	5.0
Aug	..	..	..	..	..	..	..	–11.3	–2.2	–0.7	–1.0	–1.2	–0.6	5.0
Sep	..	..	..	..	..	..	..	–11.1	–2.2	–0.8	–1.0	–0.5	–1.3	5.3
Percentage change on previous quarter	ILGN	HUDA	HUDB	HUDC	HUDD	HUDE	HUDF	ILHH	ILIB				ILIV	
1998 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	0.1	0.1	0.2	–0.3	0.1	0.4	0.3	1.9	0.8				2.3	
Q3	–0.7	–	0.1	–0.7	–	–	0.1	1.5	0.7				–	
Q4	0.7	–0.3	0.2	1.2	–	0.1	0.5	0.3	–0.4				–	
2001 Q1	0.1	0.3	–	–	–	–0.4	–0.2	–3.1	1.8				–1.8	
Q2	–0.8	0.3	0.1	–1.1	–	–0.3	–0.2	–4.0	–2.9				1.4	
Q3	..	..	..	..	..	..	..	–4.0	–0.7				–0.4	
Percentage change on previous month								ILKH	ILKR				ILLB	
2000 Sep								–3.5	–1.1				–	
Oct								1.3	–				0.4	
Nov								–0.5	1.1				–0.1	
Dec								1.7	–1.1				–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								–2.0	–2.2				0.7	
May								–1.0	–				0.8	
Jun								–0.7	1.1				–0.2	
Jul								–2.3	–1.1				–0.2	
Aug								0.3	–				–0.1	
Sep								–3.3	–1.1				–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

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

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	8.6	5.3	4.3	8.3	4.2	3.7	5.9	5.1	4.2	7.8	4.8	4.7
1993	4.8	2.2	15.3	4.0	1.0	12.5	4.0	2.2	9.1	3.3	0.8	10.3	4.4	3.6
1994	12.0	9.9	19.9	11.9	12.4	11.0	10.6	9.3	14.0	10.9	11.0	10.7	12.0	10.7
1995	9.6	9.9	8.6	10.9	10.4	12.4	8.9	9.4	7.8	9.9	8.9	12.2	10.3	9.4
1996	6.8	6.5	7.7	7.5	7.9	6.6	6.8	6.4	7.6	6.4	7.0	4.9	7.1	6.6
1997	11.5	11.9	10.3	10.8	11.3	9.5	10.6	11.1	9.2	9.5	9.7	8.9	11.1	10.0
1998	6.1	6.4	5.3	6.8	9.5	–0.4	5.5	5.8	4.7	5.9	8.3	–0.3	6.4	5.7
1999	6.4	5.9	7.9	7.8	10.3	0.8	5.8	5.6	6.4	6.3	8.7	–0.4	7.1	6.1
2000	14.1	12.5	19.4	14.4	13.9	16.3	12.9	12.0	15.1	12.9	11.9	16.0	14.3	12.9
1995 Q2	10.1	10.5	8.8	12.1	11.4	13.8	9.6	10.4	7.8	11.2	10.2	13.7	11.1	10.4
Q3	8.6	9.1	6.8	10.5	9.5	12.9	7.8	8.3	6.7	9.3	8.1	12.7	9.5	8.6
Q4	6.7	6.8	6.3	7.3	6.2	10.3	6.1	6.0	6.6	6.3	5.0	9.7	7.0	6.2
1996 Q1	5.9	5.6	6.6	7.5	7.2	8.0	5.6	5.1	6.8	6.4	6.2	6.7	6.6	6.0
Q2	5.7	5.3	7.0	6.4	6.6	5.9	5.5	4.9	7.2	5.3	5.8	4.0	6.0	5.4
Q3	7.1	6.8	7.9	7.8	8.7	5.5	7.2	7.0	7.8	6.6	7.8	3.6	7.4	6.9
Q4	8.4	8.1	9.4	8.4	9.0	7.0	8.8	8.8	8.7	7.5	8.3	5.3	8.4	8.1
1997 Q1	8.5	8.0	10.3	8.2	8.2	8.2	8.1	7.6	9.4	7.2	7.2	7.4	8.3	7.7
Q2	12.5	13.1	10.6	11.6	12.4	9.5	11.7	12.5	9.5	10.2	10.6	9.1	12.0	10.9
Q3	13.1	14.0	10.3	11.7	12.3	10.1	11.9	12.9	9.2	10.3	10.6	9.6	12.4	11.1
Q4	11.8	12.4	9.8	11.5	12.1	10.1	10.5	11.2	8.7	10.2	10.4	9.5	11.7	10.3
1998 Q1	10.7	11.4	8.1	11.0	13.1	5.6	9.9	11.0	6.8	9.9	11.5	5.7	10.8	9.9
Q2	6.7	6.8	6.3	7.2	9.5	1.4	5.9	6.2	5.3	6.5	8.3	1.7	6.9	6.2
Q3	4.1	4.1	4.2	4.9	7.8	–2.7	3.5	3.3	3.9	4.3	6.8	–2.6	4.5	3.9
Q4	3.1	3.3	2.6	3.9	7.7	–5.8	2.6	2.5	2.9	3.0	6.5	–6.0	3.5	2.8
1999 Q1	2.6	2.6	2.5	4.1	7.1	–3.9	2.3	1.8	3.6	3.1	6.1	–5.1	3.4	2.7
Q2	4.1	3.8	4.8	6.3	9.0	–1.3	4.0	3.6	5.0	4.8	7.5	–2.9	5.2	4.4
Q3	7.8	7.2	9.6	8.9	11.3	2.1	7.1	7.1	7.1	7.3	9.5	0.8	8.3	7.2
Q4	11.1	10.2	14.5	11.8	13.6	6.5	9.9	9.8	10.1	10.2	11.7	5.7	11.5	10.1
2000 Q1	15.2	13.9	19.5	14.3	15.2	11.7	13.7	13.5	14.1	12.7	13.0	11.7	14.7	13.2
Q2	15.6	13.9	21.5	15.3	15.0	16.1	14.0	13.1	16.3	13.7	12.8	16.2	15.4	13.8
Q3	14.3	12.4	20.7	15.5	14.2	19.7	13.1	11.8	16.7	14.0	12.4	19.1	14.9	13.6
Q4	11.3	10.0	15.8	12.7	11.2	17.6	10.6	9.6	13.4	11.3	9.5	17.0	12.0	10.9
2001 Q1	5.9	5.5	7.5	6.6	5.4	10.6	5.7	5.2	6.8	..	4.9	..	6.3	..
Q2	0.4	0.1	1.4	..	–0.2	..	..	0.5	..	..	0.4	..	..	..
Percentage change on previous quarter														
	ILJN	ILJO	ILJP	ILJQ	ILJR	ILJS	ILJT	ILJU	ILJV	ILJW	ILJX	ILJY	ILJZ	ILKA
1995 Q2	1.2	1.0	1.6	2.1	1.6	3.2	1.1	0.9	1.6	2.2	1.7	3.2	1.6	1.6
Q3	1.0	0.8	1.5	1.2	0.8	2.1	0.8	0.5	1.6	1.0	0.6	2.0	1.1	0.9
Q4	1.4	1.5	1.3	1.7	2.0	1.1	1.4	1.3	1.6	1.2	1.4	0.8	1.6	1.3
1996 Q1	2.2	2.2	2.0	2.3	2.6	1.3	2.2	2.3	1.8	1.8	2.3	0.5	2.2	2.0
Q2	1.0	0.7	2.0	1.0	1.0	1.2	1.1	0.7	2.0	1.1	1.3	0.6	1.0	1.1
Q3	2.3	2.3	2.3	2.6	2.9	1.8	2.4	2.5	2.2	2.3	2.5	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	1.9	2.5	2.5	2.4
1997 Q1	2.2	2.0	2.9	2.1	1.9	2.5	1.6	1.2	2.4	1.6	1.3	2.5	2.1	1.6
Q2	4.7	5.4	2.4	4.2	4.9	2.4	4.4	5.3	2.1	3.9	4.5	2.3	4.5	4.2
Q3	2.9	3.1	2.0	2.7	2.8	2.3	2.6	2.9	1.9	2.4	2.5	2.1	2.8	2.5
Q4	1.5	1.3	2.2	2.1	2.0	2.5	1.5	1.4	2.0	1.9	1.8	2.3	1.8	1.7
1998 Q1	1.2	1.2	1.3	1.6	2.8	–1.7	1.0	1.1	0.6	1.4	2.3	–1.0	1.4	1.2
Q2	1.0	1.1	0.6	0.6	1.5	–1.7	0.7	0.7	0.7	0.7	1.6	–1.6	0.8	0.7
Q3	0.4	0.5	–	0.5	1.3	–1.8	0.3	0.2	0.6	0.2	1.0	–2.3	0.4	0.2
Q4	0.5	0.5	0.6	1.2	1.9	–0.7	0.6	0.5	1.0	0.7	1.4	–1.2	0.9	0.7
1999 Q1	0.7	0.5	1.2	1.8	2.2	0.3	0.6	0.4	1.3	1.4	1.9	–0.1	1.2	1.0
Q2	2.4	2.3	2.9	2.7	3.3	0.9	2.4	2.5	2.0	2.4	2.9	0.7	2.6	2.4
Q3	3.9	3.8	4.5	3.0	3.5	1.5	3.3	3.5	2.6	2.5	2.9	1.5	3.5	2.9
Q4	3.7	3.3	5.2	3.9	4.0	3.5	3.3	3.1	3.9	3.5	3.5	3.6	3.8	3.4
2000 Q1	4.3	3.9	5.6	4.0	3.6	5.2	4.1	3.8	4.9	3.7	3.1	5.6	4.1	3.9
Q2	2.8	2.3	4.6	3.6	3.2	4.9	2.6	2.1	3.9	3.3	2.8	4.7	3.2	3.0
Q3	2.8	2.4	3.8	3.2	2.7	4.7	2.5	2.4	3.0	2.8	2.4	4.0	3.0	2.7
Q4	0.9	1.0	0.9	1.4	1.3	1.7	1.0	1.0	0.9	1.1	0.8	1.8	1.2	1.0
2001 Q1	–0.7	–0.3	–1.9	–1.7	–1.9	–1.0	–0.5	–0.3	–1.1	..	–1.2	..	–1.2	..
Q2	–2.6	–3.0	–1.3	..	–2.3	..	..	–2.5	..	..	–1.6	..	..	..

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

Source: OECD - SNA93

Final Expenditure Prices Index (Experimental) – October 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 annual rate of inflation for the FEPI fell from 1.8 per cent in September to 1.6 per cent in October, largely due to lower inflation for consumer prices.

The FEPI annual percentage change

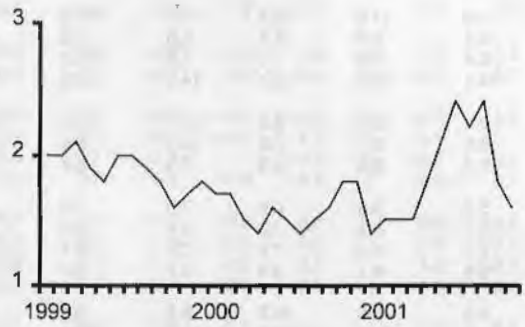


Table A

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
2001	May	126.6	2.0	120.1	1.7	125.8	2.3	132.1	3.2	125.2	2.1
	Jun	126.9	2.2	120.9	2.3	127.0	3.2	132.8	3.4	125.7	2.4
	Jul	126.0	1.9	120.9	2.3	126.6	2.8	133.4	3.2	125.1	2.2
	Aug	126.5	2.3	121.0	1.8	126.7	2.7	133.9	3.2	125.5	2.4
	Sep	126.4	1.7	120.3	1.0	127.0	2.8	134.2	3.4	125.3	1.8
	Oct	126.2	1.5	120.0	0.8	126.9	2.7	134.2	3.5	125.1	1.6

The Index of Consumer Prices (ICP)

Consumer price inflation, as measured by the ICP, fell from 1.7 per cent in September to 1.5 per cent in October.

Downward effects were recorded for most categories within the ICP but the largest downward effect came from transport services where the annual rate of inflation fell from 6.2 per cent in September to 2.7 per cent in October due to lower air and sea fares following the increases over the summer season.

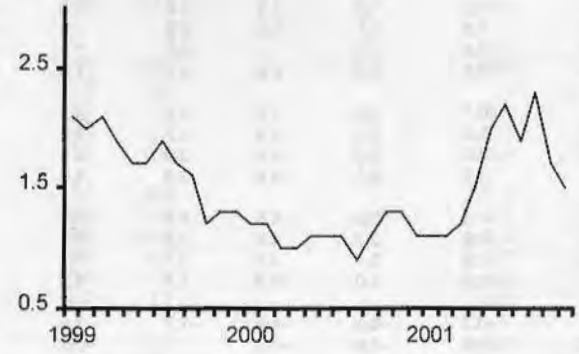
Other large downward effects came from:

- Clothing and footwear, where the annual rate of inflation was more negative in October, at minus 4.5 per cent, than in September at minus 4.0 per cent. There were deeper and more widespread special offers compared with last October.

The largest upward effect came from:

- Fuels and lubricants for vehicles, where the annual rate of inflation was less negative in October, at minus 5.8 per cent, than in September at minus 6.7 per cent. There were smaller decreases in petrol prices than this time last year.

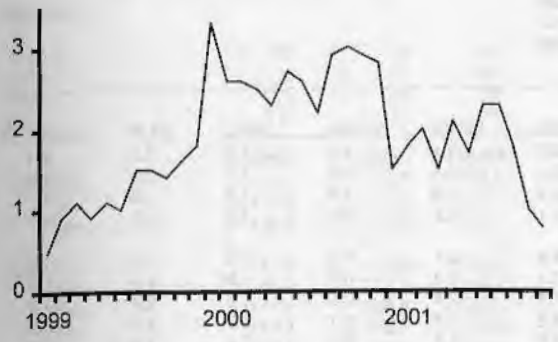
The ICP annual percentage change



The Index of Investment Prices (IIP)

Investment price inflation, as measured by the IIP, fell from 1.0 per cent in September to 0.8 per cent in October. The largest downward effect came from Other Machinery and Equipment, where the annual rate of inflation was more negative in October, at minus 5.0 per cent, than in September at minus 4.2 per cent.

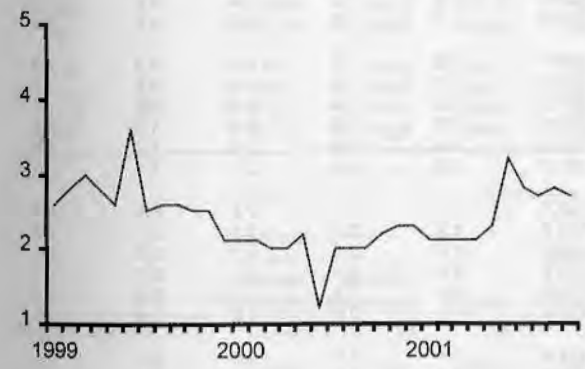
The IIP annual percentage change



The Index of Government Prices (IGP)

The annual rate of inflation for the IGP was 2.7 per cent in October, broadly unchanged compared with the previous month.

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
2001	May	2.1	2.4	1.7	2.0	0.7
	Jun	2.4	2.4	1.7	2.2	0.4
	Jul	2.2	2.2	1.4	1.9	- 0.1
	Aug	2.4	2.6	1.8	2.3	0.2
	Sep	1.8	2.3	1.3	1.7	- 0.2
	Oct	1.6	2.3	1.2	1.5	- 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 almost entirely 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 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	122.9	1.1	1.8	2.1	2.9	1.5
Feb	124.2	119.1	124.2	130.5	123.2	1.1	2.0	2.1	2.9	1.5
Mar	124.7	119.1	124.1	130.6	123.5	1.2	1.5	2.1	3.0	1.5
Apr	125.6	119.8	125.3	131.3	124.4	1.5	2.1	2.1	2.7	1.8
May	126.6	120.1	125.8	132.1	125.2	2.0	1.7	2.3	3.2	2.1
Jun	126.9	120.9	127.0	132.8	125.7	2.2	2.3	3.2	3.4	2.4
Jul	126.0	120.9	126.6†	133.4	125.1	1.9	2.3	2.8†	3.2	2.2
Aug	126.5	121.0	126.7	133.9	125.5	2.3	1.8	2.7	3.2	2.4
Sep	126.4	120.3†	127.0	134.2†	125.3†	1.7	1.0†	2.8	3.4†	1.8†
Oct	126.2	120.0	126.9	134.2	125.1	1.5	0.8	2.7	3.5	1.6

† 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	Electricity, Gas and Other Household Fuels	Furnishings, Household Equipment, etc.	Health	Purchase and Operation of Vehicles	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 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
Jun	119.4	116.5	207.3	95.1	155.9	140.9	98.5	113.0	168.1	116.0	184.3
Jul	117.1	116.3	207.4	89.3	156.0	139.9	98.4	110.9	170.0	116.5	181.7
Aug	116.9	116.7	207.4	91.6	156.0	140.8	98.3	111.9	170.2	116.6	179.8
Sep	116.7	116.1	209.7	94.1	156.2	141.0	99.1	113.4	170.4	116.3	178.8
Oct	117.0	116.6	209.9	93.6	156.5	140.8	98.7	112.3	170.5	115.7	175.9

Annual Percentage Changes

	Food and Non-alcoholic Beverages	Alcoholic Beverages	Tobacco	Clothing and Footwear	Actual Rentals for Housing	Housing Goods and Services	Electricity, Gas and Other Household Fuels	Furnishings, Household Equipment, etc.	Health	Purchase and Operation of Vehicles	Fuels and Lubricants for Vehicles
COICOP Division	**01**	**02**	**02**	**03**	**04**	**04**	**04**	**05**	**06**	**07**	**07**
	VASK	VASL	VASM	VASN	VASO	VASP	MKUP	MKUQ	MKUR	MKUS	MKUT
1999 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
Jun	6.2	0.9	4.2	–4.9	3.8	4.6	2.2	1.0	6.1	1.0	–5.4
Jul	3.3	1.0	4.2	–4.0	3.5	3.6	2.1	1.0	6.3	2.1	–7.5
Aug	3.9	1.6	3.6	–3.2	3.4	3.9	2.0	1.3	6.2	2.7	–4.4
Sep	3.5	0.6	4.1	–4.0	3.3	3.9	2.0	1.1	6.2	2.7	–6.7
Oct	3.6	1.2	4.1	–4.5	3.2	3.5	1.1	1.2	5.4	2.6	–5.8

† indicates earliest revision.

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 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	73.9	122.2	153.9	142.6	138.5	124.7	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	73.9	123.2	153.9	144.2	140.6	126.6	115.4	142.1
Jun	147.4	74.9	73.5	123.4	153.9	144.7	141.0	126.9	115.6	142.5
Jul	154.6	75.7	73.5	123.0	153.9	145.2	139.2	126.0	113.8	143.0
Aug	157.8	77.0	73.1	123.4	153.9	145.5	139.5	126.5	114.2	143.7
Sep	143.1	77.0	72.7	123.7	157.7	145.9	139.5	126.4	114.7	142.6
Oct	139.1	77.5	72.1	123.6	160.8	146.4	139.7	126.2	114.2	142.7

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*
COICOP Division	**07**	**08**	**09**	**09**	**10**	**11**	**12**			
	MKUU	MKUV	MKUW	MKUX	MKUY	MKUZ	MKVA	MKVB	MKVC	MKVD
1999 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	–6.0	0.9	5.1	4.2	2.1	1.2	–	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	–5.9	1.0	5.1	4.0	3.4	2.0	0.4	4.0
Jun	10.4	–8.5	–4.8	1.1	5.1	4.1	3.4	2.2	0.6	4.0
Jul	14.9	–8.6	–3.5	1.1	5.1	4.0	2.4	1.9	0.2	4.2
Aug	16.8	–5.2	–4.4	1.4	5.1	3.7	2.3	2.3	0.7	4.4
Sep	6.2	–4.5	–4.3	1.1	4.8	3.7	1.9	1.7	0.3	3.3
Oct	2.7	–3.5	–4.6	1.0	4.5	3.8	2.0	1.5	0.2	3.1

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 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	120.6	92.0	128.0	99.2	146.4	131.6	223.7	143.2	118.8
2001 Jan	120.3	91.7	127.7	98.9	147.2	131.9	227.0	143.9	118.9
Feb	121.1	91.6	129.0	99.0	146.8	132.1	228.4	144.0	119.1
Mar	120.9	91.2	129.1	98.6	148.1	132.4	230.5	144.7	119.1
Apr	120.8	90.7	130.7	98.3	152.3	132.6	238.5	146.8	119.8
May	120.0	91.0	131.4	98.4	153.4	132.8	240.9	147.5	120.1
Jun	120.0	90.9	131.8	98.3	157.8	132.9	247.7	149.5	120.9
Jul	119.7	90.7†	131.1	98.1†	158.7	133.1†	249.5	150.1†	120.9
Aug	119.8†	89.7	131.2	97.4	161.5	133.2	253.8	151.4	121.0
Sep	119.8	89.4	131.8†	97.1	158.3†	133.3	248.9†	150.0	120.3†
Oct	120.4	88.2	131.5	96.3	159.6	133.3	251.1	150.6	120.0

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 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	–2.0	–2.1	2.8	–1.8	5.6	3.5	11.1	4.9	1.5
2001 Jan	–1.2	–2.0	1.4	–1.6	7.2	3.6	10.5	5.5	1.8
Feb	–0.6	–2.3	2.3	–1.7	7.2	3.6	12.4	5.6	2.0
Mar	–0.7	–2.0	2.6	–1.5	5.3	3.5	10.2	4.8	1.5
Apr	0.8	–1.8	3.4	–1.0	7.0	3.4	10.5	5.3	2.1
May	–0.6	–2.3	3.1	–1.6	6.8	3.2	11.0	5.2	1.7
Jun	–1.2	–2.0	3.5	–1.6	9.7	2.9	13.4	6.4	2.3
Jul	–2.0	–2.1†	3.1	–1.8†	10.7	2.7†	14.1	6.7†	2.3
Aug	–1.2	–3.7	3.5	–2.7	10.7	2.5	14.3	6.5	1.8
Sep	–1.9	–4.2	3.7†	–3.3	8.9†	2.3	11.0†	5.5	1.0†
Oct	–1.0	–5.0	3.6	–3.6	8.8	2.1	11.6	5.4	0.8

† 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

	Local Government Pay & Procurement	Central Government Pay & Procurement	Index of Government Prices	Annual percentage changes: Local Government Pay & Procurement	Annual percentage changes: Central Government Pay & Procurement	Annual percentage changes: 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 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	124.1	2.6	1.8	2.1
Apr	130.6	122.0	125.3	2.3	1.9	2.1
May	130.7	122.8	125.8	2.3	2.3	2.3
Jun	133.3	123.1	127.0	4.2	2.5	3.2
Jul	131.8	123.3	126.6†	3.0	2.6	2.8†
Aug	131.8	123.6	126.7	3.0	2.6	2.7
Sep	132.2†	123.8†	127.0	2.9†	2.7†	2.8
Oct	132.1	123.7	126.9	2.8	2.6	2.7

† 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	100.9	102.0	101.2	..	..	..	..	..
1993	105.5	99.8	103.6	106.3	103.9	3.3	1.0	2.7	4.2	2.7
1994	108.2	103.0	106.3	109.4	106.7	2.6	3.2	2.6	2.9	2.7
1995	111.6	108.5	108.0	112.4	110.1	3.1	5.3	1.6	2.7	3.2
1996	114.8	111.8	110.3	115.3	113.2	2.9	3.0	2.1	2.6	2.8
1997	117.7	113.1	111.6	118.1	115.4	2.5	1.2	1.2	2.4	1.9
1998	120.4	113.7	114.1	121.4	117.7	2.3	0.5	2.2	2.8	2.0
1999	122.4	115.2	119.5	125.4	120.3	1.7	1.3	4.7	3.3	2.2
2000	123.8	118.2	123.6	128.6	122.6	1.1	2.6	3.4	2.6	1.9

† 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	101.4	100.9	..	..	..
1993	101.1	105.3	103.6	1.0	3.8	2.7
1994	103.6	108.0	106.3	2.5	2.6	2.6
1995	106.1	109.2	108.0	2.4	1.1	1.6
1996	108.2	111.7	110.3	2.0	2.3	2.1
1997	110.5	112.4	111.6	2.1	0.6	1.2
1998	113.1	114.8	114.1	2.4	2.1	2.2
1999	118.7	120.1	119.5	5.0	4.6	4.7
2000	122.1	124.6	123.6	2.9	3.7	3.4

† indicates earliest revision.

CORPORATE SERVICES PRICE INDEX (EXPERIMENTAL) – 3RD QTR 2001

Contact: Nick Palmer UK Office for National Statistics
Tel: (01633) 813493 email: cspi@ons.gov.uk

This summary contains the latest quarter's results for the experimental Corporate Services Price Index (CSPI) and the industry-level indices it encompasses. "Corporate services" are those services purchased by businesses and government from other businesses to support them in their usual line of activity. Broadly, the CSPI is the services sector equivalent of the manufacturing Producer Price Index (PPI).

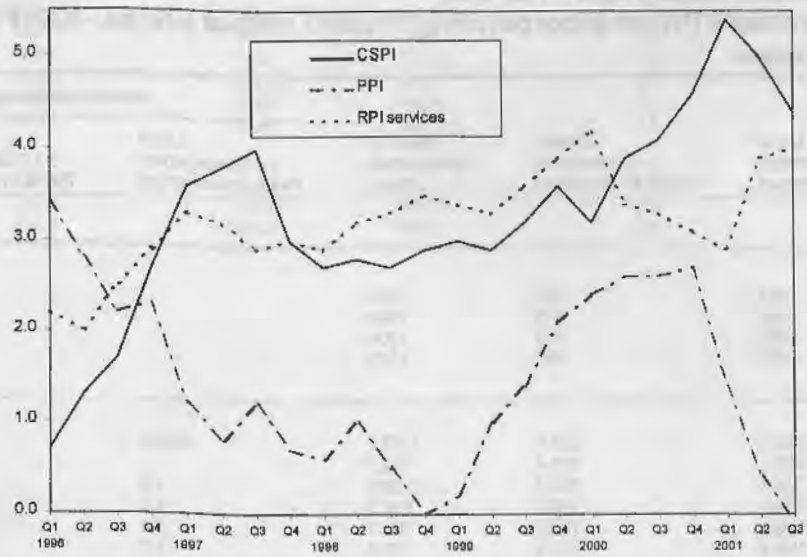
Full background and details of the development of the CSPI were included in an article published in the July 2000 issue of Economic Trends.

The main uses of the CSPI are as:

- a key indicator of inflation in the services sector;
- a deflator of service sector output for use in calculating GDP and the Index of Services; and
- an information tool for business itself.

N.B. Measurement of service sector prices is inherently difficult and challenging. When viewing the results **it should be borne in mind that the indices shown are regarded as experimental**, particularly those that have been added to the series most recently. Therefore some of the results will be subject to revision before the completion of the CSPI development project. The top-level index should also be viewed as **experimental**.

Experimental top-level CSPI compared with the Retail Price Index (RPI) for services and the PPI for manufactured products: percentage change on same quarter a year ago



Results for Quarter 3, 2001

The top-level CSPI is constructed by weighting together the currently available industry-level indices. Coverage is now around 50 per cent of the total turnover of the targeted corporate services sector.

The graph above shows that the annual rate of increase for the CSPI reduced to 4.4 per cent in Q3 2001, compared to 5.0 for the previous quarter. (It should be noted that the prices collected are the average prices for each quarter. Consequently any effects following September 11th are unlikely to be evident in these results.)

The top-level quarterly results are shown in the table on the next page. Results are also shown with *property rental payments* excluded, due to its relatively high weighting within the top-level index (just under a third).

This latest summary includes some revisions to the indices for business telecommunications and technical testing from 1998 onwards and these have had a minor effect on the top-level CSPI (see page 3 for more information).

Experimental corporate services price index (CSPI), quarterly index values and percentage changes:

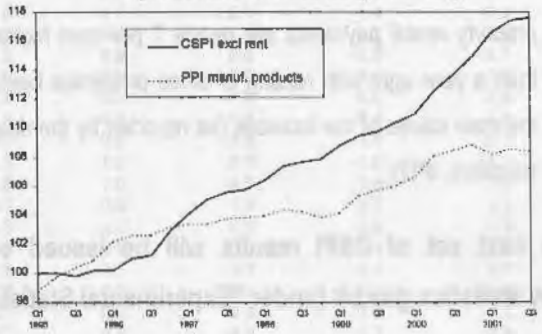
		Quarterly CSPI index values (1995=100)		Percentage change on same quarter in previous year (%)	
		Including rent	Excluding rent	Including rent	Excluding rent
1995	Q1	99.8	100.0	.	.
	Q2	100.0	100.0	.	.
	Q3	99.9	99.8	.	.
	Q4	100.3	100.2	.	.
1996	Q1	100.5	100.2	0.7	0.2
	Q2	101.3	101.0	1.3	1.0
	Q3	101.6	101.2	1.7	1.4
	Q4	103.0	102.9	2.7	2.7
1997	Q1	104.2	104.2	3.6	4.0
	Q2	105.1	105.2	3.8	4.1
	Q3	105.7	105.6	4.0	4.3
	Q4	106.1	105.8	3.0	2.9
1998	Q1	107.0	106.4	2.7	2.2
	Q2	108.0	107.4	2.8	2.2
	Q3	108.5	107.7	2.7	1.9
	Q4	109.1	107.9	2.9	2.0
1999	Q1	110.2	108.8	3.0	2.2
	Q2	111.1	109.5	2.9	1.9
	Q3	112.0	109.8	3.2	2.0
	Q4	113.0	110.4	3.6	2.3
2000	Q1	113.8	111.0	3.2	2.0
	Q2	115.4	112.6	3.9	2.9
	Q3	116.7	113.7	4.1	3.5
	Q4	118.2	115.0	4.6	4.1
2001	Q1	120.0	116.6	5.4	5.0
	Q2	121.2	117.4	5.0	4.2
	Q3	121.8	117.6	4.4	3.4

In Q3 2001, the CSPI (including property rental payments) rose by 0.5 per cent. The key rises contributing to this were for property rental payments and road freight. Smaller impacts on the top-level CSPI were due to increases for waste disposal and decreases for freight forwarding.

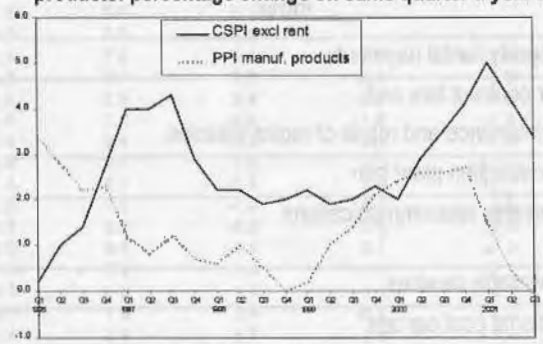
The top-level CSPI (excluding property rental payments) is compared to the net sector output PPI for manufactured products in the top graph on the right. Prices of corporate services covered by this inquiry have shown a relatively smooth upward path since 1997 but have been rising at a greater rate over this period than that of the PPI (which has begun to stagnate in recent quarters).

The annual increases have been slowing for both CSPI and PPI in recent quarters. Increases in the CSPI have almost always been higher than PPI from 1997 onwards.

Experimental top-level CSPI and PPI for manufactured products: index values (1995=100)



Experimental top-level CSPI and PPI for manufactured products: percentage change on same quarter a year ago



Industry-specific indices

The tables on the next 4 pages contain the series for the 28 industries for which indices of corporate services prices are currently available. The weighting for each index is shown separately for when property rentals are included and excluded. Some key points to note are:

- *bus and coach hire* prices show a 3 per cent increase over the year for Q3 2001. Increases in fuel bills and drivers' wages remain the major factors, according to the industry, when comparing prices with a year ago;
- a 0.5 per cent price increase is shown for *road freight* in the latest quarter although prices are more than 6 per cent higher than a year ago – apparently mainly due to higher fuel costs;
- *sea and coastal water freight* prices show a decrease of 2 per cent this quarter. Although the market appeared to be recovering in preceding quarters, this decline is due to competitive market conditions, according to the industry;
- the *freight forwarding* price index is the lowest since 1999 and shows a 2 per cent decrease this quarter, reportedly due to market conditions and a decline in rates to and from the Far East.
- *property rental payments* are nearly 7 per cent higher than a year ago; with renting of office properties being the main cause of the increase (as reported by the data suppliers, IPD);
- price increases across the board for European and long-haul flights have caused the increase of 14 per cent over the year for *business airfares*, according to the industry;
- charges for *waste disposal* appear to have been affected in recent years by increases in the rate of Landfill Tax following its introduction in quarter 4 1996. The latest quarter shows a 2.5 per cent increase and prices are now 4 per cent higher than a year ago;
- increases in fuel bills and drivers' wages are again reported to have been the main cause of a 7 per cent increase for *courier services* over the last year;
- price rises for *car contract hire* through 1999 and early 2000 have been offset by falls in recent quarters and prices are now at their lowest level since 1997. This is apparently the net result of: an upward effect from the end of 1998 to the end of 2000 caused by leasing companies expecting lower sale values of their cars at the end of the lease; and a downward effect from June 2000 due to cheaper purchase prices of new cars;
- the *business telecommunications* index shows revised values from 1998 onwards due to a small change in the methodology for pricing mobile telephones to enable better treatment of migration to new packages;
- also, an enhanced sample for the *technical testing* index has led to revised data back to 1998.

The next set of CSPI results will be issued on 15th February 2002 via the National Statistics website www.statistics.gov.uk (under "Experimental Statistics").

Note to the main table: There are external sources for the indices denoted by an asterisk, as follows:

Index	Source
Property rental payments	Investment Property Databank (IPD)
Car contract hire and Maintenance and repair of motor vehicles	Yewtree.com Ltd
Construction plant hire	Construction Plant-hire Association (CPA)
Business telecommunications	Published sources: Tarifica Telecom Pricing Intelligence and What Cellphone magazine
Sewerage services	Ofwat (Office of the Water Regulator)
National post parcels	Parcelforce

Corporate Services Price Indices (EXPERIMENTAL) (1995=100)

			Freight transport by road					
	Maintenance and repair of motor vehicles*	Canteens and catering	Bus and coach hire	Total	International component	Commercial vehicle ferries	Sea and coastal water freight	Business air fares
SIC(92):	50.20	55.50	60.23/1	60.24		61.10/1	61.10/2	62.10/1
1995 net sector weights (%):								
(including property rentals)	3.95	0.78	0.59	19.80		0.51	0.59	1.97
(excluding property rentals)	5.71	1.13	0.86	28.63		0.74	0.85	2.85
Annual								
1995	100.0	..	100.0	100.0	100.0	..	..	..
1996	99.8	..	103.0	103.8	101.1	..	..	103.4
1997	104.5	..	108.5	110.4	105.2	96.9	95.4	115.1
1998	106.0	112.0	115.2	113.4	105.4	96.4	88.6	123.5
1999	108.0	114.7	119.7	116.5	101.4	101.9	79.6	127.2
2000	110.0	115.9	130.5	123.6	103.4	101.3	82.1	135.3
Percentage change, latest year on previous year								
1996	-0.2	..	3.0	3.8	1.1	..	..	..
1997	4.7	..	5.4	6.3	4.0	..	..	11.3
1998	1.4	..	6.1	2.7	0.2	-0.4	-7.2	7.3
1999	1.9	2.5	3.9	2.7	-3.8	5.6	-10.2	3.0
2000	1.9	1.0	9.1	6.1	1.9	-0.6	3.2	6.3
Quarterly results (not seasonally adjusted)								
1996 Q1	99.1	..	101.9	102.3	101.6	..	..	101.4
Q2	99.5	..	102.4	103.4	100.0	..	..	101.8
Q3	99.9	..	103.5	103.6	100.2	103.4	97.2	101.8
Q4	100.8	..	104.2	105.9	102.5	100.9	96.3	108.5
1997 Q1	104.2	..	106.8	108.3	101.7	99.2	95.2	112.7
Q2	104.4	..	108.4	110.5	106.3	98.0	95.4	113.7
Q3	104.8	111.0	109.2	111.3	106.3	95.8	95.7	116.6
Q4	104.8	110.8	109.8	111.4	106.3	94.4	95.5	117.3
1998 Q1	105.4	110.8	111.9	112.2	105.2	97.0	93.7	119.8
Q2	106.4	111.9	115.5	113.3	105.8	96.3	88.4	124.2
Q3	106.3	112.4	116.2	113.9	106.0	95.9	86.1	124.9
Q4	106.1	112.8	117.1	114.3	104.6	96.6	84.0	125.1
1999 Q1	107.0	113.9	118.4	114.8	104.3	103.8	81.8	125.4
Q2	107.9	114.9	119.6	115.5	100.6	102.7	81.2	127.5
Q3	108.2	115.1	120.1	116.8	100.5	101.5	77.1	127.7
Q4	108.9	115.1	120.5	119.0	100.4	99.6	78.0	128.3
2000 Q1	109.2	115.1	126.6	119.3	102.3	102.1	79.6	129.5
Q2	109.5	116.1	130.8	121.9	102.3	101.5	81.9	132.4
Q3	110.1	116.2	131.9	124.9	102.9	101.4	83.1	135.9
Q4	111.2	116.3	133.0	128.3	106.1	100.3	83.8	143.3
2001 Q1	111.9	119.6	134.2	131.1	106.1	103.7	85.8	150.3
Q2	112.6	120.5	135.1	132.1	106.3	101.9	87.3	150.8
Q3	113.1	120.4	136.1	132.8	102.2	100.2	85.2	154.9
Percentage change, latest quarter on previous quarter								
1997 Q1	3.4	..	2.4	2.3	-0.8	-1.7	-1.1	3.9
Q2	0.2	..	1.5	2.0	4.6	-1.2	0.2	0.8
Q3	0.4	..	0.8	0.6	0.0	-2.3	0.3	2.6
Q4	0.0	-0.1	0.5	0.1	0.0	-1.4	-0.2	0.6
1998 Q1	0.6	0.0	1.9	0.8	-1.1	2.7	-1.9	2.2
Q2	0.9	1.0	3.2	0.9	0.6	-0.8	-5.7	3.7
Q3	-0.1	0.5	0.6	0.5	0.2	-0.4	-0.3	0.6
Q4	-0.2	0.4	0.8	0.3	-1.3	0.8	-4.6	0.1
1999 Q1	0.8	0.9	1.1	0.5	-0.3	7.4	-2.6	0.2
Q2	0.8	0.9	1.0	0.6	-3.6	-1.1	-0.7	1.7
Q3	0.4	0.2	0.5	1.2	-0.1	-1.2	-5.1	0.2
Q4	0.6	-0.1	0.3	1.9	-0.1	-1.8	1.1	0.5
2000 Q1	0.2	0.0	5.1	0.3	1.9	2.5	2.1	1.0
Q2	0.3	0.9	3.3	2.2	0.0	-0.6	2.8	2.2
Q3	0.5	0.1	0.8	2.5	0.6	-0.1	1.5	2.6
Q4	1.0	0.1	0.8	2.7	3.1	-1.1	0.9	5.5
2001 Q1	0.6	2.8	0.9	2.2	0.0	3.4	2.4	4.9
Q2	0.6	0.8	0.7	0.8	0.2	-1.7	1.7	0.3
Q3	0.5	-0.1	0.7	0.5	-3.8	-1.7	-2.4	2.7
Percentage change, latest quarter on corresponding quarter of previous year								
1997 Q1	5.1	..	4.8	5.9	0.1	..	..	11.2
Q2	5.0	..	5.9	7.0	6.3	..	..	11.7
Q3	4.9	..	5.5	7.4	6.1	-7.4	-1.6	14.5
Q4	4.0	..	5.3	5.1	3.8	-6.5	-0.8	8.1
1998 Q1	1.1	..	4.8	3.6	3.4	-2.2	-1.5	6.2
Q2	1.9	..	6.6	2.5	-0.5	-1.8	-7.3	9.3
Q3	1.4	1.3	6.4	2.4	-0.3	0.1	-7.9	7.1
Q4	1.3	1.8	6.6	2.6	-1.6	2.3	-12.0	8.7
1999 Q1	1.5	2.8	5.8	2.3	-0.9	7.0	-12.7	4.7
Q2	1.4	2.7	3.5	1.9	-4.9	6.8	-8.1	2.6
Q3	1.8	2.4	3.4	2.6	-5.2	5.8	-12.5	2.2
Q4	2.7	2.0	2.9	4.1	-4.1	3.1	-7.2	2.6
2000 Q1	2.0	1.1	6.9	3.9	-1.9	-1.6	-2.7	3.3
Q2	1.5	1.0	9.3	5.6	1.7	-1.1	0.8	3.8
Q3	1.7	1.0	9.8	7.0	2.4	-0.1	7.7	6.4
Q4	2.1	1.1	10.4	7.9	5.7	0.6	7.4	11.7

Corporate Services Price Indices (EXPERIMENTAL) (1995=100) – continued

	Freight forwarding	National post parcels*	Courier services	Business telecomm--unications*	Property rental payments*	Real estate agency activities	Car contract hire*	Construction Plant hire*
SIC(92):	63.40	64.11	64.12	64.20	70.20	70.30	71.10	71.32
1995 net sector weights (%):								
(including property rentals)	5.78	4.28	0.97	7.40	30.84	1.18	1.34	1.99
(excluding property rentals)	8.35	6.19	1.40	10.71	0.00	1.71	1.94	2.88
Annual								
1995	..	..	..	..	100.0	..	..	..
1996	..	100.0	100.4	..	102.2	..	..	98.4
1997	103.9	103.7	101.4	86.1	105.4	..	96.4	96.5
1998	99.2	110.5	105.6	83.4	110.0	119.5	97.5	99.8
1999	95.5	113.3	107.0	81.7	116.0	125.5	99.2	103.9
2000	96.1	118.6	110.1	77.7	122.6	134.5	102.2	109.3
Percentage change, latest year on previous year								
1996	..	..	..	..	2.2	..	..	..
1997	..	3.7	1.0	..	3.1	..	..	-1.9
1998	-4.5	6.6	4.2	-3.2	4.3	..	1.2	3.4
1999	-3.7	2.5	1.3	2.1	5.4	5.0	1.7	4.1
2000	0.6	4.7	2.9	-4.9	5.7	7.2	3.0	5.1
Quarterly results (not seasonally adjusted)								
1996 Q1	..	100.0	99.7	..	101.4	..	..	98.4
Q2	..	100.0	100.3	..	101.8	..	93.4	99.7
Q3	..	100.0	100.8	..	102.3	..	93.2	99.0
Q4	..	100.0	100.6	..	103.2	..	94.1	96.7
1997 Q1	103.5	100.0	101.2	88.3	104.2	..	96.1	98.2
Q2	103.7	104.9	101.5	86.1	105.1	..	95.7	96.3
Q3	104.0	104.9	101.2	85.6	105.7	..	96.2	94.9
Q4	104.4	104.9	101.7	84.4	106.7	..	96.5	96.6
1998 Q1	102.2	104.9	102.7	83.5	108.4	117.0	97.6	101.3
Q2	99.7	112.4	105.8	83.1	109.3	119.0	98.4	99.8
Q3	98.1	112.4	106.8	83.5	110.5	120.9	96.9	99.1
Q4	96.7	112.4	107.3	83.5	111.7	121.3	97.3	99.1
1999 Q1	97.4	112.4	107.3	83.5	113.4	121.9	97.8	105.3
Q2	94.7	113.6	106.9	83.0	114.9	124.6	98.1	102.6
Q3	94.5	113.6	106.9	81.5	116.9	126.6	99.6	103.0
Q4	95.4	113.6	107.0	78.7	118.7	128.8	101.4	104.9
2000 Q1	95.2	113.6	108.5	79.1	120.1	131.8	102.3	105.6
Q2	95.7	120.3	108.6	78.7	121.7	133.9	102.7	110.1
Q3	96.3	120.3	109.3	77.0	123.3	135.2	102.2	111.1
Q4	97.1	120.3	114.0	75.9	125.2	137.2	101.6	110.2
2001 Q1	98.0	120.3	114.8	75.9	127.6	138.6	99.5	111.3
Q2	97.0	122.9	116.2	75.5	129.6	139.1	96.6	118.0
Q3	94.9	122.9	116.9	75.5	131.4	139.2	96.2	116.2
Percentage change, latest quarter on previous quarter								
1997 Q1	..	0.0	0.6	..	0.9	..	2.1	1.5
Q2	0.2	4.9	0.3	-2.5	0.8	..	0.6	-1.9
Q3	0.3	0.0	-0.4	-0.6	0.6	..	-0.5	-1.4
Q4	0.4	0.0	0.5	-1.4	0.9	..	0.3	1.8
1998 Q1	-2.1	0.0	1.0	-1.1	1.6	..	1.1	4.8
Q2	-2.5	7.1	3.1	-0.4	0.9	1.7	0.8	-1.4
Q3	-1.6	0.0	0.9	0.4	1.1	1.6	-1.5	-0.7
Q4	-1.4	0.0	0.5	0.0	1.1	0.4	0.4	0.0
1999 Q1	0.7	0.0	0.0	0.0	1.5	0.5	0.5	6.3
Q2	-2.8	1.1	-0.4	-0.5	1.3	2.2	0.3	-2.6
Q3	-0.2	0.0	0.0	-1.8	1.8	1.6	1.6	0.5
Q4	0.9	0.0	0.1	-3.5	1.5	1.7	1.9	1.8
2000 Q1	-0.2	0.0	1.4	0.5	1.2	2.3	0.9	0.7
Q2	0.5	5.8	0.1	-0.5	1.3	1.6	0.4	4.3
Q3	0.6	0.0	0.6	-2.1	1.3	1.0	-0.5	0.8
Q4	0.8	0.0	4.4	-1.4	1.6	1.4	-0.6	-0.7
2001 Q1	1.0	0.0	0.7	0.0	1.9	1.0	-2.1	1.0
Q2	-1.0	2.2	1.2	-0.6	1.5	0.4	-2.9	6.1
Q3	-2.1	0.0	0.7	0.0	1.4	0.0	-0.4	-1.6
Percentage change, latest quarter on corresponding quarter of previous year								
1997 Q1	..	0.0	1.5	..	2.8	..	..	-0.2
Q2	..	4.9	1.2	..	3.2	..	3.5	-3.4
Q3	..	4.9	0.3	..	3.3	..	3.2	-4.1
Q4	..	4.9	1.1	..	3.3	..	2.5	-0.1
1998 Q1	-1.2	4.9	1.4	-5.5	4.0	..	1.5	3.1
Q2	-3.8	7.1	4.2	-3.5	4.1	..	1.8	3.6
Q3	-5.7	7.1	5.5	-2.4	4.5	..	0.8	4.4
Q4	-7.3	7.1	5.5	-1.1	4.8	..	0.8	2.5
1999 Q1	-4.7	7.1	4.5	0.0	4.7	4.2	0.2	4.0
Q2	-5.0	1.1	1.0	-0.1	5.1	4.8	-0.3	2.8
Q3	-3.6	1.1	0.1	-2.4	5.8	4.7	2.7	4.0
Q4	-1.3	1.1	-0.3	-5.8	6.2	6.1	4.2	5.9
2000 Q1	-2.3	1.1	1.1	-5.3	5.9	8.1	4.7	0.3
Q2	1.0	5.8	1.6	-5.3	5.9	7.4	4.8	7.4
Q3	1.8	5.8	2.2	-5.5	5.4	6.8	2.6	7.8
Q4	1.7	5.8	6.6	-3.5	5.5	6.5	0.2	5.1
2001 Q1	3.0	5.8	5.8	-3.9	6.3	5.2	-2.8	5.4
Q2	1.4	2.2	7.0	-4.1	6.5	3.9	-6.0	7.2

Corporate Services Price Indices (EXPERIMENTAL) (1995=100) – continued

	Market research	Technical testing	Employment Agencies	Security Services	Industrial cleaning	Commercial film processing	Contract packaging
SIC(92):	74.13	74.30	74.50	74.60	74.70	74.81/9	74.82
1995 net sector weights (%):							
(including property rentals)	1.28	1.21	6.32	1.15	2.27	0.09	0.49
(excluding property rentals)	1.85	1.75	9.14	1.66	3.29	0.12	0.71
Annual							
1995	..	..	..	..	100.0	100.0	..
1996	..	..	..	99.4	99.4	101.7	..
1997	..	..	108.9	99.5	98.8	104.7	..
1998	..	106.7	114.9	100.3	101.3	105.5	..
1999	112.2	109.1	120.6	103.0	101.8	105.6	109.4
2000	116.1	110.2	124.4	105.0	102.0	106.3	112.7
Percentage change, latest year on previous year							
1996	..	..	..	..	-0.6	1.7	..
1997	..	..	..	0.1	-0.5	2.9	..
1998	..	..	5.5	0.9	2.5	0.8	..
1999	..	2.2	4.9	2.7	0.5	0.1	..
2000	3.5	1.0	3.1	1.9	0.1	0.7	3.0
Quarterly results (not seasonally adjusted)							
1996 Q1	..	..	..	99.9	100.1	101.3	..
Q2	..	..	..	100.3	99.8	101.1	..
Q3	..	..	..	98.8	98.7	100.2	..
Q4	..	..	..	98.7	98.8	104.1	..
1997 Q1	..	..	107.0	98.9	98.8	104.4	..
Q2	..	..	108.4	99.2	98.6	104.4	..
Q3	..	..	109.9	99.7	98.9	104.7	..
Q4	..	..	110.4	100.0	99.0	105.3	..
1998 Q1	..	106.1	112.9	100.3	100.8	105.5	..
Q2	..	106.7	114.1	99.8	101.3	105.5	..
Q3	106.8	106.7	115.3	100.4	101.5	105.5	..
Q4	108.6	107.4	117.5	100.8	101.7	105.5	..
1999 Q1	111.7	109.1	119.4	101.4	101.8	105.5	109.2
Q2	112.0	109.1	120.7	102.5	101.9	105.6	109.5
Q3	112.4	109.0	121.0	103.9	101.9	105.6	109.5
Q4	112.8	109.3	121.3	104.3	101.7	105.6	109.5
2000 Q1	115.2	109.5	121.9	104.3	102.0	105.9	112.0
Q2	115.7	110.3	124.4	104.4	102.1	105.9	112.2
Q3	116.5	110.6	125.1	105.6	102.0	106.5	113.5
Q4	117.1	110.6	126.0	105.7	101.7	107.0	113.0
2001Q1	120.5	109.9	128.4	106.8	101.6	106.8	112.6
Q2	121.0	111.2	129.3	107.2	101.7	107.0	112.8
Q3	120.7	111.8	128.5	107.3	101.4	108.2	113.2
Percentage change, latest quarter on previous quarter							
1997 Q1	..	..	..	0.2	0.0	0.3	..
Q2	..	..	1.2	0.3	-0.2	0.0	..
Q3	..	..	1.4	0.5	0.3	0.3	..
Q4	..	..	0.5	0.3	0.1	0.6	..
1998 Q1	..	..	2.2	0.3	1.8	0.2	..
Q2	..	0.5	1.1	-0.5	0.5	0.0	..
Q3	..	0.0	1.0	0.6	0.2	0.0	..
Q4	1.6	0.7	1.9	0.3	0.1	0.0	..
1999 Q1	2.9	1.6	1.6	0.6	0.1	0.0	..
Q2	0.3	0.0	1.0	1.1	0.1	0.1	0.3
Q3	0.4	-0.2	0.2	1.4	0.0	0.0	0.0
Q4	0.3	0.3	0.3	0.4	-0.2	0.0	0.0
2000 Q1	2.1	0.2	0.5	0.0	0.3	0.3	2.3
Q2	0.5	0.7	2.0	0.1	0.1	0.0	0.1
Q3	0.7	0.3	0.6	1.1	-0.2	0.5	1.2
Q4	0.6	0.0	0.7	0.2	-0.2	0.4	-0.5
2001 Q1	2.9	-0.7	1.9	1.0	-0.1	-0.2	-0.3
Q2	0.4	1.2	0.8	0.4	0.1	0.2	0.1
Q3	-0.2	0.5	-0.6	0.0	-0.2	1.2	0.4
Percentage change, latest quarter on corresponding quarter of previous year							
1997 Q1	..	..	..	-1.0	-1.3	3.0	..
Q2	..	..	..	-1.1	-1.2	3.3	..
Q3	..	..	..	1.0	0.2	4.5	..
Q4	..	..	..	1.3	0.3	1.1	..
1998 Q1	..	..	5.5	1.4	2.1	1.1	..
Q2	..	..	5.3	0.6	2.8	1.1	..
Q3	..	..	4.9	0.7	2.6	0.8	..
Q4	..	..	6.4	0.8	2.6	0.2	..
1999 Q1	..	2.8	5.8	1.1	0.9	0.0	..
Q2	..	2.3	5.7	2.6	0.6	0.1	..
Q3	5.2	2.1	4.9	3.4	0.4	0.1	..
Q4	3.9	1.7	3.2	3.5	0.1	0.1	..
2000 Q1	3.1	0.3	2.1	2.9	0.2	0.4	2.6
Q2	3.3	1.0	3.1	1.9	0.2	0.3	2.4
Q3	3.6	1.5	3.5	1.6	0.0	0.8	3.7
Q4	3.9	1.2	3.9	1.4	0.0	1.3	3.2
2001 Q1	4.6	0.3	5.3	2.4	-0.4	0.8	0.5
Q2	4.6	0.9	4.0	2.7	-0.5	1.0	0.5

Corporate Services Price Indices (EXPERIMENTAL) (1995=100) – continued

SIC(92):	Direct marketing & secretarial services 74.83 (part)	Translation & Interpretation services 74.83 (part)	Adult Education 80.42	Sewerage services 90.00/1	Waste disposal 90.00/2	Commercial washing & dry cleaning 93.01	TOP-LEVEL CSPI Including property rentals	TOP-LEVEL CSPI Excluding property rentals
1995 net sector weights (%):								
(including property rentals)	0.19	0.15	0.58	1.33	2.39	0.58	**100.00**	..
(excluding property rentals)	0.27	0.21	0.84	1.92	3.46	0.83	..	**100.00**
Annual								
1995	..	..	100.0	100.0	100.0	..	100.0	100.0
1996	..	..	103.4	105.5	111.3	..	101.6	101.3
1997	..	..	108.5	109.9	126.8	..	105.3	105.2
1998	108.0	106.9	111.1	114.1	129.0	108.9	108.2	107.4
1999	109.9	108.5	114.7	118.1	138.1	112.1	111.6	109.6
2000	109.5	108.6	118.8	107.8	145.2	114.8	116.0	113.1
Percentage change, latest year on previous year								
1996	..	..	3.4	5.5	11.3	..	1.6	1.3
1997	..	..	4.9	4.2	13.9	..	3.6	3.8
1998	..	..	2.4	3.8	1.8	..	2.8	2.1
1999	1.8	1.5	3.2	3.4	7.0	2.9	3.2	2.1
2000	-0.3	0.0	3.6	-8.7	5.2	2.4	4.0	3.2
Quarterly results (not seasonally adjusted)								
1996 Q1	..	..	102.7	101.4	105.4	..	100.5	100.2
Q2	..	..	103.4	106.8	107.1	..	101.3	101.0
Q3	..	..	103.6	106.8	109.2	..	101.6	101.2
Q4	..	..	104.1	106.8	123.7	..	103.0	102.9
1997 Q1	..	..	107.2	106.8	126.4	..	104.2	104.2
Q2	..	..	107.3	111.0	125.9	..	105.1	105.2
Q3	..	106.5	108.8	111.0	126.8	106.5	105.7	105.6
Q4	..	106.6	110.7	111.0	128.0	107.7	106.1	105.8
1998 Q1	106.4	106.9	111.1	111.0	128.5	107.3	107.0	106.4
Q2	108.1	106.7	110.9	115.2	129.2	109.2	108.0	107.4
Q3	109.1	106.9	110.7	115.2	128.9	109.8	108.5	107.7
Q4	108.2	107.1	111.9	115.2	129.3	109.4	109.1	107.9
1999 Q1	109.3	108.5	113.9	115.2	130.9	110.5	110.2	108.8
Q2	110.4	108.6	114.4	119.0	139.6	112.5	111.1	109.5
Q3	109.7	108.5	115.0	119.0	140.8	112.4	112.0	109.8
Q4	110.0	108.5	115.4	119.0	140.9	112.9	113.0	110.4
2000 Q1	110.2	109.1	117.6	119.0	141.7	114.6	113.8	111.0
Q2	109.8	109.1	117.6	104.0	147.3	114.9	115.4	112.6
Q3	110.2	108.2	119.7	104.0	146.2	115.3	116.7	113.7
Q4	107.8	107.9	120.4	104.0	145.5	114.4	118.2	115.0
2001Q1	106.9	107.9	122.1	104.0	145.5	115.6	120.0	116.6
Q2	106.8	108.0	123.3	106.1	148.7	116.2	121.2	117.4
Q3	107.6	107.7	123.4	106.1	152.5	116.1	121.8	117.6
Percentage change, latest quarter on previous quarter								
1997 Q1	..	..	3.0	0.0	2.2	..	1.2	1.3
Q2	..	..	0.1	3.9	-0.4	..	0.9	1.0
Q3	..	..	1.4	0.0	0.7	..	0.5	0.5
Q4	..	0.1	1.7	0.0	0.9	1.1	0.4	0.2
1998 Q1	..	0.2	0.3	0.0	0.4	-0.4	0.9	0.6
Q2	1.7	-0.1	-0.2	3.8	0.5	1.7	0.9	0.9
Q3	0.9	0.2	-0.2	0.0	-0.2	0.8	0.5	0.2
Q4	-0.8	0.2	1.1	0.0	0.3	-0.4	0.5	0.3
1999 Q1	1.0	1.3	1.8	0.0	1.2	1.0	1.0	0.8
Q2	1.0	0.0	0.4	3.3	6.7	1.8	0.8	0.6
Q3	-0.6	0.0	0.5	0.0	0.8	-0.1	0.8	0.3
Q4	0.3	0.0	0.4	0.0	0.1	0.5	0.9	0.6
2000 Q1	0.2	0.5	1.9	0.0	0.6	1.5	0.7	0.5
Q2	-0.4	0.0	0.0	-12.6	4.0	0.2	1.4	1.5
Q3	0.4	-0.8	1.8	0.0	-0.8	0.4	1.1	0.9
Q4	-2.2	-0.2	0.6	0.0	-0.4	-0.7	1.3	1.2
2001 Q1	-0.8	0.0	1.4	0.0	-0.1	1.0	1.5	1.3
Q2	-0.1	0.0	0.9	2.0	2.2	0.5	1.0	0.7
Q3	0.8	-0.2	0.1	0.0	2.5	-0.1	0.5	0.1
Percentage change, latest quarter on corresponding quarter of previous year								
1997 Q1	..	..	4.5	5.3	20.0	..	3.6	4.0
Q2	..	..	3.7	3.9	17.6	..	3.8	4.1
Q3	..	..	5.1	3.9	16.1	..	4.0	4.3
Q4	..	..	6.4	3.9	3.4	..	3.0	2.9
1998 Q1	..	..	3.6	3.9	1.6	..	2.7	2.2
Q2	..	..	3.3	3.8	2.6	..	2.8	2.2
Q3	..	0.4	1.7	3.8	1.7	3.1	2.7	1.9
Q4	..	0.4	1.1	3.8	1.1	1.5	2.9	2.0
1999 Q1	2.8	1.6	2.5	3.8	1.9	3.0	3.0	2.2
Q2	2.1	1.7	3.2	3.3	8.1	3.0	2.9	1.9
Q3	0.6	1.5	3.8	3.3	9.2	2.3	3.2	2.0
Q4	1.7	1.4	3.1	3.3	8.9	3.2	3.6	2.3
2000 Q1	0.8	0.5	3.2	3.3	8.2	3.7	3.2	2.0
Q2	-0.6	0.5	2.8	-12.6	5.5	2.1	3.9	2.9
Q3	0.5	-0.3	4.1	-12.6	3.8	2.6	4.1	3.5
Q4	-2.0	-0.8	4.4	-12.6	3.3	1.3	4.6	4.1
2001 Q1	-3.0	-1.0	3.8	-12.6	2.7	0.9	5.4	5.0
Q2	-2.7	-1.0	4.8	2.0	0.9	1.2	5.0	4.2
Q3	-2.4	-0.4	3.1	2.0	4.3	0.7	4.4	3.4

ONS and the Inflation Target

Amanda Rowlatt
Chief Economist
Office for National Statistics
Zone D4/21
1 Drummond Gate
LONDON SW1V 2QQ
Tel: 020 7533 5905
E-mail: amanda.rowlatt@ons.gov.uk

Introduction

The purpose of this article is to articulate the responsibilities of the Office for National Statistics (ONS) with respect to the UK inflation target. At its simplest level the relationship is straightforward: ONS is responsible for measuring inflation, and a wide range of other economic statistics. ONS has no further input into the Bank of England's inflation projections, over and above supplying statistics on what has actually happened, and has no role in defining the inflation target. The publication of ONS's data also allows the public to judge the success of monetary policy.

In essence, the current processes for monetary policy in the UK might be depicted as a tripartite relationship between HM Treasury, the Bank of England, and ONS. HM Treasury sets the inflation target, the Bank of England is responsible for meeting the target, and it uses statistics, predominantly from ONS, to inform the policy decision.

This paper therefore has two discrete elements: the first part describes these institutional relationships in more detail, while the second addresses ONS's core business of data production directly with a discussion of the construction of ONS's inflation statistics.

Monetary Policy in the UK – the Institutional Arrangements

This section starts with an overview of monetary policy in the UK, illustrating how the focus on economic statistics has developed with changes in the monetary policy framework. This leads naturally into a discussion of the statutory basis of the Office for National Statistics, its relationship with HM Treasury, and the monetary policy remit set for the Bank of England by the Chancellor of the Exchequer. It is followed by a description of the relationship between ONS and the Bank of England.

Monetary policy and the link with economic statistics

The Bank of England has only had responsibility for setting interest rates since 1997; before this the Chancellor of the Exchequer was responsible for setting interest rates. There has always been a close relationship between the monetary policy framework and the demands made on economic statisticians, and the demands have increased with recent developments.

The UK money supply targets in the 1970s and early 1980s could be measured just using data from the Bank of England, although the policy makers also had some input from a range of macro-economic statistics. With the switch to an inflation target in 1992[1] attention on Government statisticians increased, as the chief providers of macro-economic data. Then in 1994 the move was made to start publishing the minutes of the regular meeting held between the Chancellor and the Governor of the Bank of England to discuss the Chancellor's interest rate decision. This immediately increased the transparency of the process, focussing attention on the wide range of economic data used to make the decision.

Since 1993 the Bank of England has published an overview of inflationary pressures in their quarterly *Inflation Report*. This has provided useful background for economic commentators and observers. It includes consideration of monetary and financial conditions, demand and output, the labour market, and costs and prices.

The *Inflation Report* came into its own in May 1997, when the Treasury passed responsibility for setting interest rates to the Bank of England, with the Chancellor's announcement of operational independence for the Bank. The Remit from the Chancellor to the

Governor, as Chair of the MPC, provides additional details including those on the structure of accountability; this was sent in June 1997. Since then the Monetary Policy Committee (MPC) of the Bank of England has used the *Inflation Report*,[2] to present its inflation projections; and to share the MPC's thinking on monetary policy. The *Inflation Report* is a substantial resource, comprising some 60 pages of closely argued discussion of recent economic developments. As this provides far more detail than before on the rationale for policy decisions, it has provided another step change in the degree of transparency of the process, and led to increasing public scrutiny of ONS's economic statistics, and their coherence.

The responsibilities of ONS

ONS was created in 1996 from the merger of the Central Statistical Office (CSO) and the Office of Population Censuses and Surveys (OPCS). ONS is a Government department and is also an agency reporting to the Chancellor of the Exchequer.

ONS produces most official economic statistics, including:

- the full range of price statistics, as outlined below;
- national accounts and trade statistics;
- short term output indicators, notably the monthly indices of production and distribution output and the retail sales inquiry; and
- labour market statistics.

In June 2000 a new framework was launched – National Statistics. This followed the Government's pledge in its 1997 election manifesto to provide independent national statistics. The scope of National Statistics is wide, including all statistics published by ONS, as well as nominated statistics from other Government departments.

Responsibility for National Statistics is shared between three central players:

- the National Statistician, who is both the professional Head of National Statistics and the Director of the Office for National Statistics;
- the Chancellor of the Exchequer, who is the Minister for National Statistics, and
- the Statistics Commission, which is independent of Ministers and the producers of National Statistics.

The Framework Document for National Statistics[3] stipulates that the National Statistician has 'responsibility for the professional statistical quality of all the outputs comprising National Statistics', inside and outside the Office for National Statistics.[4] He is 'accountable to the Chancellor for the performance of National Statistics and, with Heads of Profession [in Departments], for the discharge of the annual work plans approved by Ministers'.

The Statistics Commission's role is to advise on the quality assurance and priority setting for National Statistics and on the procedures designed to deliver statistical integrity. It produces an annual report[5] that is laid before Parliament by the Minister for National Statistics. As part of the process of setting priorities, there is wide consultation with users.

The *Framework Document for National Statistics* specifies slightly different responsibilities for the Retail Prices Index (RPI) to those for other statistics. For all National Statistics apart from the RPI, the National Statistician is responsible for 'developing and maintaining statistical standards, definitions and classifications and promoting high quality statistical output through systematic evaluation and research'. However, for the RPI: 'the National Statistician will take the lead in advising on methodological questions concerning the RPI but the scope and definition of the index will continue to be matters for the Chancellor of the Exchequer'.

HM Treasury: the institutional relationships

The aim of HM Treasury is 'to raise the rate of sustainable growth, and achieve rising prosperity, through creating economic and employment opportunities for all'. The first of the nine objectives to achieve this goal is 'maintaining a stable macro-economic framework with low inflation'.[6]

The relationship between the Office for National Statistics and HM Treasury has two angles:

- HM Treasury's interest in economic statistics deriving from its responsibility for macro-economic policy, and
- the fact that the Chancellor of the Exchequer is the Minister for National Statistics, and, linked to this, ONS is one of the Chancellor's departments, along with other departments such as the Inland Revenue and Customs and Excise.

The working relationship between HM Treasury and ONS is governed by a Concordat[7] which outlines the aims and objectives of each, specifies the consultation arrangements between the two organizations, and provides for service level agreements. The key service level agreement (SLA) relating to macro-economic policy is the SLA on Macro-Economic Statistics[8] – which is very similar to the SLA with the Bank of England, as described in.

Under the public spending regime, in common with other smaller departments, HM Treasury also agrees with ONS a Service Delivery Agreement specifying performance targets for ONS.[9] This states that 'the Chancellor of the Exchequer will determine the policy and financial framework within which ONS operates', and that 'the operational management of ONS is delegated to the Director of ONS'.

When the Labour Government gained power in 1997 one of their first acts was to grant operational independence for the Bank of England and establish a Monetary Policy Committee with the responsibility of setting monetary policy to achieve an inflation target. The Government and Parliament remained responsible for setting and defining the objective of monetary policy. These arrangements were enshrined in law through the Bank of England Act (1998), which legislated procedure for MPC meetings, minutes and appointments.[10] The exact definition of price stability, and thus the nature of the inflation target, is communicated to the Bank through the remit, which is set by HM Treasury. The remit has not changed since its introduction in 1997.

The remit given to the Monetary Policy Committee on interest rate policy is as follows. The target rate of inflation is 2½ per cent for the 12-month increase in the Retail Prices Index excluding mortgage interest payments (RPIX). The MPC is charged with meeting this target at all times. It is a symmetric target. If inflation deviates by more than one percentage point above or below the target the Governor of the Bank of England must send an open letter to the Chancellor of the Exchequer explaining:

- why inflation has deviated from target;
- what action the Bank of England's Monetary Policy Committee (MPC) intends to take to get it back to target;
- how long it will be before inflation returns to target; and
- how this meets the MPC's remit as set out by the Chancellor. The 2001 Budget Report[11] explains that this helps to support the Government's wider economic policy objective of high and stable levels of growth and employment.

The monetary policy remit given to the Bank of England by the Treasury complements the Memorandum of Understanding between the Treasury, the Bank of England and the Financial Services Authority in the field of financial stability.[12] In addition, the Bank of England Act covers both of these Bank of England functions.

ONS and the Bank of England: the wider working relationship

ONS and the Bank of England have developed a far closer relationship in recent years. Until the mid-1990s, the main working relationship was between statisticians in the two institutions, CSO (before the creation of ONS) and the Bank of England's statistical division, although the Bank's macro-economists also took a close interest in ONS's macro-economic data. The focus of the statisticians was on the financial data the Bank provided to CSO to feed into CSO's compilation of macro-economic statistics.[13]

When responsibility for setting interest rates was passed to the Bank of England in 1997 the relationship changed immediately. The Bank became one of its key customers, and ONS's links widened from collaboration with statisticians at the Bank to include the Bank economists who analyse the economy and brief the MPC.

This relationship was formalised by the service level agreement between the Bank of England and ONS,[14] which was agreed and signed by both sides in October 1999. This outlines the services ONS will provide to the Bank of England, and the obligations of the Bank of England in return. It stipulates the form and timeliness of the data supplied to the Bank of England, and requires 'sufficient' quality and scope of statistics, consistent time series, and full, public documentation of its sources and methods used in constructing key economic statistics. The Bank of England undertakes to inform ONS of their use and interpretation of ONS economic statistics.

The service level agreement also provides for regular meetings between ONS and the Bank of England, and this has proved to be a good way to develop strong working relationships, and a good sense amongst both parties of the objectives of the other side, and their constraints. ONS places significant weight on the views of the Bank of England when formulating spending priorities for economic statistics.

ONS provides both the Bank of England and HM Treasury with regular updates on progress on the key development programmes, and they attend several of the project boards monitoring methodological change to provide feedback on user needs. Both take a keen interest in the RPI research programme, and tripartite meetings are held once a quarter to feed the views of HM Treasury and the Bank of England in to the 'technical board' of ONS staff. In parallel with this, ONS has increased the number of economists on its staff in recent years; one of their roles is to help ONS understand the perspective of economist users of ONS statistics.

One feature of ONS's close working relationship with HM Treasury, and more recently the Bank of England, has been a strong focus on the need for timely economy data. The recent European 'benchmarking' study comparing the timeliness of economic data in Europe with the US found that UK short-term economic statistics were rather more timely than any other member state. The UK

was the fastest country to publish six of the twelve indicators reviewed, and in the top three countries for ten of the twelve. This seems likely to be a result of the very close working relationship between ONS and its key macro-economic users, HM Treasury and the Bank of England.

Inflation measurement in the UK

This section complements the discussion of institutional responsibilities with a brief overview of ONS's work on prices measurement, focusing on the RPI. It starts by outlining the wide range of price statistics produced by ONS. This is followed by a discussion of the uses of the RPI over time, and then a summary of progress on the RPI development programme.

ONS's price statistics

ONS publishes an unusually wide range of price statistics. The most high profile statistics are the family of domestic retail price indices produced each month:

- the 'headline' Retail Prices Index (RPI), which represents retail prices for the whole population, apart from the richest 4 per cent and those pensioner households mainly dependent on state pensions;
- the Retail Prices Index excluding Mortgage Interest Payments (RPIX), which – as its name suggests – excludes mortgage interest payments from the RPI;
- the Retail Prices Index excluding mortgage interest payments and indirect taxes (RPIY); and
- detailed product breakdowns of the RPI.

Current press releases and further information are found at www.statistics.gov.uk/rpi.

ONS also produces the harmonised index of consumer prices (HICP). This measure is designed for comparison between European countries. It is calculated differently from the RPI – in particular using the geometric mean to aggregate prices at the most basic level rather than the RPI's arithmetic means. A number of RPI series are also excluded from the HICP, most particularly those relating to owner occupiers' housing costs (eg mortgage interest payments, house depreciation, council tax and buildings insurance). In the UK HICP inflation has consistently been lower than RPIX inflation. HICP inflation in July 2001 was 0.75 percentage points lower than RPIX inflation; of this 0.5 percentage points was due to the formula effect, although this effect can vary over time. ONS is concerned about the size of this formula effect, and this is a major element of the research programme described below.

ONS complements these retail price series with a number of monthly producer price series, notably:

- trade prices, broken down by continent and commodity type – the export prices are directly collected by ONS from UK manufacturers and the import prices use world market prices where the products are traded on a world basis (eg some raw agricultural materials), some proxies, and directly collected prices otherwise (more information at www.statistics.gov.uk/bop);
- producer input and output prices covering UK production for domestic markets (www.statistics.gov.uk/ppi); and
- experimental corporate services prices, which price a range of services used as inputs to other goods or services (www.statistics.gov.uk/cspi).

A range of deflators is currently produced as part of ONS's comprehensive National Accounts data set. These build on the directly collected price indices, incorporating the effects of balancing adjustments where necessary. The ONS also produces the experimental Final Expenditure Price Index, which is a direct measure of economy-wide inflation. This covers government and investment expenditure as well as consumers' expenditure.[15] It was requested by the Treasury and the Bank, who use it as an additional measure of economy-wide inflation, alongside the implied deflators.

ONS is not at present using a 'stage of processing' framework to develop a complete set of price indices at the various stages of production. However, we are developing a consistent and detailed set of deflators as part of the major programme to develop constant price input-output tables; this will provide a systematic structure and database to develop a stage of processing framework.

Uses of the Retail Prices Index

The RPI has the longest history of ONS's price statistics. Although there were occasional official comparisons of prices for food in the late 19th and early 20th centuries, the Government first began a systematic, continuous check on the increase in the cost of living in 1914. This was pushed as an aid towards protecting ordinary workers from what was initially expected to be temporary economic circumstances of the First World War. The figures initially released related only to food prices but after June 1916 they were expanded and calculated retrospectively to cover clothing, fuel and some other items reflecting the principle expenditure of a working class family.

As noted above, the use of an inflation target for monetary policy is relatively recent. The RPI has a range of other functions, in particular:

- many benefits are linked to the RPI, notably pensions;
- the RPI is used to set the return on index-linked gilts, issued since 1981; and
- the RPI is used in private sector contracts to specify benchmark price changes.

It is ONS policy not to revise the RPI because of these wider uses.

With respect to index-linked gilts, the terms of the prospectus[16] state that if the coverage or the basic calculation of the index is changed in a way that is 'fundamental' and 'materially detrimental' to the interests of holders of the particular index-linked stock, in the opinion of the Bank of England, then HM Treasury is obliged to offer the stock holders the right to redeem their stock at the uplifted par value.[17] The amount of principal due on repayment and of any interest which has accrued will be calculated on the basis of the Index ratio applicable to the month in which repayment takes place. In practice, the Bank has to date not found any changes that have been fundamental and that would have been materially detrimental to the interests of the relevant stockholders.

The RPI is currently described as a 'measure of price change'. A convenient way to understand the nature of the RPI is to envisage a very large shopping basket comprising all the different kinds of goods and services bought by a typical household. As the prices of individual items in the basket vary, the total cost of the basket will change – the RPI is a measure of the change in this total cost from month to month.

As the balance of interests has moved there have been periodic reviews over the years, considering whether the basis for the RPI should be changed – notably to a cost of living index. However, the diversity of uses is a significant constraint on changing the rationale of the RPI, and the net result has been to retain the 'measure of price change'.

Where significant changes are being considered to the RPI the Chancellor of the Exchequer has in the past called a Retail Prices Index Advisory Committee (RPIAC) to advise him on whether the changes are appropriate, and how they should be handled. In the past, RPIAC's have been staffed with representatives from the public and private sector, including a Bank of England official as a full member and an HM Treasury official appointed in a personal capacity, based on their relevant expertise. The Secretariat was provided by CSO, the forerunner of ONS.

Further details on the construction of the RPI and its history are available in the *Retail Prices Index Technical Manual*.[18]

The RPI Development Programme

After moving to an inflation target, policy makers – first HM Treasury and then also the Bank of England – have placed increasing emphasis on the accurate measurement of retail prices. The Boskin report into bias in the US Consumer Price Index[19] crystallised concerns, and ONS established a comprehensive programme of research on the methodology of the RPI. The main areas of work are outlined in *Economic Trends*.[20]

Formula bias: bias arising when the formula used to weight together prices is inappropriate. ONS is establishing broad principles for when the arithmetic mean should be used and when the geometric mean is more appropriate. ONS has also been investigating the impact on the formula effect of moving the base month at which the RPI is rebased, for example from January to December, and the practical implications of any such move. The arithmetic differences observed need not be interpreted as bias, as the appropriate formula depends, amongst other things, on the definition and use of an index.

Quality bias: bias occurring when insufficient account is taken of changes in the quality of goods. ONS is investigating a range of techniques for improving the measurement of quality change, including hedonics.

Substitution bias: this has two elements. The first is 'product substitution bias': bias arising because there are lags before the price index adjusts for changes in purchasing patterns. In the UK the RPI is rebased every year, so this bias will be relatively small compared to countries which rebase less frequently. The second is 'outlet substitution bias': bias from lags in taking account in changes in where people do their shopping. ONS have carried out a systematic rebalancing of the RPI sample, and outlets are re-enumerated every five years on a rolling programme. ONS is also currently investigating practical ways of measuring internet shopping, and is also reviewing its general procedures for monitoring shopping trends to ensure these are reflected in the RPI on a timely basis.

New goods bias: bias occurring as a result of delays in including the prices of new goods in the index. ONS has estimated the effect of excluding new goods from the RPI in recent years, and it is negligible. The project is also tracking prices of products from when they first enter the market, to check whether price falls have a more significant effect early in a product's life.

Conclusions

The changes to the monetary policy framework in recent years provide far more information on the rationale for interest rate decisions, which has naturally led to a higher public profile for economic statistics. In parallel, the three main parties in the monetary policy framework – HM Treasury, the Bank of England and ONS – have developed clearer written agreements documenting their institutional relationships and responsibilities. This too has increased the transparency of the process. This article provides, in one place, a comprehensive overview of all these agreements.

These agreements confirm the allocation of responsibilities between the three parties: ONS measures what has happened; the Bank of England uses these data, amongst others, to assess inflationary pressures and thus set interest rates to meet the inflation target; and HM Treasury sets this monetary policy remit. As key users of ONS economic data, ONS consults the Bank of England and Treasury when setting its work priorities.

In response to the adoption of an inflation target, ONS is implementing an extensive RPI development programme, investigating all the main potential sources of bias, and has also reconsidered the design of the RPI in the light of its evolving uses.

Acknowledgement

I am very grateful to a range of ONS staff for their help with this paper, including Len Cook, John Kidgell, Dave Fenwick, Prabhat Vaze and Geoff Tily.

Notes and References

1. Medium-term 'monitoring ranges' for monetary variables such as M0 and M4 remained in place until 1997.
2. *Inflation Report*, Bank of England. www.bankofengland.co.uk/inflationrep
3. *Framework for National Statistics*, (2000), Office for National Statistics. www.statistics.gov.uk/about_ns/ons.asp
4. More information on ONS' activities is found in *The Office for National Statistics Framework Document*, (1996), Office for National Statistics. www.statistics.gov.uk/about_ns/ons.asp. This is being revised to take account of the *Framework Document for National Statistics.*
5. *Statistics Commission Annual Report 2000–01*, www.statscom.org.uk
6. *HM Treasury Departmental Report*, (April 2001), www.hm-
7. *Concordat between Office for National Statistics and HM Treasury*, (1996).
8. *Service Level Agreement between the Office for National Statistics and HM Treasury on Macro-Economic Statistics*, (1998).
9. *Office for National Statistics Service Delivery Agreement*, (2000)
10. *The Bank of England Act 1998*, www.bankofengland.co.uk
11. *Budget 2001 Investing for the Long Term: Building Opportunity and Prosperity for All*, Economic and Fiscal Strategy Report and Financial Statement and Budget Report (2001).
12. *Memorandum of Understanding between the Treasury, the Bank of England and the Financial Services Authority.* (www.bankofengland.co.uk/financialstability/mou.html)
13. This relationship is governed by the Firm Agreement between the Bank of England and ONS: *A Firm Agreement between the Bank of England and the Office for National Statistics to Supply Data for Macro-Economic Statistical Purposes.*
14. *Service Level Agreement between the Office for National Statistics and the Bank of England on Economic Statistics, (1999).*
15. Final Expenditure Prices Index web page: www.statistics.gov.uk/fepi
16. The terms governing index-linked gilts are not all the same – prospectuses for new issues of index-linked gilts were changed from March 1982 onwards to allow for the possibility of switching to a substitute price index which, as long as it did not result in material detriment, would avoid the early redemption clauses being triggered.
17. The UK Debt Management Office, which has responsibility for gilts issuance, has recently launched a consultation on the redesign of the next tranche of gilts, including a review of the wording of the early redemption clause.
18. *The Retail Prices Index Technical Manual*, (1998), ed. Michael Baxter. www.statistics.gov.uk/products/p2328.asp
19. Boskin, M.J., Dulberger, E., Gordon, R., Griliches, Z. and Jorenson, D. (1996) *Toward a more accurate measure of the cost of living*, Final Report to the Senate Finance Committee, December 4.
20. Michael Baxter and Dawn Camus, (February 1999), Three Year Research Programme on RPI Methodology, *Economic Trends* No. 543. Michael Baxter (October 1997), Implications of the US Boskin report for the UK Retail Prices Index, *Economic Trends* No. 527.

Implementing selective editing in a monthly business survey

Ceri Underwood
Data Editing and Imputation Branch
Methodology Group
Office for National Statistics
Room D.140 Government Buildings
Cardiff Road,
NEWPORT NP10 8XG
Tel: 01633 812132
Fax: 01633 813166
E-mail: ceri.underwood@ons.gov.uk

Introduction

National Statistical Institutes (NSIs) have traditionally believed that focusing a large proportion of resources on data editing produces high quality survey data. However, over the last decade, this notion has been questioned by some NSIs and research has shown that overediting induces high editing costs, high respondent burden, and possibly delivers data of a lower quality than anticipated (see Granquist,[1] 1997).

A new philosophy in data editing is therefore emerging which supports reducing the levels of data editing whilst maintaining data quality. By implementing systems which support the new philosophy, resources could be freed up and redirected towards other areas of the survey process that may require development or more input. The Office for National Statistics (ONS) has recently embraced this new approach to editing, and has undertaken research into a new selective editing system for one monthly business survey. The results from a recent trial of the new system suggest that it is possible to reduce the amount of data editing without impacting adversely on data quality.

Background

In the latter part of 1998, it was established that data validation and editing processes undertaken by ONS were operating inefficiently. Initial research showed that many surveys were experiencing high failure rates (percentage of questionnaires that fail at validation) and low hit rates of editing (percentage of validation failures that require an edit) and consequently it quickly became a key objective to improve the efficiency of data editing. A project board and project team were established, and three main validation and editing areas were highlighted for their potential to meet with this aim, namely:

1. Review the validation system. This involves reviewing the current validation checks and 'tweaking' or removing checks where possible.

2. Introduce automatic editing methods. This involves researching and developing a method to automatically locate and edit common errors before data are passed through the validation system. Research highlighted, in particular, two types of common error which were suitable for automatic editing:
   i. factor 1000 errors – where the contributor returns values in £ actual as opposed to the nearest £ thousand; and
   ii. summation errors – where the component values do not sum to the total.

   By automating these types of error prior to validation, fewer failures are triggered by the validation system. This reduces editing costs, and also ensures that these types of error are edited less subjectively (see Underwood, Small and Thomas,[2] 2000).

3. Introduce selective (or significance) editing methods. This involves reducing the amount of editing through concentrating the resource on only editing the suspect values that are thought to make a material difference to the survey outputs. The selective editing strategy adopted by ONS forms the focus of this article.

Selective editing

Selective editing aims to focus the editing resource on following up only those suspect values that are thought to make a material difference to the final survey outputs. In order to do this, a *score* for each suspect value is calculated, which incorporates some form of 'importance' criterion, and which allows the validation failures to be prioritised for editing. Techniques for developing the score, and the incorporation of the importance criterion, have been widely discussed in the literature over the past decade or so (for example, see

Lathouche and Berthelot,[3] 1992; Lawrence and McDavitt,[4] 1994; Granquist[5] 1997). The philosophy behind selective editing implies that for scores below a certain point, any further editing which is carried out on the data will have an insignificant effect on the final survey outputs. Hence, a 'threshold level' is established, that marks the point at which editing the suspect values may stop, and staff are not expected to edit beyond this point. Efficiency savings are thus realised under a selective editing system since those suspect values that fall below the threshold level do not require any editing resource allocated to them.

One requirement of the selective editing system was that it should not impact adversely on the current quality of the survey outputs. Hence the difference made to outputs by the selective editing system is assessed for whether it is material or not, in order to check that data quality is maintained.

Methodology

ONS systems

The selective editing system at ONS has been set up so that it fits in with the current data processing infrastructure. The selective editing method is applied after:

1. Automatic editing – the automatic correction of factor 1000 and totalling errors; and

2. Validation.

All contributors that fail at validation continue on to selective editing. Any validation failures that involve fatal errors (missing or inconsistent) in the key variables are followed up, as are any errors incurred by new contributors. All other validation failures are passed on for the calculation of the selective editing score.

The selective editing system outlined here aims to prioritise all validation failures, hence its dependency on the validation system. However, it should be noted that the validation system is not a necessary requirement, and that a selective editing system could be developed, which calculates a score for every contributor to the survey.

Selective editing score calculation

Various approaches to calculating the score were researched and the most appropriate was found to be:

1. Construct an 'expected' value, where the most suitable value is taken to be the edited value for the contributor from the previous reporting period;

2. Calculate the absolute difference between the 'expected' value and the returned value this period;

3. Multiply by a weighting factor (sample design weight);

4. Divide by the domain estimate from the previous period (this standardises across domains and across variables).

By multiplying the absolute difference by the sample design weight, the score is made approximately proportional to the effect on the survey estimate of editing that case. Only the sample design weight is used although there are other estimation weights that could be used. These, however tend not to be available until later on in the survey process. Since the purpose of the score is to be able to prioritise the suspect values, the use of the design weight alone was found to be robust.

Setting the threshold

The threshold level marks the point beyond which any further edits will make little difference to the final survey outputs. However, locating the optimal threshold level is not straightforward and hence much research is required into its setting. Ideally, the threshold level needs to be set such that the coverage probability of the final survey output under selective editing remains unchanged, i.e. the confidence interval of the output remains unchanged. This is assessed by calculating the absolute difference between the estimates under the old style of editing and the proposed selective editing system. Where the absolute difference is less than 10 per cent of the standard error, the 95 per cent coverage probability of the estimate is effectively unchanged (see Särndal *et al*,[6] 1997). However, this is considered to be somewhat conservative, as even when the absolute difference is allowed to be up to 30 per cent of the standard error, the coverage probability is only reduced to 94 per cent.

When a survey has more than one key variable, each of them needs to be taken into account in selecting contributors for editing. In general, the more key variables that a survey has, the more complex the selective editing system will be. Consideration needs to be given into how the scores and thresholds should be combined to produce one global score for prioritisation. For small surveys, which only have say up to five key variables of interest, research

at ONS has shown that it is sufficient, in certain surveys, to take the largest of the standardised scores. However, for more complex surveys, a more advanced method for global prioritisation may be required and this is currently being considered for the Annual Business Inquiry.

Changing the editing system

The move to a selective editing system requires staff to accept a new philosophy of editing. It challenges people's basic assumptions about the 'right' way of editing and requires staff to alter their working methods and systems. It is important to recognise that managing these things is a critical part of the project, hence the involvement of key staff throughout the transition needs to be carefully considered, and strong communication links need to be established early on.

The monthly business survey

The Monthly Inquiry into Distribution and Services Sector (MIDSS) was chosen to initially test the selective editing method for its potential to reduce the cost of editing whilst maintaining data quality. It is considered to be a relatively straightforward survey since it only collects two key variables: total turnover and total employees. Total turnover is collected from around 24,000 businesses each month and is used to compile the output measure of gross domestic product. This data is also fed into the Index of Services, which provides a monthly indicator of gross value added in the (non-government) service sector of the economy. Data on employees is collected in the form of a sub-sample every third month and underpins the Workforce Job series, which is an important source of labour market information.

There are numerous customers of the MIDSS outputs who require the data to be of a certain quality and it was important to the selective editing work that the current quality of the data provided to all customers was not adversely affected. Hence, carrying out checks to see how the quality of the data had changed under selective editing was considered to be fundamental to the work, and therefore quality checks formed a large part of the evaluation of the method during the trial run.

Selective editing trial run

The selective editing trial run was carried out in parallel with the traditional manual editing system. For this to happen, changes were made to both the survey processing system and to the workflow system for the editing staff. Staff training was also provided so that they would understood how the trial run, and selective editing in general, would function.

The contributors which failed validation were placed in one of the four categories described below according to their score. The MIDSS business survey also has a box on the questionnaire where contributors may enter any comments. These comments may contain important information explaining unreported values, or they may be trivial or irrelevant, but they all have to be dealt with.

A – score well above the threshold identifying the highest priority suspect value. This may also have a comment in the comments box. Both are to be dealt with.

B – score just above the threshold identifying a medium priority suspect value which may also have a comment in the comments box. Both are to be dealt with.

C – score below the threshold identifying a low priority suspect value that also has a comment in the comments box. Only the comment is to be dealt with.

D – score below the threshold identifying a low priority suspect value which has no comment. This will not be dealt with at all.

Results from the trial run

Owing to the structure of the existing data processing systems for ONS business surveys, selective editing can only be applied to those questionnaires that have passed through batch processing. Questionnaires that are received via fax or telephone are not passed through batch processing and hence only mailed back questionnaires can benefit from selective editing. This limits the potential efficiency gains at present although there are plans to include other forms of data collection into the selective editing program in the future.

The results from the selective editing trial run in MIDSS for April and May 2001 are shown here. We are concerned with two aspects of the results:

1. the efficiency savings generated under a selective editing system; and

2. the difference made to data quality under a selective editing system.

Efficiency savings in April 2001

To date there have been 8,326 questionnaires for April 2001 that have been mailed back to ONS, and which have failed at validation. Scores for each validation failure were calculated and categorised into one of A, B, C or D. The distribution of validation failures across the selective editing categories is shown in Table 1.

Table 1 Distribution of validation failures by category, May 2001

Category	Frequency	Number which have comment in comments box
A	3,030	642
B	897	190
C	1,603	1,603
D	2,796	0
Total	**8,326**	**2,435**

Table 2 Distribution of validation failures by category, May 2001

Category	Frequency	Number which have comments in comments box
A	2,750	484
B	795	129
C	1,284	1,284
D	2,782	0
Total	**7,611**	**1,897**

The validation failures that fall into the A and B categories are to be fully scrutinised by the operators, in order to make alterations where necessary and to obtain reasons for large movements in data. Those that fall into category C lie below the threshold level, but require checking since the questionnaire contains a comment. Those that fall into category D are not checked by operators, and hence this is where the efficiency savings are realised. In April 2001, the reduction in the numbers of questionnaires (i.e. those that came through batch processing and which failed at validation) that would have been followed up during editing is approximately 34 per cent.

Efficiency savings in May 2001

The same analysis was carried out for May 2001. To date, there have been 7,611 questionnaires mailed back to ONS, and which have failed at validation. The distribution of validation failures across the selective editing categories is shown in Table 2.

In May 2001, the reduction in the numbers of questionnaires that would have been followed up during editing is approximately 37 per cent.

Quality of results

MIDSS produces 101 domain estimates for total turnover for the National Accounts. The quality of the selective editing outputs, under selective editing, are determined by comparing the difference selective editing makes with the sampling error of the output as described under 'Setting the threshold'. A difference of less than 0.1 of the standard error means that a coverage probability of 95 per cent remains unchanged. However, even where the difference is less than 0.3 of the standard error, the coverage probability is only reduced to 94 per cent, and is deemed acceptable.

Table 3 The five domains with differences greater than 0.1 of the standard error (SE)

Domain	Current estimate (£m)	Sel ed estimate (£m)	Absolute Difference	Standard Error	Abs Diff/SE
1	1,209.1	1,213.2	4.1	16.3	0.25
2	1,538.5	1,531.7	6.8	27.6	0.25
3	636.9	633.4	3.5	22.7	0.15
4	443.5	444.8	1.3	12.2	0.11
5	1,102.9	1,099.0	3.9	25.6	0.15

Table 4 The three domains with differences greater than 0.1 of the standard error (SE)

Domain	Current estimate (£m)	Sel ed estimate (£m)	Absolute difference	Standard Error	Abs Diff/SE
1	1,989.0	1,982.1	6.9	60.0	0.12
2	1,416.3	1,412.9	3.4	29.3	0.12
3	991.8	990.7	1.1	9.9	0.11

Please note that the domains in Tables 1 and 2 are not necessarily the same.

April 2001

The results for April 2001, showed that 96 out of the 101 domains had differences less than 0.1 of the standard error. The remaining five had differences less than 0.3 of the standard error, which are acceptable, and these are shown in Table 3.

May 2001

In May 2001, 98 out of the 101 domains had differences in the estimates less than 0.1 of the standard error. The remaining three had differences of less than 0.2 of the standard error, which are acceptable, and these are shown in Table 4.

Hence it is possible to conclude that the survey outputs, which are produced under selective editing, are in line with the outputs produced under the current full editing system.

Conclusions

The results from the trial run on the MIDSS survey have shown that selective editing reduces the amount of editing required, without adversely affecting the quality of the outputs. Resources could now be freed up and focused on other areas of the survey process that may be in need of development.

Selective editing was implemented in the MIDSS survey at the start of August 2001, whilst research into the application of selective editing in other business surveys continues, eg the Monthly Wages and Salary Survey (MWSS) and the Annual Business Inquiry (ABI). The next trial run of selective editing is due to commence in October 2001 on the Monthly Production Inquiry.

References

1. Granquist, L. (1997) The New View on Editing, *International Statistical Review*, **65**, 3, pp. 381–387.
2. Underwood, Small and Thomas (2000). Improving the Efficiency of Data Validation and Editing Activities for Business Surveys, paper presented at the Government Statistical S(M) 2000 Conference, Ambassadors Hotel, London, United Kingdom.
3. Latouche, M. and Berthelot, J-M. (1992). Use of a Score Function to Prioritize and Limit Recontacts in Editing Business Surveys, *Journal of Official Statistics*, **8**, 3, pp. 389–400.
4. Lawrence, D. and McDavitt, C. (1994). Significance Editing in the Australian Survey of Average Weekly Earnings, *Journal of Official Statistics*, **10**, 4, pp. 437–447.
5. Granquist, L. (1997). Editing of Survey Data: How Much is Enough? In *Survey Measurement and Process Quality*, edited by Lyberg *et al*, John Wiley and Sons, pp. 415–435.
6. Särndal, C.-E., Swensson, B and Wretman, J. (1997). Model Assisted Survey Sampling. New York: Springer-Verlag.

International Comparisons of Productivity

Craig Richardson, Economic Methodology - Office for National Statistics

Address: D4/19, 1 Drummond Gate, London, SW1V 2QQ, tel: 020 7533 5908, E-mail: craig.richardson@ONS.gov.uk

Summary

This paper contains a detailed discussion of the issues surrounding the international comparisons of productivity system underlying the figures released on the National Statistics website on the 17th of October.

The original system of international comparisons of productivity was developed by the DTI and is set out by Harley and Owen in their 1998 Economic Trends paper. However, recent work by the ONS suggests that there are short-comings in this system, notably in the treatment of actual hours worked and the source of the employment numbers used. Since the OECD have improved the comparability of their data series the ONS and DTI have agreed to switch to using straight OECD data.

Revisions to the numbers previously published by the DTI are caused both by changes to the sources used for these numbers, and from revisions to published OECD series already in use.

Introduction

The International Comparisons of Productivity (ICP) work was handed over from the Department of Trade and Industry to the ONS in early 2001. The aim of this handover and the investigation into the methodology that followed it was to get the National Statistics "kitemark" of quality for the comparison statistics. To do this, the data sources and methodologies used needed to be fully investigated to ensure that the data was as robust, comparable and as timely as possible.

The original methodology used in the ICP system comes from the work of Ed Harley and James Owen, both of the Department of Trade and Industry (DTI) at the time, and is set out in the January 1998 edition of Economic Trends[1]. Since then, the ICP work has become the basis of a Public Service Agreement (PSA) between the DTI and HM Treasury; this states that the DTI should narrow the productivity gap between the UK and its competitors. Results of the ICP system as run by the DTI were most recently published in the March 2001 Budget Report[2].

The structure of this paper is as follows. Section 1 details the basic methodology and outputs of the system. Sections 2 to 5 detail some of the discussions surrounding the data sources for the components required, GDP, Purchasing power parities, employment and hours worked, and section 6 presents the final results of the new system and the full dataset used in their calculation.

1. Basic Methodology

The system produces two main results, GDP per worker, and GDP per hour worked. For both methodologies the GDP figure is converted to US dollars using a purchasing power parity (PPP) supplied by the OECD. The final results are then divided by the UK productivity figure to obtain a UK=100 figure.

$$\text{GDP per worker} = \frac{(GDP/_{PPP})}{Employment}$$

$$\text{GDP per hour worked} = \frac{(GDP/_{PPP})}{Employment \times hours}$$

These are established methodologies provoking little debate. GDP per hour worked is considered by many to be a superior measure of productivity in the economy as it takes into account different working hours across countries. Hours worked can vary significantly with differences in holiday entitlements, legal working times and the composition of the workforce. For example, differences in the female participation ratio could lead to differences in the average numbers of hours worked, because of the higher propensity for female part-time working and flexible working arrangements (such as job sharing). However, due to the quality of the data on hours actually worked, GDP per worker tends to be the more statistically robust measure.

It is important to note that due to limitations of international data sources, these comparisons are not wholly compatible with the domestic productivity data produced by the ONS which is on a GDP per job basis rather than GDP per worker.

[1] "International Comparisons of Productivity and Wages", Ed Harley and James Owen, Economic Trends No 530, January 1998.

[2] http://www.hm-treasury.gov.uk/budget2001/index.html

2. GDP

The current source for the GDP numbers is the most recent Economic Outlook (EO) database, published twice a year, usually in December and June. The numbers in this come from the OECD Quarterly National Accounts. It is often assumed that out of all the statistics involved in the productivity comparisons, GDP is the most comparable between countries due to the standardisation introduced in the System of National Accounts (SNA) and the European System of Accounts (ESA). However, this does not make the data perfectly comparable and there are a number of issues currently revolving around GDP measurement, such as the use of chain linking and also the use of hedonic methods for deflation. However, these tend to affect constant price GDP, and this project is only concerned with GDP at current prices.

The main issue with current price data is that of SNA93 compliance. The introduction of the SNA93 (and the fully consistent ESA95) should improve comparability of GDP across countries, once all countries have implemented it. However, given the scale of the implementation task, implementation has often been a gradual affair, and the availability of consistent back-series is often limited. For example, the treatment of software and the hidden economy in the national accounts often vary across countries.

The move from the previous SNA68 to the more recent SNA93 tends to increase the total level of GDP, although not uniformly over time or countries. Amongst the countries in the productivity comparisons, Japan is only just converting to SNA93 and there are sizeable revisions to their GDP in the Economic Outlook volume 69 database as the conversion feeds through.

Other sources, including the OECD's Annual National Accounts, were investigated, but ultimately the EO database is consistent with the alternatives and has the advantage of being the source for GDP used by the OECD economists in their international comparisons. However, the semi-annual nature of this source does mean that recent revisions to GDP (for example the changes to the UK's GDP published in the recent 2001 Blue Book) are not reflected in the system at present, and will not be until the Economic Outlook 70 database is released early in 2002.

3. Purchasing Power Parities (PPPs)

PPPs have been the subject of much debate. There are two different methodologies for their calculation, and also a choice of benchmark years for the basket of goods in question. Both issues will be summarised here.

There are two methods for aggregation. Both start off by calculating price ratios for individual goods and services to obtain unweighted parities for small groups of homogeneous commodities. The choice in methodologies comes in weighting and aggregating these commodity groups in the expenditure categories to arrive at the top-level GDP figure.

The EKS method treats all countries as independent and assigns an equal weight, it then tries to minimise the difference between the bilateral binary PPP (i.e. if only those two countries were being considered) and the multilateral binary PPP (i.e. when all countries are considered). This is the accepted method used by Eurostat and OECD papers[3]. It has the advantage that the results tend to be more characteristic of each country's own prices, but it suffers from the fact that the results are not additive, implying that the real value of the aggregate is not the sum of the real value of the components.

The alternative Geary-Khamis method is additive. It works by treating all countries as members of a group and weighting them according to their share of GDP, the prices that are calculated are characteristic of the group overall. The problem with this methodology is that it tends to lead to higher estimates of volumes of output than if more characteristic prices for the country in question had been used. This is known as the Gerschenkron effect, and the EKS method does not suffer from it. [4]

Then there is the choice of benchmark year. Baskets of goods are benchmarked by Eurostat/OECD every three years, the PPPs used in the Budget run of the ICP system in April 2001 were the latest results from the 1996 benchmark. The 1999 benchmark data will be published after the Pre-Budget run in November.

Use of different benchmarks will produce slightly different results, with the 1985 benchmark producing the lowest GDP relative to the US for other countries. Differences between the 1990, 1993 and 1996 benchmarks are minimal. The OECD currently uses the 1996 benchmark for its comparisons.

The publication of the EO69 database saw revisions to several of the PPPs when compared to the EO68 database (table 1). This represents the replacement of forecasted values for 1999 with actual values. The values for 2000 contained in EO69 are currently forecasts.

Where data is missing from the Economic Outlook database (e.g. the UK figure for 2000) the data can be taken from the latest version of the OECD's monthly Main Economic Indicators database, which is fully

---

[3] for example see Schreyer and Pilat, March 2001

[4] for a much more detailed exposition of the aggregation issues surrounding PPPs, try Balk (2001)

Table 1 – OECD Purchasing Power Parities

1999 PPPs	France	Germany	Japan	UK	USA
EO 68	6.621	1.996	159.925	0.673	1.000
EO 69	6.630	1.983	158.702	0.655	1.000
Difference	0.14%	-0.65%	-0.76%	-2.67%	0.00%
2000 PPPs	France	Germany	Japan	UK	USA
EO 69	6.550	1.941	153.040	0.653*	1.000

Source: Economic Outlook volumes 68 and 69; * - MEI data - see below

compatible with the Economic Outlook for PPPs and which contains the missing values.

In conclusion, although there is debate over the aggregation method and the choice of base year, there is no real debate over which PPPs the ONS should use as long as the OECD continues to publish PPPs of the most recent benchmark in the Economic Outlook database.

4. Employment

With the employment figures the problem was not whether the number represents the number of workers in the economy (e.g. a household survey like the Labour Force Survey) or the number of jobs in the economy (e.g. an establishment based survey), but whether or not the source chosen is consistent across countries.

Under the previous system employment numbers had been taken from the most recent publication of the OECD's Economic Outlook database. However, comparisons between this source and another OECD publication, the annual Labour Force Statistics (ALFS), and a study of the database inventory revealed some discrepancies in the figures, as shown by table 2.

The ONS investigations discovered that the EO is not an entirely consistent source for employment figures. Whilst four of the G5 employment numbers in the EO database are LFS based per worker estimates, for Germany the employment figure comes from an establishment survey, hence a per job measure, and consequently employment is around 1.4 million higher than the LFS based estimate. For the other four countries with LFS measures, three of the figures in the EO database are total employment (Japan, France and the UK) whilst the US measure is of civilian employment, excluding the 1.5 million armed forces. Note that Japan, by definition, has no armed forces, so the measure is total employment.

Table 2 – Comparison of Employment Numbers - 1999

	France	Germany	Japan	UK	USA
EO 69	23222	37942	64620	27649	133501
ALFS – Civilian Emp	22813	36167	64620	27314	133488
+Armed forces	399	370	0	128	1457
= ALFS total	23212	36537	64620	27442	134945

Source: OECD Labour Force Statistics and Economic Outlook vol. 69

The concept underlying total population for the purposes of GDP as stated in the SNA93 includes national armed forces stationed home and abroad, but excludes foreign armed forces stationed in the country. Hence it follows that for the numerator and denominator in the productivity calculation to be consistent, armed forces need to be included in the employment estimates.

Thus we are forced to conclude that the use of the EO database for employment numbers in the previous system has resulted in an over estimate of productivity for the USA, and an underestimate for Germany. The new system now uses the OECD's annual Labour Force Statistics total employment data to provide a consistent estimate of employment. This has resulted in revisions to both measures of productivity, with the biggest effect being a upwards impact on the German comparisons (due to the downwards revision of 1.4 million to employment) and a small downwards revision to the US figures (caused by the inclusion of the 1.5 million armed forces in the US).

5. Hours Worked

Several OECD working papers have been dedicated to the subject of hours worked data. A good example is "Annual Hours of Work: definitional and comparability issues"[5], where much of the commentary included here on the data and sources is taken from.

Under the previous system three sources for hours worked were used, based on the two different methodologies available. This paper will give a summary of the two methodologies, and of the issues surrounding the collection of the data.

One technique is called direct estimation, where the National Statistics Institute (NSI) estimates the hours *actually* worked. The other is a technique called the component method, where the NSI estimates the *usual* level of hours worked, and then adjusts with data on things like annual leave, illness, maternity leave etc (the components) to reach the *actual* hours worked measure. Statistically, there is no reason to favour either method,

[5] "*Annual Hours Of Work: Definitional And Comparability Issues*" OECD Working Paper, DEELSA/ELSA/WP7(98)2, Working Party on Employment and Unemployment Statistics, 1998

and some countries use a hybrid of both. The only question when using direct methods is whether the components that are implicitly assumed to be accounted for, actually are accounted for.

Another debate is the source of the data, i.e. should it come from individuals or employers? Information from establishments is generally based on company records, thus should be less likely to be subject to measurement error than LFS results. However, this limits us to what information the firms consider important, namely paid hours worked, and paid absences. For those on hourly rates the difference between the two will generally be the actual hours worked, but this is not likely to be true for salaried workers. Also, establishment surveys tend to exclude the self-employed and often certain sectors of the economy such as agriculture.

LFS records cover all sectors of the economy, but may be subject to response error. It is also unclear what the respondent is actually giving when asked for their usual hours. For example, many include regularly occurring overtime as part of their usual hours. Or they may give the conventional working week in their establishment, regardless of what they actually work. A study in Finland suggests that the self-employed, especially in agriculture, tend to over-estimate their hours worked, and US time-use surveys suggest that people who work long hours tend to over-report their hours in labour force surveys.

The OECD highlights a number of other possible flaws in the household derived measures, which it is currently trying to verify empirically by comparing the household and establishment survey results for individual countries. It finds that establishment and labour force estimates can vary between 0 and 3 per cent for individual countries, the latter pushing the limits of what is considered acceptable for international comparisons.

By comparing different sources for the same country, the OECD is able to make some suggestions about the source of these discrepancies, although whether these suggestions can be generalised to other countries is subject to debate. The paper suggests that absences due to illness and accidents in LFS results are underestimated by some 45 to 60 per cent and that this might be caused by part-week absences, since it seems reasonable to assume that respondents would recall full-week absences.

On the issue of holidays, some countries use assumptions such as workers take all the statutory leave available, or no workers get more than the statutory minimum amount of holidays. Both of these assumptions are questionable. LFS results on holidays show much lower figures than one would expect, and considerable variations within countries across time.

On overtime the results are even more vague. For a start, there is the question of whether regularly occurring overtime is recorded as overtime, or as part of the usual week. Comparable data from establishment and household surveys on overtime is limited to two data studies from Germany, which suggest that overtime might be under-recorded by as much as 25 per cent in the household surveys.

The OECD concludes that although there may be biases, they may cancel each other out, and correcting some biases but not others could lead to a deterioration in the quality of the results.

As mentioned above, the previous ICP system used different methodologies for different countries. The component method was used for two of the EU countries; France and Germany (not the UK), taking data on the usual hours worked and then adjusting using the components from the European Labour Force Survey (ELFS). Data for the USA and Japan came from the OECD's Employment Outlook Publication, and finally UK figures came from the ONS dataset.

Aside from the debates on measurement methodology and survey units, a concern with the previous system was the level of consistency between these three data sources.

The new ONS system uses a single data source, the OECD's Employment Outlook. However, it is acknowledged even within the OECD that the figures are not totally comparable across countries, and to quote from the Employment Outlook publication; "*The data are intended for comparisons of trends over time; they are unsuitable for comparisons of the level of average annual hours of work for a given year, because of differences in their sources.*"[6]

However, the recent use of hours worked numbers in the OECD's "growth project" means that substantial steps have been taken by the OECD to standardise data sources and methodologies. The OECD data also have the added advantage over the EU LFS numbers of being published and thus are transparent. It is worth noting though that this is only a switch in data source for two countries, since the UK figure in the OECD Employment Outlook is provided by the ONS, and figures for the USA and Japan were previously taken from this source.

As such, the GDP per hour worked figures calculated using these hours worked numbers are currently marked "EXPERIMENTAL", and will remain so until the ONS is satisfied that the OECD has improved the comparability to such an extent that the numbers can be described as comparable. However, the OECD's development process also means that revisions to these series are likely.

[6] Table F, OECD 2001 Employment Outlook

6. Results and Data Sources

Table 3: GDP per Worker (UK=100)

	France	Germany	Japan	USA	G7	G7-UK
1990	129.1		105.6	139.9		
1991	134.0	107.7	109.5	143.3	125.3	127.7
1992	128.6	108.3	103.9	137.1	120.8	122.8
1993	125.6	107.4	104.1	138.4	121.3	123.2
1994	124.6	111.1	103.4	138.5	122.0	124.0
1995	127.8	115.2	108.1	139.4	124.9	127.1
1996	120.8	110.0	106.6	136.6	121.9	124.0
1997	117.2	110.2	104.5	137.5	121.4	123.3
1998	115.2	107.2	100.5	137.3	120.0	121.8
1999	114.9	107.3	100.8	139.0	120.9	122.9
2000	114.4	106.6	100.9	141.6	121.9	124.0

Table 4: GDP per Hour Worked (UK=100) EXPERIMENTAL

	France	Germany	Japan	USA	G7	G7-UK
1990	137.7		91.9	136.0		
1991	144.0	123.2	96.9	140.2	123.9	126.1
1992	135.1	118.6	91.4	131.8	117.6	119.2
1993	131.8	118.6	94.1	131.4	118.1	119.8
1994	132.0	124.2	94.6	131.7	119.5	121.2
1995	137.7	131.0	99.8	131.8	122.6	124.6
1996	130.6	126.6	98.0	129.1	119.7	121.4
1997	126.9	127.1	97.3	129.2	119.1	120.8
1998	124.4	122.9	94.5	127.4	117.3	118.9
1999	123.8	122.8	94.2	127.7	117.4	119.0
2000		123.0		128.9		

Table 5: GDP Domestic Currency, current prices

	France	Germany	Japan	USA	UK	G7 (US$)
1990	6,624,769	2,497,753	441,915,208	5,803,200	556,217	12,637,259
1991	6,890,606	2,937,999	469,229,782	5,986,225	584,536	13,312,969
1992	7,119,281	3,155,199	481,581,507	6,318,950	608,165	14,088,118
1993	7,226,869	3,235,400	486,519,103	6,642,375	639,356	14,516,525
1994	7,489,757	3,394,400	491,835,181	7,054,250	677,594	15,292,051
1995	7,760,850	3,523,000	497,739,428	7,400,475	713,980	16,205,734
1996	7,954,567	3,586,500	510,802,306	7,813,250	756,058	16,955,450
1997	8,205,159	3,666,499	521,861,382	8,318,450	805,402	17,714,289
1998	8,536,672	3,784,400	515,834,805	8,790,225	851,654	18,459,671
1999	8,826,845	3,877,200	512,530,046	9,299,175	891,000	19,333,362
2000	9,160,620	3,976,100	512,319,184	9,963,000	934,421	20,479,276

Source: OECD Economic Outlook, Volume 69

Table 6: Purchasing Power Parities

	France	Germany	Japan	UK	USA
1990	6.614	2.088	195.300	0.602	1.000
1991	6.513	2.094	193.060	0.635	1.000
1992	6.418	2.066	188.161	0.616	1.000
1993	6.573	2.103	184.307	0.637	1.000
1994	6.621	2.069	180.589	0.645	1.000
1995	6.460	2.016	169.942	0.654	1.000
1996	6.572	2.027	165.615	0.644	1.000
1997	6.722	2.008	165.052	0.651	1.000
1998	6.705	2.014	163.523	0.652	1.000
1999	6.630	1.983	158.702	0.655	1.000
2000	6.550	1.941	153.040	0.653	1.000

Source: OECD Economic Outlook, Volume 69

Table 7: Total Employment

	France	Germany	Japan	UK	USA	G7
1990	22,633		62,490	26,935	120,960	
1991	22,661	37,373	63,690	26,400	119,836	304,834
1992	22,543	36,875	64,360	25,812	120,458	304,698
1993	22,260	36,444	64,500	25,511	122,019	304,371
1994	22,237	36,174	64,530	25,717	124,777	306,993
1995	22,413	36,176	64,570	26,026	126,520	309,365
1996	22,461	36,045	64,860	26,323	128,268	311,804
1997	22,558	35,899	65,570	26,814	131,071	316,160
1998	22,949	36,397	65,140	27,116	132,953	319,373
1999	23,370	36,753	64,620	27,442	134,945	322,585
2000	23,750	37,336	64,460	27,793	136,641	326,175

Source: OECD Labour Force Statistics, 2001 Edition

Table 8: Annual Average Hours Actually Worked

	France	Germany	Japan	UK	USA
1990	1657.0	1597.6	2031	1767	1819.0
1991	1645.0	1545.9	1998	1768	1807.6
1992	1646.0	1578.1	1965	1729	1798.8
1993	1642.3	1559.9	1905	1723	1814.5
1994	1638.9	1553.5	1898	1737	1825.4
1995	1613.9	1529.1	1884	1739	1839.9
1996	1607.7	1510.5	1892	1738	1838.8
1997	1604.6	1506.4	1864	1737	1849.0
1998	1602.6	1509.9	1842	1731	1864.4
1999	1596.4	1503.1	1840	1719	1871.3
2000		1480.1		1708	1876.7

Source: OECD Employment Outlook, Table F, 2001 Edition

Reference:

"Annual Hours Of Work: Definitional And Comparability Issues" OECD Working Paper, DEELSA/ELSA/WP7(98)2, Working Party on Employment and Unemployment Statistics, 1998 Annual National Accounts, 2001, OECD, Paris

Balk, B.M., *"Aggregation methods in international comparisons: what have we learned?"*, Statistics Netherlands, 2001

Crafts, N. and O'Mahoney, M., *"A Perspective On UK Productivity Performance"*, IFS Paper, July 2001.

Economic Outlook volumes 68 and 69, OECD, Paris

Employment Outlook 2001, OECD, Paris

Harley, E. and Owen, J., *"International Comparisons of Productivity and Wages"*,Economic Trends No 530, January 1998.

Labour Force Statistics, 2001, OECD, Paris

Quarterly Labour Force Statistics, OECD, Paris

Schreyer, P. and Pilat, D., *"Measuring Productivity"*, Draft paper for OECD Economic Studies, March 2001

Valuing Household Transport in the UK - December 2001

by Sandra Short, Household Satellite Account Branch - Office for National Statistics

Address: D4/19, 1 Drummond Gate, London, SW1V 2QQ Tel: 020 7533 5728 E-mail: sandra.short@ons.gov.uk

Introduction

This article describes a new methodology being developed by the Office for National Statistics (ONS) to measure and value the output of the household production of transport. This includes all modes of transport which are provided by the household and for all purposes where the cost is not already included in the UK National Accounts. This is an experimental approach, and the author invites feedback on the methodology and underlying assumptions. The figures quoted in the article are provisional and should be interpreted cautiously, bearing in mind their sensitivity to some of the assumptions. More details of the results and sensitivity tests can be found on the transport project pages at **www.statistics.gov.uk/hhsa**.

The project is part of the development of a Household Satellite Account (HHSA), which measures and values the unpaid goods and services produced by households in the UK. This is described in the September (2001) Economic Trends article 'Valuing Informal Childcare in the UK', which is also available via **www.statistics.gov.uk/hhsa**.

Scope and Data Sources

The household transport account includes all transport provided by the household, using the third party criterion – if the activity can be delegated to a third party, it is productive. For example, if you choose to travel from your house to a friend's house by bus, you pay for that journey and this is picked up in the National Accounts in the output of the bus industry. If you choose to make the same journey on foot instead of by bus, the same output has been achieved, but rather than being an output of the bus industry, it is an output of the household. The same would be true if you used your car or bicycle. Because you have provided the mode of transport and not paid for the journey, it is household production of transport. However, when the travel is an end in itself, e.g. walking for exercise or pleasure, it cannot be delegated and is therefore not included. The cost of 'business travel' is usually claimed back from employers, and is therefore included in the National Accounts, and should be excluded from the HHSA. Business travel recorded in the National Travel Survey (NTS) may include some commuting where a respondent does not have a permanent place of work, such as builders who work on different sites. As it is not possible to split this code at present, all business travel has been excluded from these results. Those modes of transport which people pay to use, such as bus, coach, train and taxi, are also not included, because they are measured in the National Accounts.

The NTS is carried out by the Social Survey Division of the ONS, on behalf of the Department of Transport, Local Government and the Regions (DTLR). The NTS has been a continuous survey on personal travel in Great Britain since 1988. During the period January 1998 to December 2000, individuals in 9,390 households completed a seven day travel diary, covering all travel over 50 yards in distance. Details collected include purpose and method of travel, time of day and length of trip, numbers in parties and the cost of travel. Only travel within Great Britain is included. Journeys to other places are included only up to the ticket control point at which the boat, plane, or the train using the Channel Tunnel, is boarded. More details on the survey can be found at **www.transtat.dtlr.gov.uk/personal**.

It should be noted at this point that as the NTS is a sample survey the results are subject to sampling variability, which can be quite large particularly when looking at travel data broken down by purpose and mode. More details of the sampling variabilities are given later in the article.

Personal travel data is not available in the same form for Northern Ireland. The results in this article therefore assume that Northern Ireland has the same travel patterns as the rest of the UK. A survey was started in Northern Ireland this year, so data will be available in the future – details of Northern Ireland transport data can be found at **www.doeni.gov.uk/statistics/transport**.

Mode

The modes of travel included in this project are *walk*, *bicycle*, *car or van*, *motorcycle* and *other private*. However, *just walk*, which is walking as a leisure activity, has been excluded as explained above. Private hire buses have been excluded from the NTS category *other private*, as these are paid for and are therefore included in the National Accounts.

Purpose

The NTS data is broken down by purpose of travel. In the HHSA, transport is an input to other projects, the main areas being education and shopping. For this reason, the results in this article, have been aggregated into four purpose categories, with the escort trips classified to those purposes to which they most closely relate:

Education	Leisure & other (incl.voluntary work & care escort)
Education	Day trip
Escort Education	Eat/drink with friends
	Entertainment/ public activity
Shopping	Holiday: base
Shopping	Other social
Escort shopping / personal business	Sport: participation
	Visit friends at private home
Work	Other non-escort
Commuting	Escort home (not own) and other escort
Escort Commuting	Personal business medical
Other work	Personal business other

Price

In order to value the output of transport provided by the household, the nearest market equivalent has to be identified. As the objective is to value a trip from one particular point to another, i.e. 'door to door', a private hire vehicle (PHV) is the closest equivalent. If a train or bus were used, for example, a trip to the station or the bus stop would still be required.

The NTS collects information on the cost of PHV trips. Respondents report the length and cost of each journey, so an average cost per trip and an average cost per mile can be calculated. This data is available separately for London and the rest of Great Britain (RoGB). The cost of PHVs may be a flat rate or may be metered irrespective of the number in party, luggage etc. When people share a PHV, the cost reported in the NTS should be the total, split between the number in the party. However, this does not appear to have been calculated correctly by all respondents. To ensure the estimates are as accurate as possible, only single occupancy trips have been included in the PHV costs used in these calculations.

The NTS also collects data for taxi travel. Both the PHV and taxi rates are wholly dependent on the survey respondent to record this information correctly. There may be some doubt among respondents as to whether they are travelling in a PHV or a taxi. If the vehicle has been booked in advance the respondent will usually know (most likely a PHV) or if it has been hailed in the street and has therefore been plying for trade it will be a taxi. However, if for example you walk out of a station and get in a vehicle at the taxi rank it could be either a taxi or a PHV. This is because the taxi rank is normally on private property and the PHV is able to operate here, as it is not plying for trade on a public road. Respondents are more likely to misclassify PHVs as taxis, rather than taxis as PHVs. The NTS 5 year average cost for a PHV centred on 1997 is £1.39 per mile in London and 87p per mile in the rest of Great Britain. The corresponding taxi costs are £1.63 and £1.17 respectively.

School buses were investigated as a possible market equivalent for education trips. The DTLR 'Surveys of concessionary fares schemes for children and students in 1999'[1] showed that, of the 101 education authorities who responded, 60 had no scheme for children and 53 had no scheme for students. Those authorities with schemes had wide variations in terms of flat rates, photo passes, permits, different age ranges and time of day limitations. As a guide, from those authorities who responded, the average term travel fee per child was £19 and for students £58. Given that the availability and types of scheme vary so widely, it would be inappropriate to use an 'average' approach for the whole of the UK. Also there would still be the problem that children or students have to get to the bus stop. As education (including escort trips) was the reason for 4 per cent of total travel in 1999, using a different pricing system for education trips, if an option were available, would have a fairly small effect on the total.

Provision of transport for the ill and disabled also varies widely, as do subsidies for the elderly. The 'Mayor's Draft Transport Strategy'[2] indicates that in London, Dial a Ride, funded by Transport for London (TfL), provides 1.2 million trips per year. In 1999/2000 the service cost £12.5m, which implies a cost of £10.42 per trip. However this will also cover the overheads of running the service. TfL also provides subsidised taxi travel - approximately 700,000 trips per year at a cost of £7m in 1999/2000, giving an average of £10 per trip.

The report on concessionary fares[1] also covers schemes for the elderly, disabled, registered blind and those with impaired mobility. In London, all travel on public transport for elderly residents is free after the morning peak. Outside London, there is often some form of reduced fare, sometimes tiered, with different rates for the over 75s, and take up rates vary. As with school travel, these subsidies have wide variations throughout the country and usually apply to bus and train travel, so are not 'door to door'.

Volume Data

Methodology

Due to the level of detail by mode and purpose required from the NTS for this analysis, it is not sensible to look at individual year data, because of the large sampling errors around the estimates. Results for both 3-year and 5-year rolling averages are presented in this paper. These averages have been centred, so 1997 in the 3-year average data is the average of 1996 to 1998, and in the 5-year average data it is the average of 1995 to 1999.

All of the NTS data used is for the average distance travelled per person per year. Distance has been used rather than the number of trip stages,

as this is more appropriate, given the price information available for valuing the results. The distance of all trip stages provided by the household has been included. For example, if, on a trip to work, an individual got a lift to the station, caught the train and then walked to the office, the lift to the station is commuting as a car passenger, the train trip is excluded and the walk to the office is commuting by walking. The car driver would also record an 'escort commuting' trip as a car driver.

The distance per person per year data has been calculated separately for 0-16 year olds (children) and 17+ (adults) and also for London and the rest of Great Britain (RoGB). In order to get the total distance travelled by everyone in the UK, the average distance per person has been grossed to the appropriate population totals. As we are assuming that travel patterns in the rest of the UK (RoUK) are the same as those in RoGB, the average distance per adult in RoGB has been grossed by the adult population of RoUK. This has been done separately for motorised and non-motorised modes of transport. Motorised modes include *car*, *van*, *motorcycle* and *other private* vehicles and non-motorised modes are *walk* and *bicycle*.

As a PHV trip is the 'unit' of travel, we assume that if people travel together they would also share a PHV. The total distance travelled by all people in the UK therefore needs to be adjusted by the average number of people travelling together. The numbers in party for motorised and non-motorised modes by purpose have been averaged over eight years (1992 to 1999) from the NTS data. Each year's data has then been divided by this average number in party. As adults and children travel together, it is not possible to keep child and adult trips separate when looking at the party data. Between 1992 and 1999 approximately 7 per cent of all child trips and 49 per cent of all adult trips were undertaken alone.

Results

Tables 1 and 2 show the total mileage travelled by all people in the UK, split between motorised and non-motorised modes. Children's travel as a proportion of the total has declined slightly over this period, falling from 14.6 per cent to 13.5 per cent of the total. Motorised modes make up approximately 96 per cent of all distance travelled. Non-motorised modes are usually used for short journeys, and account for approximately 30 per cent of all trips made.

The largest difference between the 3-year and 5-year rolling average data is 2.6 billion miles in 1997. The issue of which is most appropriate to use will be looked at later in the article, in the light of information on sampling variability.

When looking at distance travelled by purpose for the 3-year average

Table 1

Total distance travelled by all individuals in the UK based on 3-year centred rolling average
1993 - 1999

billion miles

Year	Motorised	Non-motorised	Total*	% child
1993	274.7	11.6	286.3	14.6
1994	280.1	11.6	291.7	14.5
1995	283.0	11.8	294.7	14.0
1996	288.1	11.6	299.7	13.6
1997	294.9	11.5	306.4	13.5
1998	297.1	11.4	308.5	13.6
1999	299.7	11.1	310.8	13.5

Source: HHSA estimates/DTLR
*Totals may differ due to rounding

Table 2

Total distance travelled by all individuals in the UK based on 5-year centred rolling average
1994 - 1998

billion miles

Year	Motorised	Non-motorised	Total*	3-yr av. minus 5-yr av.	% child
1994	279.0	11.7	290.7	1.0	14.4
1995	284.0	11.6	295.6	-0.8	14.3
1996	289.1	11.6	300.8	-1.0	13.8
1997	292.2	11.6	303.8	2.6	13.8
1998	295.7	11.3	307.0	1.6	13.6

Source: HHSA estimates/DTLR
*Totals may differ due to rounding

centred on 1999, Table 3 (overleaf) shows that most travel relates to commuting, visiting friends at private homes, and shopping. These totals are heavily influenced by the motorised modes. When looking at non-motorised modes, shopping forms the largest single purpose - 23 per cent of total distance. Education travel also accounts for a greater proportion of non-motorised distance, particularly as the escort education category is included. Escort trips are only separately identified for commuting, education, and shopping/personal business (all included in shopping). All other escort trips are included in 'Other' in Table 3.

As mentioned earlier, in order to value the output of household transport we need to convert the distance travelled by individuals to distance travelled by parties. The average number in party for motorised modes ranges from 1.4 people per party for 'other work' travel to 3.0 people for holidays. The average for non-motorised parties ranges from 1.1 for commuting to 2.7 for holidays.

Table 3

Percentage breakdown by purpose
of total distance travelled in the UK in 1999
based on 3-year centred rolling average

per cent

Purpose	Motorised	Non-motorised	Total*
Commuting (1)	22.9	19.8	22.8
Other work	1.1	1.3	1.1
Education (1)	3.3	17.3	3.8
Shopping (1)	17.7	22.9	17.9
Personal business medical	1.1	1.6	1.2
Personal business other	5.7	6.6	5.7
Visit friends at private home	20.6	12.3	20.3
Eat/drink with friends	2.5	3.4	2.6
Sport: participate	2.7	3.0	2.7
Entertainment/public activity	4.7	3.1	4.6
Day trip	5.4	4.7	5.4
Holiday: base	6.9	1.4	6.7
Other social	1.5	1.8	1.5
Other (1)	4.0	0.9	3.9
Total - all purposes	100.0	100.0	100.0

Source: HHSA estimates/DTLR

* Totals may differ due to rounding (1) Purpose includes escort trips

Looking at the difference in travel by parties between London and the RoUK, Table 4 shows that Londoners account for approximately 8 per cent of the total distance travelled. However, it should be remembered that travel reported by Londoners will include travel they undertake outside the London area, and travel by parties in the rest of the UK will include some travel which takes place in London.

Table 4

Total distance travelled by parties in the UK
based on 3-year centred rolling average
1993 - 1999

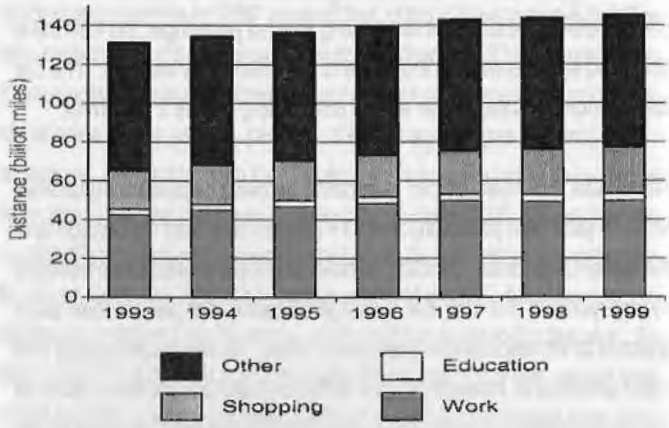
percentage of total miles

Year	Motorised		Non-motorised		Total (bn miles)
	London	RoUK	London	RoUK	
1993	7.7	87.1	0.7	4.4	138.4
1994	7.4	87.7	0.7	4.2	141.7
1995	6.8	88.2	0.7	4.3	143.8
1996	6.7	88.4	0.7	4.1	146.7
1997	7.0	88.3	0.7	4.0	150.2
1998	7.3	88.0	0.8	3.9	151.0
1999	7.5	88.0	0.7	3.8	152.3

Source: HHSA estimates/DTLR

Chart 1

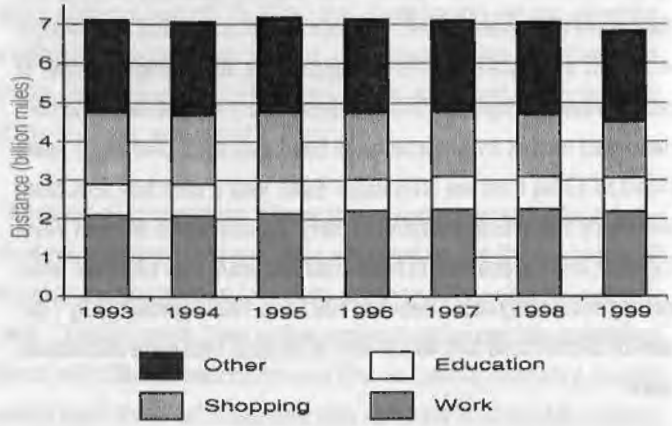
Purpose of travel by parties in the UK
using motorised modes
based on 3-year centred rolling average



Source: HHSA estimates/DTLR

Chart 2

Purpose of travel by parties in the UK
using non-motorised modes
based on 3-year centred rolling average



Source: HHSA estimates/DTLR

Charts 1 and 2 show the distance travelled by parties split into the 4 'purpose' groups. Both charts are based on 3-year rolling average data. In total, motorised travel has increased steadily from 1993 to 1999, while non-motorised travel has remained fairly constant at about 7 billion miles per year. As before, the charts show that shopping and education travel form a much larger proportion of the total for non-motorised than for motorised modes.

Value Data

Methodology

The NTS PHV cost per mile data is available for 1995 onwards, separately

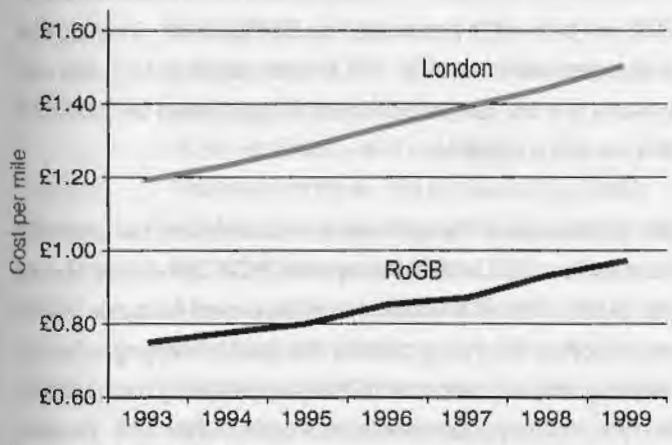
for London and the rest of Great Britain (RoGB). We have again had to assume that Great Britain is representative of the UK. Due to the relatively small number of respondents, this data has been averaged for 1995 to 1999, giving a value centred on 1997. As noted earlier the centred average cost of a PHV in London in 1997 was £1.39 per mile, and in the rest of Great Britain 87p per mile. The year on year changes in the retail price index for taxis in London and outside London have then been applied to the 1997 values, to create a price series from 1993 to 1999.

The separate London and RoUK prices are then applied to the appropriate totals by purpose, still split between motorised and non-motorised modes. This assumes that the trips made by Londoners outside of London are balanced by the trips made by RoUK respondents in London.

The cost of hiring a PHV includes a charge to cover the time that the PHV (and driver) are not in use or 'dead time' during the working day. In the absence of information on what proportion of the charge covers this dead time, we have assumed it to be 5 per cent in the results shown here.

Results

Chart 3
PHV prices



Source: HHSA estimates/DTLR

Chart 3 shows that prices in London increased by 31 per cent between 1993 and 1999, while prices in the RoGB increased by 22 per cent over the same period.

As Table 5 shows, the largest difference between the values based on 3-year and 5-year average data is £1.1bn in both 1997 and 1998. In both the 3-year and 5-year average results, the output of household transport has increased steadily over time. In the 3-year average data the value of household travel has increased by 42 per cent from 1993 to 1999. From Table 4 it can be seen that the total distance travelled by parties in the UK increased by 10 per cent between 1993 and 1999, during which time the UK population increased by 3 per cent.

Table 5
Total value of household transport in the UK
1993 - 1999

£ billion

Year	Motorised	SV	Non-motorised	SV	Total*	SV
based on 3-year centred rolling average:						
1993	98.1	±3.3	5.5	±0.2	103.6	±3.3
1994	103.8	±3.3	5.7	±0.2	109.5	±3.4
1995	108.4	±3.6	5.9	±0.3	114.3	±3.6
1996	117.7	±4.0	6.3	±0.3	124.0	±4.0
1997	123.7	±4.5	6.4	±0.3	130.1	±4.5
1998	132.9	±4.6	6.8	±0.3	139.7	±4.7
1999	140.3	±4.8	6.9	±0.3	147.1	±4.9
based on 5-year centred rolling average:						
1993	-		-		-	
1994	103.5	±2.6	5.7	±0.2	109.2	±2.7
1995	108.8	±2.8	5.9	±0.2	114.7	±2.8
1996	118.1	±3.1	6.3	±0.2	124.4	±3.2
1997	122.6	±3.2	6.4	±0.2	129.0	±3.3
1998	132.2	±3.5	6.7	±0.2	138.8	±3.5
1999	-		-		-	

Source: HHSA estimates/DTLR
*Totals may differ due to rounding
SV = sampling variability: ±1.96 * standard error

The results given here are based on the National Travel Survey which is subject to sampling variability. This means that the estimates given could be higher or lower than their true value. The output of household travel in 1998 using a 3-year rolling average was £139.7bn, the sampling interval (at the 95 per cent confidence level) for this value varies between £135.0bn and £144.4bn. Using a 5-year rolling average, the value is £138.8bn with a sampling interval of £135.3bn and £142.4bn. When looking at the sampling variability for the various purposes of travel, the standard errors for the 5-year rolling average data are about 20 to 30 per cent smaller than those for the 3-year rolling averages. However, the standard errors for the 3-year rolling average estimates are generally less than ± 10 per cent of the estimate, and many are less than ± 5 per cent of the estimate. On this basis it would seem reasonable to use the 3-year rolling average data in the Household Satellite Account. The sampling variability will also be taken into account when looking at the estimates, in order to forecast results for the year 2000. The sampling variabilities by purpose can be found at www.statisitics.gov.uk/hhsa.

Sensitivity

The results in this article are sensitive to certain assumptions:

- Travel in Northern Ireland is on average the same as the rest of the UK
- 5 per cent of the PHV hire charge covers the drivers 'dead time'

- PHV costs change at the same rate as taxi costs
- Household travel patterns would remain unchanged if PHVs were used

In order to test the assumptions where possible, sensitivity tests have been carried out:

- Results with no 'dead time' and 10 per cent 'dead time' have been calculated.
- If all travel were by PHV, some non-essential travel would probably be eliminated. It is likely that some return escort trips would disappear. This may be because an escort is not needed if a PHV is used. Or, for example, a parent taking a child to a dance class, who currently returns home during the class, may stay and wait, so avoiding two single person escort trips. A test of the effect of removing 50 per cent of single person escort trips has been carried out.

Results

Table 6

Effect of sensitivity tests on the value of household transport based on 3-year centred rolling average

1993 - 1999 (£ billion)

Year	SV lowest	10% dead time	50% SP Escort trips removed	5% dead time	No dead time	SV highest
1993	93.7	96.8	102.2	**103.6**	109.0	112.5
1994	99.1	102.3	108.0	**109.5**	115.2	118.8
1995	103.4	106.8	112.7	**114.3**	120.4	124.2
1996	112.1	115.9	122.3	**124.0**	130.6	134.8
1997	117.3	121.6	128.3	**130.1**	137.0	141.7
1998	126.1	130.5	137.7	**139.7**	147.0	151.9
1999	132.8	137.4	145.1	**147.1**	154.9	160.0

Source: HHSA estimates

Table 6 shows the effects of the sensitivity tests. In the results we have used we have assumed 'dead time' is 5 per cent. If we do not allow for any dead time, the results are 5 per cent higher. In this case the sampling variability is also increased by a constant 5 per cent, to give the top of the range values shown in the last column.

At the bottom of the range, removing 50 per cent of the single person escort trips reduces the total by about 1.4 per cent. If the assumption is that 'dead time' is 10 per cent rather than 5 per cent, the total is then reduced by a further 5 per cent. Again the sampling variability has also been adjusted, but in this case it is reduced by 5 per cent to give the values in the first column of Table 6. It should be noted that the sampling variability has not been adjusted to allow for removing the single person escort trips, but this would make a very small difference.

The value of £147.1bn for 1999 is calculated based on the assumption that patterns of travel would be unchanged if all household travel cost the same as travelling by PHV, and that PHV fares include the cost of 5 per cent dead time. If we change these assumptions and allow for sampling variability, the 1999 value could be anywhere between £132.8bn and £160.0bn.

Transport Account

The results presented here are an initial estimate of the value of the output of transport by all households in the UK. In the full account, to be published in March 2002, the net value added by households will be calculated by subtracting the cost of the inputs to this transport. These include intermediate consumption, such as petrol, insurance, cost of parts, repairs etc., and capital goods, such as cars, motorcycles and bicycles.

The other major input is that of time/labour. Information on the time spent in travelling, shopping for transport related items and maintaining the vehicle is collected in time use surveys. The time use data can be used to calculate an hourly effective return to labour, by dividing the net value added figure by the total time spent in transport related activities. The results of the UK time use survey for 2000/2001 will be available in March 2002, and these will be incorporated into the full account. Travelling time is also recorded in the NTS. DTLR have compared NTS data with previous time use data and will look at this again when the 2000/2001 time use data is available.

As mentioned above, transport has been subdivided into four 'purposes' because it is an input to other projects in the HHSA. Some escort trips are part of care. The NTS separately identifies escort education but not escort of others whilst being cared for. Transport for shopping and escort shopping is separate, and from 1998 onwards shopping is split between food (40 per cent by distance) and other shopping (60 per cent). Transport related to voluntary work cannot at present be separately identified in the NTS, and is included in the purpose 'Entertainment/public activity'.

Future Development

There are a number of developments which should improve the quality of the transport account in the future:

- The sample size of the NTS is being increased by three times from 2002.
- Results from the new travel survey for Northern Ireland will be available in the future.
- Comparison work on the NTS and the UK time use surveys may provide additional information on travel.

Conclusion

The results presented here are a first attempt at calculating the output of household transport and should be viewed in that light. Travel patterns change very slowly over time and the growth in the results from year to year is largely a reflection of the increase in the price of travel by PHV but also due to increases in the amount of travel and the population. The results are sensitive to the assumptions used, particularly to the amount of 'dead time'. While the sampling variability around some of the estimates, when looking at individual purposes, is quite large, those at the total level are relatively small. Given the sampling variability of the 3-year rolling average data there is no reason not to use this in preference to the 5-year data. Indeed, this will enable us to estimate data for the year 2000 using only one year of forecast data for 2001, rather than the two years required for a 5-year average. The 2000 estimate will be published in the HHSA UK account in March 2002.

The purpose of this article is to invite comment on the methods used and these can be sent to the author or by e-mail to HHSA@ons.gov.uk

Glossary of terms

Mode	The method of transport. In this article, modes have been split into: i) Motorised - *car*, *van*, *motorcycle* and *other private* (excluding private hire buses) ii) Non-motorised – *walk* and *bicycle*
Purpose	The reason for travel. The term *escort* trip refers to someone who has no purpose of travel themselves, other than to accompany someone else.
Taxi	A taxi can be hailed in the street. For example, a black cab in London is a taxi.
PHV	Private hire vehicle, more commonly known as a mini-cab. These are usually ordered by telephone, to collect a passenger from a particular address.

Acknowledgements

The author wishes to acknowledge the helpful comments received from members of the Household Satellite Account Programme Board, as well as colleagues in ONS, especially Jeremy Barton, and Barbara Noble in DTLR.

---

[i] Transport Statistics Bulletin: Concessionary Fares Schemes SB(99)19 Department of Transport Local Government and the Regions

[ii] The Mayors' Draft Transport Strategy Chapter 4N: Improving London's Transport System: Taxis and Minicabs, Community Transport and Door-to-Door Transport