OFFICE FOR NATIONAL STATISTICS

Economic Trends

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Contents

Introduction

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

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

An article on international economic indicators appears monthly and an article on regional economic indicators appears every January, April, July and October. Occasional articles comment on and analyse economic statistics and introduce new series, new analyses and new methodology.

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

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

Economic Trends is prepared monthly by the Office for National Statistics in collaboration with the statistics divisions of Government Departments and the Bank of England.

Notes on the tables

1. All data in the tables and accompanying charts is current, as far as possible, to 24 July 1997.

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

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

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

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

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

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

8. 'Billion' denotes one thousand million.

9. There is no single correct definition of *money*. The Government has set monitoring ranges for two aggregates:

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

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

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

10. Symbols used:

.. not available

- nil or less than half the final digit shown

+ alongside a heading indicates a series for which measures of variability are given in the table on page T77

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

* average (or total) of five weeks.

If you have any comments or suggestions about *Economic Trends*, please write to Michael Byrne, Technical Editor, ONS, Zone D4/16, 1 Drummond Gate, London, SW1V 2QQ or e-mail Michael.Byrne@ONS.Gov.UK

Office for National Statistics
August 1997

In brief

Articles

This month we feature four articles.

Each year the Office for National Statistics publishes an analysis of the effects on the Retail Prices Index of changes in the Budget. This year we have published this on the Internet (http://www.emap.co.uk/ons/) as well as in *Economic Trends* (Effects on the RPI of changes announced in the 1997 Budget: page 9) to allow rapid and widespread dissemination of the analysis. We intend to do this after each Budget in the future.

Peter Jones of the ONS gives an account of expenditure on Research and Development statistics up to and including 1995 (page 18). The Budget article (page 46) described the Government's overall approach to economic policy and summarises specific tax and spending measures. Recent developments and prospects are summarised in a separate article (page 59).

New National Statistics Catalogue

The 1997 edition of the National Statistics Catalogue, *the Source*, is now available, including information about all ONS publications, electronic media and data delivery and other statistical services. The catalogue is available free of charge from the National Statistics Sales Office on 0171-533 5678.

Also recently published is the 1997 edition of *United Kingdom in Figures*. This is a pocket-sized fold-out compendium of key statistics about various economic and social aspects of the UK today. This is available free of charge from ONS Marketing and Customer Service Division on 01633 812915.

Recent National Statistics publications

United Kingdom National Accounts 1997 (The Blue Book). The Stationery Office, ISBN 0 11 620899 6, price £32.50. Detailed estimates of national product, income and expenditure for the United Kingdom.

United Kingdom Balance of Payments 1997 (The Pink Book). The Stationery Office, ISBN 0 11 620898 8, price £32.50. Detailed estimates of the current account, capital account and the International Investment Position for the United Kingdom.

Regional Trends 1997. The Stationery Office, ISBN 0 11 620837 6, price £37.50. ONS's popular annual source of official statistics about the regions of the United Kingdom including data upon regional accounts, the labour market and industry, broken down by Government Office Region.

UK Economic Accounts: 1997 quarter 1. The Stationery Office, ISBN 0 11 620856 2, price £22.50.

Consumer Trends: 1997 quarter 1. The Stationery Office, ISBN 0 11 620835 X, price £45.

Labour Market Trends, August 1997. The Stationery Office, ISBN 0 11 620889 9, price £6.00.

Financial Statistics, July 1997. The Stationery Office, ISBN 0 11 620876 7, price £22.50.

All of these publications are available from the National Statistics Sales Office, Zone B1/06, 1 Drummond Gate, London, SW1V 2QQ. Telephone 0171-533 5678 or fax 0171-533 5689. Subscriptions are available from The Stationery Office Publications Centre, telephone 0171-873 9090.

United Kingdom Macro-Economic Statistics Publications

Annual Publications

- UK National Accounts (Blue Book)
- UK Balance of Payments (Pink Book)
- Input/Output Balances
- Economic Trends Annual Supplement
- Public Finance Trends

Quarterly Publications

- UK Economic Accounts
- Consumer Trends
- Overseas trade analysed in terms of industry

Monthly Publications

- Retail Prices Index
- Producer Price Indices
- Economic Trends
- Financial Statistics
- Monthly Review of External Trade Statistics

First Releases

Annual

- Profitability of UK companies

Quarterly

- UK Balance of Payments
- UK National Accounts
- UK Output, Income & Expenditure
- GDP Preliminary estimate
- Capital Expenditure*
- Stocks*
- Institutional Investment
- Govt Deficit & Debt under the Treaty

Monthly

- UK Trade in goods
- Public Sector Borrowing Requirement
- Retail Prices Index
- Producer Prices

* is a News Release

***Other publications:** - Retail Prices 1914-1990 - Input/Output Tables - Labour Market Statistics - Family Spending - Sector Classification Guide - Share Ownership - Financial Statistics Explanatory Handbook*

Articles

Page

Articles published in *Economic Trends*

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

Regional economic indicators. Commentary, figures and charts are published every January, April, July and October.

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

Other Articles

1996

August	Research and experimental development (R & D) statistics 1994.
	The pilot United Kingdom enviromental accounts.
	Testing for bias in initial estimates of the components of GDP.
September	A framework for social accounting matrices.
October	The use of quarterly current price output data in the national accounts.
	Innovation in small and medium sized enterprises 1995.
	Geographical analysis of the United Kingdom balance of payments.
November	An international comparison of taxes and social security contributions 1984-1994.
	Overseas trade in services: development of monthly estimates.
	Charities' contribution to GDP: the results of the 1996 ONS survey of charities.
December	Revisions to the United Kingdom Balance of Payments.
	Developments in United Kingdom company securities statistics.
	How far should economic theory and economic policy affect the design of national accounts?

1997

January &	Regional Accounts 1995: Part 1.
February	Balancing GDP: United Kingdom annual input-output balances.
	The Budget: 26 November 1996.
	The economy: recent developments and prospects.
	ONS plans to extend publication of service sector statistics.
	The president's task force on service sector statistics.
March	Employment in the public and private sectors.
	The effects of taxes and benefits upon household income 1995-1996.
	Quarterly integrated economic accounts: the United Kingdom approach.
	International comparisons of GDP per head over time.
April	Methodology series for United Kingdom national accounts.
	Deflation of trade in goods statistics.
June	Regional Accounts 1995: Part 2.
	Competitiveness in manufactures.

For articles published in earlier issues see the list in issue 509 (March 1996) of *Economic Trends*. Copies of articles may be obtained from the Publications Unit, Marketing and Customer Service Division, Office for National Statistics, Zone B1/12, 1 Drummond Gate, London SW1V 2QQ, on payment of £2.00 per copy for articles within the last year, and £4.00 per copy for articles prior to this. The appropriate remittance should accompany each order. Cheques, etc, should be made payable to Office for National Statistics.

Economic update - August 1997

By Philip Blackburn and Adrian Richards, Economic Assessment - Office for National Statistics

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Overview

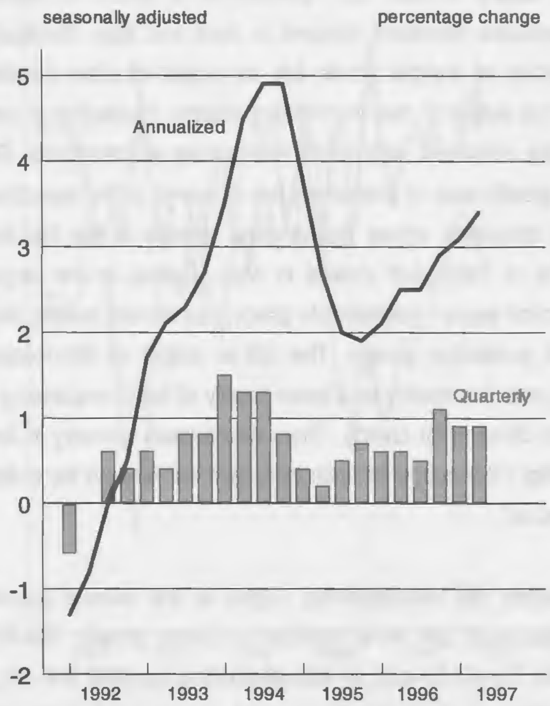
The rising trend in GDP growth continued into the second quarter of 1997. Preliminary estimates showed GDP growth remaining stable in the second quarter, driven by strong output in the service sector, but held back by subdued production output. The latest strong retail sales, acceleration in consumer credit demand, and high level of consumer confidence indicate that consumers' expenditure has continued to grow strongly in the second quarter. Despite the reduction in spare capacity in the labour market, unemployment continued to fall and growth in service sector activity increased employment. Headline inflation in the economy edged higher as mortgage interest payments increased following the recent rises in the interest rate. However, underlying costs, shown by prices of materials and fuels, continued to fall. Factory gate prices moderated, and labour costs, shown by average earnings, fell back despite the increasing claims on labour resources and strong growth in the service sector. Despite the continued strength of sterling, the UK's world trade position remained favourable as exports of goods grew more strongly than imports, resulting in a narrowing of the balance of trade in goods. However, latest trade data for the second quarter shows a deterioration in the UK's trade position with non-EU countries, as the balance of trade widened and import growth was significantly stronger than export growth.

GDP Activity

1. Preliminary estimates show growth in **GDP at constant factor cost** (including oil and gas extraction) remained stable at 0.9% in the second quarter of 1997, unchanged from the first quarter of 1997. Between 1996 Q2 and 1997 Q2, GDP grew by 3.4%, the highest growth on this basis for 2 years. The rising trend in GDP is illustrated in chart 1. Excluding oil and gas extraction, GDP grew by 1.0% in the second quarter and by 3.6% between 1996 Q2 and 1997 Q2. The pattern of growth of supply continued, with a strong service sector driving GDP growth, at a time when production output remained subdued.

Chart 1

Gross domestic product at constant factor cost



Output

2. A strong **service sector** continued to drive output growth in the second quarter. Output of the service industries grew by 1.3% (unchanged from the first quarter) compared with significantly weaker production, which grew only slightly in the second quarter. Growth within services was widespread across all industries. Business services and finance continued to show the strongest growth, with business services growing more strongly than finance. Growth was also robust throughout all categories of transport, storage and communication, and distribution, hotels and catering. Growth in other output components remained relatively subdued between 1997 Q1 and 1997 Q2. **Manufacturing** output was broadly flat, **agricultural** output showed little change, and growth in **construction** moderated following the recent recovery. Overall **production** grew slightly in the second quarter, as a fall in oil and gas extraction was offset by growth in energy supply.

3. Growth in **production** in the three months to May fell, although manufacturing output grew slightly. Manufacturing output rose by 0.2% in the three months to May compared with the three months to February, but production growth was held back by a sharp fall in oil & gas extraction and a lesser fall in the output of the electricity, gas and water supply industries. During May, oil and gas extraction fell significantly due to the early onset of summer maintenance. Output of energy recovered from weak supply in the first quarter as a return to normal temperatures increased demand in April and May. Sectorally, production of durable goods fell, as output of other durables rose, but output of cars decelerated sharply. Production of non-durables stabilised, with slight falls across all categories. The main growth area of production has occurred in the investment goods industries, where output grew strongly in the first four months of 1997, but slowed in May. Output in the largest production sector - intermediate goods, has slowed, holding back overall production growth. The fall in output of intermediate goods was due mainly to a lower supply of fuels, responding to weaker demand for energy. There was a small recovery in April and May - the supply of fuels increased as demand for energy "picked up".

4. Despite flat manufacturing output in the second quarter, manufacturers' are more confident of future growth. The CBI Monthly Trends Enquiry in **manufacturing** reported the output expectations balance in the next 4 months, not seasonally adjusted, rising from 13% in June to 21% in July. Manufacturers continue to report falling export orders, despite the latest trade data showing strong growth in UK exports. The CBI export orders balance, not seasonally adjusted, deteriorated sharply from -20% in June to -29% in July.

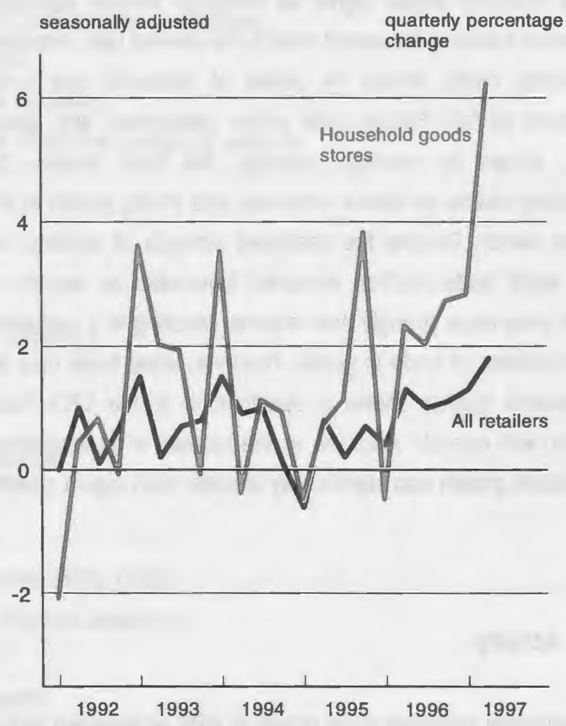
5. Despite a small rise in orders, demand for construction decelerated in the three months to May. The volume of new **construction orders** in Great Britain, seasonally adjusted, rose by 1% in the three months to May compared with the three months to Febraury. Over this period, a sharp rise in demand for public housing and housing association orders and lesser rises for private commercial orders and public non-housing were stronger than a persistent fall in demand for private housing.

Domestic demand

6. Indications of continued acceleration in consumer spending are supported by high **consumer confidence**. The EC/Gfk consumer confidence index remained unchanged at a balance of +7 in July, the highest level since July 1988.

7. The latest retail sales figures suggest the growth in consumer spending remains strong, with acceleration in particular stores. The volume of **retail sales** was 1.8% higher in the second quarter of 1997 than in the first quarter of 1997, and 5.3% up on the same period a year ago. Sales rose most sharply in household goods stores, with a sharp rise in sales during June. The strength of growth in household goods stores is evident in chart 2. Evidence from retailers suggests sales were boosted in June from increased spending originating from recipients of building society windfalls. The magnitude of "windfall spending" in June is difficult to quantify, but is estimated to be up to £150 million. Sales also grew strongly, but to a lesser extent, in textile, clothing and footwear stores. There were upward revisions to the all retail sales index in April and May 1997, and a downward revision to June 1996, confirming the underlying trend in sales has accelerated.

Chart 2
Volume of retail sales



8. Demand for personal borrowing accelerated in the second quarter of 1997. Total **net personal borrowing**, seasonally adjusted, was £9.4 billion in the second quarter, compared to £8.7 billion in the first quarter. Strengthening consumer demand is indicated by **net consumer credit,** (seasonally adjusted), which accelerated sharply to £3.5 billion from £2.9 billion over this period, as a result of strong credit demand in May and June, whilst **net borrowing secured on dwellings**, seasonally adjusted, rose to £6 billion from £5.8 billion.

External demand

9. The UK's world trade position improved during the three months to May as the deficit on **the balance of UK trade in goods** narrowed to £2.2 billion from £2.3 billion in the three months to February. UK's trade position with the European Union appeared even more favourable as the deficit on the balance of trade in goods with the EU narrowed to £0.5 billion in the three months to May from £0.9 billion in the three months to February, due to a broadly neutral balance in March and a small surplus in May. Over this period, the volume of total UK world **exports of goods**, including oil and erratics, rose strongly by 2.6%, driven by continued growth of semi-manufactures and finished manufactures, and boosted by a "pick-up" in exports of fuels and food, beverages and tobacco. **Imports of goods** including oil and erratics, rose by 2.2%, boosted by rising imports of precious stones and silver, and a sharp increase in imports of fuel, both of which occurred in April. The underlying trade position appears stronger. In the three months to May, the **volume of total exports of goods, excluding oil and erratics**, rose strongly by 2.7%. On the same basis **imports of goods** increased by only 0.6%. Exports recovered in April, and remained strong in May, while import growth also recovered in April, but fell back in May.

10. Trade **prices** continued to edge downwards in May due to the persistent strength of sterling, however, the pace of the fall has stabilised. Export and import prices of goods excluding oil and erratics, not seasonally adjusted, fell by 0.5% and 0.4% respectively in the three months to May. The downward trend in prices has clearly decelerated, suggesting exporters are no longer fully compensating for the rise in sterling.

11. As shown in chart 3, the UK's trade position with non-EU countries deteriorated between 1997 Q1 and 1997 Q2, as more timely data on **trade with non-EU countries** showed the deficit widening to £1.7 billion in the second quarter of 1997 from £1.5 billion in the first quarter of 1997, and imports of goods growing significantly more strongly than exports of goods. Although **export volume growth** of goods grew strongly over the period, **import growth** "picked up" sharply, as import volumes were consistently higher than exports in each month during the second quarter. The underlying trade position shows a lesser divergence in growth. In the second quarter, **export volumes, excluding oil and erratics** grew strongly by 5.2% compared with the first quarter. On the same basis **import volumes**, grew even more strongly, by 7.2%, as seen in chart 4. Prices of both non-EU exports and non-EU imports remained stable, confirming that sterling has strengthened against mainly EU currencies, but remained relatively stable against the US dollar and other non-EU currencies. This suggests the "pick up" in imports from non-EU countries is driven by strong demand in the UK economy.

Chart 3
UK balance of trade

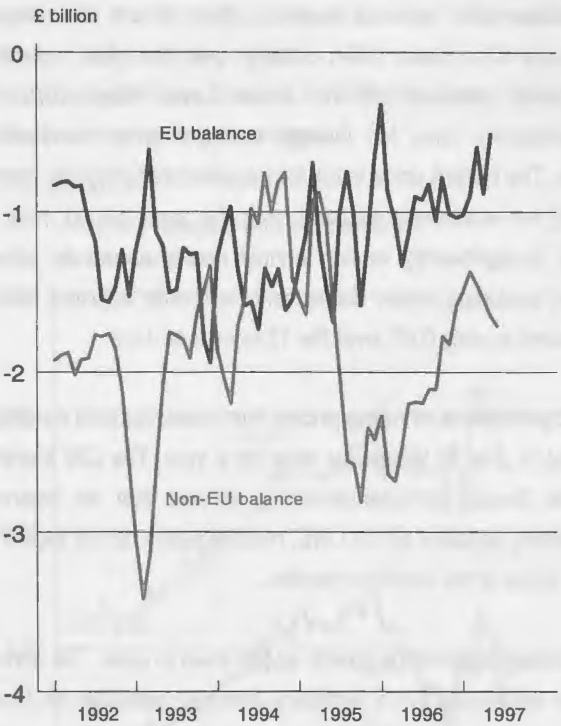
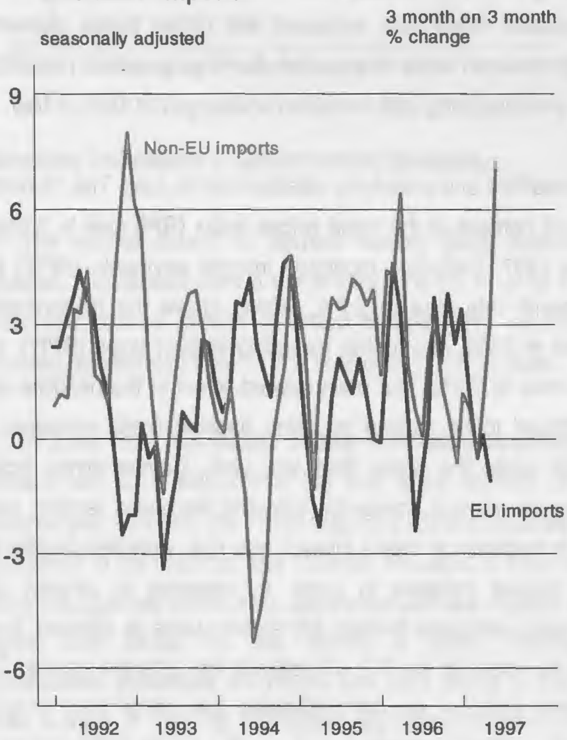


Chart 4
Volume of imports



Prices and wages

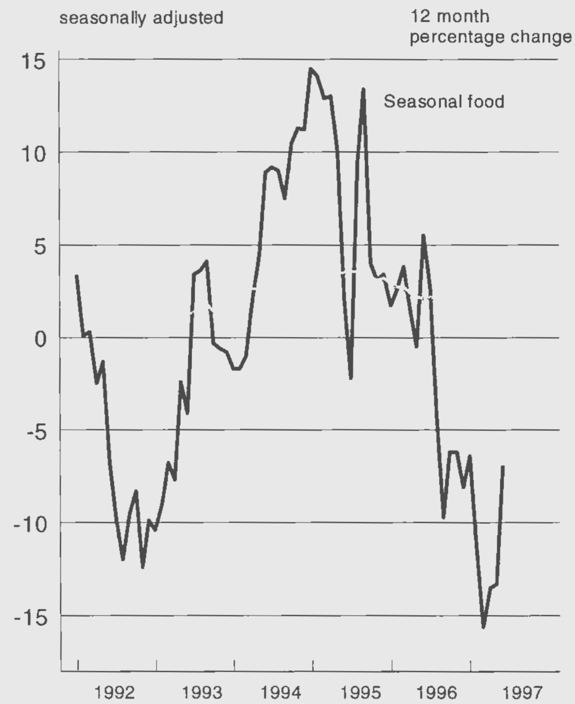
12. Despite a small rise in the annual growth of producer prices in June, falling prices of materials and fuels continue to moderate already historically low factory gate prices growth. The 12 month rate of change in **input prices** (all manufacturing), seasonally adjusted, rose to deflation of 8.4%. Prices of chemicals, other imported materials, crude oil and domestically produced food have fallen sharply over the year, exerting downward pressure on the index. Lower input costs to manufacturers have fed through to lower growth in product prices. The **output price** index for manufactured products (home sales), not seasonally adjusted, over the same period, rose to 1.1%. A significantly weaker annual rise is shown by output prices, excluding excise duties, and seasonally adjusted, which increased by only 0.5% over the 12 months to June.

13. **Expectations of rising prices** from manufacturers remained neutral in July, at the lowest level for a year. The CBI Monthly Trends Enquiry for manufacturing showed that on balance, seasonally adjusted by the ONS, manufacturers do not expect to raise prices in the next four months.

14. Underlying earnings growth edged down in June. The annual rise in underlying whole economy **average earnings** for Great Britain in May was 4¼%, down ¼ percentage point from April. Service sector earnings growth fell to 4½%, after previously peaking at 5% in February 1997. There is no longer evidence of an upward effect from increased and higher bonus payments which occurred in the first quarter. Earnings growth in production and manufacturing both remained unchanged at 4¼% in May.

15. Headline and underlying inflation rose in June. The 12-month rate of increase of the **retail prices** index **(RPI)** rose to 2.9% in June 1997. Excluding mortgage interest payments (RPIX) the 12-month rate rose to 2.7%, edging above the government's target of 2.5%, and further excluding indirect taxes (RPIY), the rate rose to 2.2%. The main upward effect in the headline rate continued to be caused by rising housing costs compared to stable costs the same time last year. Comparatively higher mortgage interest payments, following increased lending rates set in response to May's interest rate rise, were responsible for the relative increase in costs. In response to interest rate changes, mortgage lenders adjust their rates at different times and the effect on the RPI will spillover into different months. The upward pressure on the underlying rate came from irregular effects - sharp changes in the weather led to higher prices of seasonal food in June compared with a year earlier, and last year's petrol price wars resulted in higher petrol prices compared with a year ago. Chart 5 shows the effect of seasonal food prices on the overall index. The annual growth differential between goods and services narrowed in May, but service sector inflation still remains significantly higher than goods. Annual growth in the price of goods rose to 2.0% in May, and growth of prices for services fell to 3.2%. An analysis of the impact of the budget changes on the RPI, follows this article.

Chart 5
Measures of price change



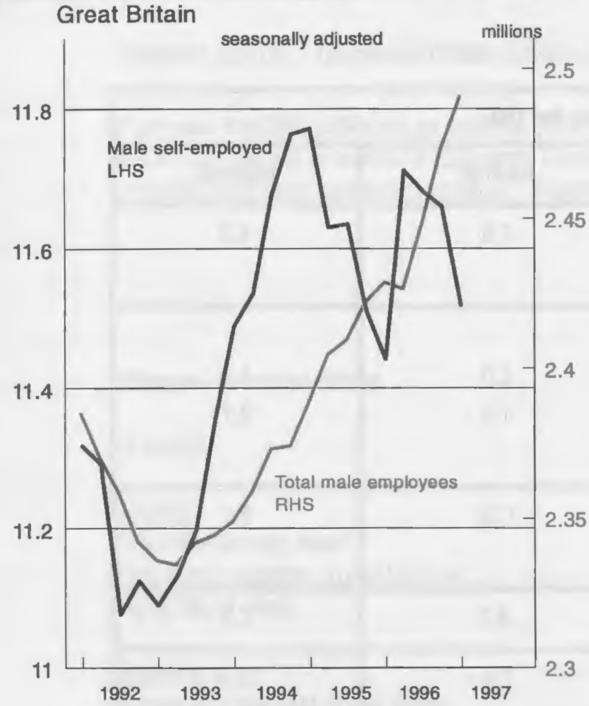
Labour Market

16. The latest employment data confirms demand for labour still remains strong. The Labour Force Survey's total **employment** in Great Britain, seasonally adjusted, increased by 91,000 between Winter 1996/7 (December to February) and Spring 1997 (March to May) and by 431,000 between Spring 1996 and Spring 1997. Growth in employment between Winter and Spring decelerated from growth of 134,000 between Autumn and Winter. The rise between Winter and Spring, was split proportionally between men and women, although male employment was substantially dampened by a large fall in the number of self-employed men, as shown in chart 6. The fall in self-employed follows changes to self-employed status by the Inland Revenue. Between Spring 1996 and Spring 1997, the increase in total employment was concentrated in services, with the strongest rises in banking, finance and insurance, and distribution hotels and restaurants. The strength of demand for labour was confirmed by the increase in workforce in employment in GB, seasonally adjusted,

which rose by 104,000 between 1996 Q4 and 1997 Q1 and by 342,000 between 1996 Q1 and 1997 Q1.

Chart 6

Labour Force Survey male employment in Great Britain



17. Despite the lack of growth in manufacturing output, manufacturers increased **employment** by 11,000 in Great Britain in the three months to May, and by 8,000 over the year. Employment in the rest of the production industries rose by 15,000 in the three months to May and by 11,000 over the year.

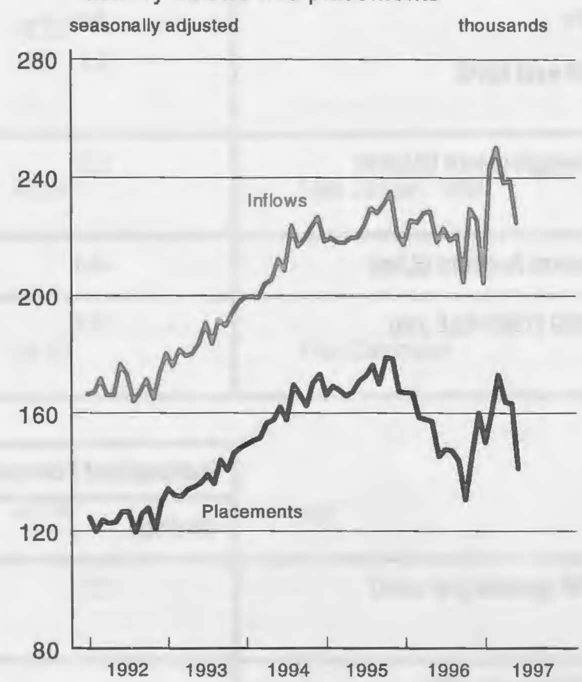
18. The falling trend in unemployment is illustrated by the latest Labour Force Survey and claimant unemployment. **ILO unemployment** in Great Britain fell by 74,000 between Winter 1996/7 and Spring 1997, and by 285,000 between Spring 1996 and Spring 1997. This compares with falls of 106,800 and 507,500 in the claimant count (Great Britain) over the equivalent periods.

19. **UK claimant unemployment**, seasonally adjusted, fell in June by 36,500 - the sixteenth consecutive monthly fall. The fall is no longer exaggerated by the Job Seekers' Allowance (JSA) implementation. The number of unemployed on the claimant count is now at its lowest level since April 1990 - 1.6 million, or 5.7% of the workforce. Despite difficulties in assessing the trend in unemployment due to the impact of the JSA, evidence from the October 1996 to June 1997 shows an acceleration in trend from the rate of 15,000 to 20,000 estimated in October 1996, to 20,000 to 35,000.

20. The stock of vacancies rose sharply in June to reach a record high, indicating the demand for labour remains strong. **Unfilled vacancies at jobcentres** in the UK, seasonally adjusted, rose in June to reach a total of 282,400. In the second quarter, the average monthly rise was 2,400 compared with 3,000 in the second quarter, suggesting the upward trend has continued. As illustrated in chart 7, the supply of vacancies (or inflows) fell between May and June, and placements, an indicator of the supply of labour, fell sharply. Stocks were overestimated between the start of 1996 until March 1997 due to difficulties in registering placements.

Chart 7

Vacancy inflows and placements



Monetary indicators & Government finances

21. The annual growth of **narrow money (M0)**, seasonally adjusted, accelerated from 6.1% in May to 6.3% in June 1997. Meanwhile, annual growth of **broad money (M4)**, seasonally adjusted, accelerated from 11.4% in May to 11.7% in June.

22. In June 1997, the **public sector borrowing requirement (PSBR)** was £4.8 billion. For the first three months of the financial year 1997-98, the PSBR was £8.5 billion compared with £9.9 billion in the financial year 1996-97. Receipts of income tax remained relatively low in June, but corporation tax receipts were higher than usual for the month of June. **Excluding privatization proceeds** the PSBR was £9.6 billion in the first three months of 1997-98, compared with £11.3 billion in 1996 97. The PSBR in May was revised downwards from £4 billion to £3.7 billion.

Forecast for the UK Economy

A comparison of independent forecasts, July 1997.

The tables below are extracted from HM Treasury's "FORECASTS FOR THE UK ECONOMY" and summarise the average and range of independent forecasts for 1997 and 1998, updated monthly.

	Independent Forecasts for 1997		
	Average	Lowest	Highest
GDP growth (per cent)	3.3	2.6	4.3
Inflation rate (Q4)			
- RPI	3.0	2.0	4.6
- RPI excl MIPS	2.4	1.9	3.7
Unemployment (Q4,mn)	1.51	1.30	1.7
Current Account (£,bn)	-3.0	-9.2	2.3
PSBR (1997-98,£ ,bn)	13.5	7.0	21.4

	Independent Forecasts for 1998		
	Average	Lowest	Highest
GDP growth (per cent)	2.7	1.8	4.2
Inflation rate (Q4)			
- RPI	3.3	2.1	4.6
- RPI excl MIPS	3.0	2.0	4.3
Unemployment (Q4, mn)	1.38	0.96	1.61
Current Account (£,bn)	-8.7	-16.4	0.2
PSBR (1998-99,£,bn)	8.2	2.0	18.7

NOTE: "FORECASTS FOR THE UK ECONOMY" gives more detailed forecasts, covering 24 variables and is published monthly by HM Treasury, available on annual subscription, price £75. Subscription enquiries should be addressed to Miss Jehal, Publishing Unit, Room 53a, HM Treasury, Parliament Street, London SW1P 3AG (0171 270 5607).

Effects on the RPI of changes announced in July 1997 Budget

By Paul Osmon and Jon McGinty, Consumer Prices and General Inflation Division - Office for National Statistics

Address: D2/15, 1 Drummond Gate, London, SW1V 2QQ Tel: 0171 533 5850

Each year the ONS publishes an analysis of the effects on the RPI of changes in the budget. This year we have published this on the Internet as well as in Economic Trends to allow rapid and widespread dissemination of the analysis. We intend to do this after each budget in the future. The Internet address for this article is http://www.emap.com/ons/public/rpi.htm

	Percentage points effect on 1-month change in all items RPI	Timing of effect
Changes to excise duties	**+0.72**	
of which:		
Alcohol "3% inflation-only rises" (19p bottle of spirits, 1p pint of beer, 4p bottle of wine)	+0.24	from January 1998
Tobacco Duties up 5 per cent in real terms, i.e. 19 pence on a packet of 20 cigarettes	+0.22	from December
Petrol Road fuel duties up 6 per cent in real terms, i.e. 4 pence per litre on petrol and DERV (18 pence per gallon)	+0.24	July
Vehicle excise duty "broadly in line with inflation" (presumably up £5 to £150)	+0.02	December
Other:	**+0.07**	
VAT on fuel Down from 8 per cent to 5 per cent	-0.11	from September
Gas Levy Abolition of levy (cut bills by 2%)	-0.03	from April 1998
Mortgage tax relief Down from 15 per cent to 10 per cent	+0.21	April 1998

[Increase in stamp duty from 1% to 1.5% or 2% for property transactions over £250,000 or £500,000 respectively: no effect on the RPI since this item is not included in the basket. Similarly, withdrawal of tax relief for private medical insurance for the over-60s will not affect the RPI. The 'windfall tax' has been assumed to have no effect on the RPI.]

Note that these estimates assume that the changes are passed on immediately and in full to consumers.

Comparison between Budget measures in 1996 and 1997

	Percentage points effect on one month change in all items Retail Prices Index	
	Total effect of Nov 1996 Budget	Total effect of July 1997 Budget
Change to excise duties	+0.36	+0.72
Change to insurance premium tax	+0.03	---
Change to VAT	---	-0.11
Abolition of gas levy	---	-0.03
Change to mortgage tax relief	---	+0.21
Total effect of Budget measures	**+0.39**	**+0.79**

Effect on 12-month rate

The overall effect of this year's Budget compared to last year's is estimated to be to increase the 12-month rate by around 0.4 percentage points by May 1998.

The following table shows the likely timing of effects on the RPI 12-month rate, assuming all announced changes are passed on immediately and in full to consumers. In practice, this is unlikely: changes in Road fuel and Vehicle Excise Duties usually affect the index immediately, whilst tobacco and alcohol duties will affect the index over a period of several months, depending on pre-Budget stock levels.

Timing:	Cause	Effect	Cumulative effect
July 1997	Road fuel (Petrol) duties	+0.24	+0.24
September 1997	VAT on fuel	-0.11	+0.13
December 1997	Tobacco and VED duties this year	+0.24	
	Dropping out of last year's effects	-0.36	+0.01
January 1998	Alcohol duties	+0.24	+0.25
April 1998	Abolition of Gas levy	-0.03	
	MIRAS reduction	+0.21	
	Dropping out of last year's IPT rise	-0.03	+0.40

Effect of Budget on the Tax and Prices Index (TPI)

No changes to direct taxation were announced, so the TPI and RPI annual rates will continue to move broadly in line with each other. The next Budget will be in the spring of 1998.

INTERNATIONAL ECONOMIC INDICATORS - AUGUST 1997

By Adrian Richards, Economic Assessment - Office for National Statistics

Overview

GDP growth remained robust in the United Kingdom and the United States. Recoveries remained weak in Europe, with the exception of Germany, but strengthened further in Japan. Growth in industrial production was strong in the United States and Japan, but erratic elsewhere. There were no strong movements in either unemployment figures or consumer price inflation across the G7 countries.

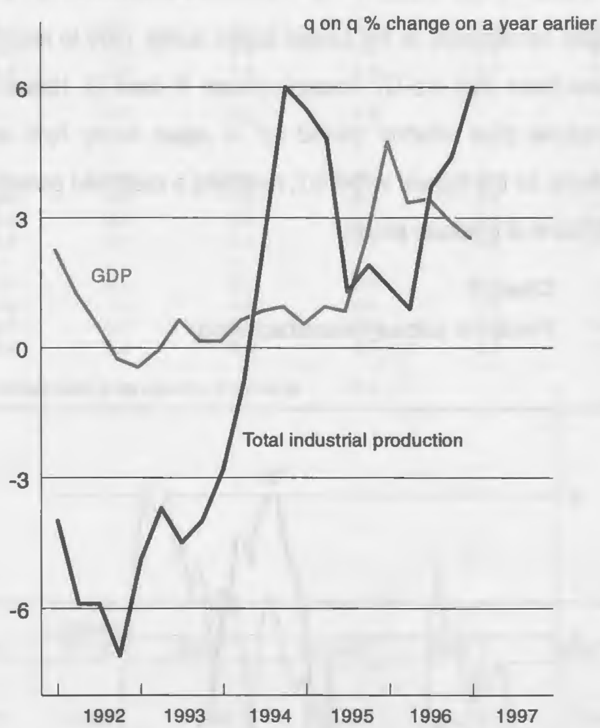
Activity

Latest estimates of **gross domestic product** (GDP) at constant market prices show that growth moderated in Europe, except Germany, but accelerated in the United States and Japan. In Germany, growth in the first quarter of 1997 rose from 0.1% in the fourth quarter to 0.4%, despite weak domestic demand. Meanwhile the French economy continued to grow at a modest rate, up 0.2%. The recovery in France has been erratic, which is highlighted by the expenditure components of demand. Investment fell back in the first quarter whereas consumers' expenditure bounced back from a fall in the previous quarter. In the United States, growth accelerated to 1.4%, with strong growth in consumers' expenditure and investment. The recovery in Japan also accelerated from 0.9% between the third and fourth quarters of 1996 to 1.6% between the fourth quarter of 1996 and the first of 1997. Consumer expenditure was erratic, and was combined with a fall in investment in the first quarter of 1997, and some evidence of a rise in exports in the second quarter.

In all countries except the United Kingdom, **industrial production** has shown strong growth recently. In the US, production was up 3.8% on the previous quarter in the second quarter of 1997. In France and Japan, there were quite considerable upturns in the latest month. As chart 1 shows, industrial production in Japan has been running ahead of GDP growth.

Chart 1

Japan GDP at constant market prices and total Industrial Production



Demand

Latest **retail sales** data indicate a strengthening in consumer demand in the major countries. Sales expanded rapidly in Japan between 1996 Q4 and 1997 Q1, in anticipation of a rise in sales tax in April. Latest monthly data shows sales falling back sharply in the latter month. There was a strong "pick up" in retail sales in the United States over the period. In the European Union retail sales grew strongly in the first quarter, even ahead of the UK, where strong retail sales continued into the second quarter.

Inflation

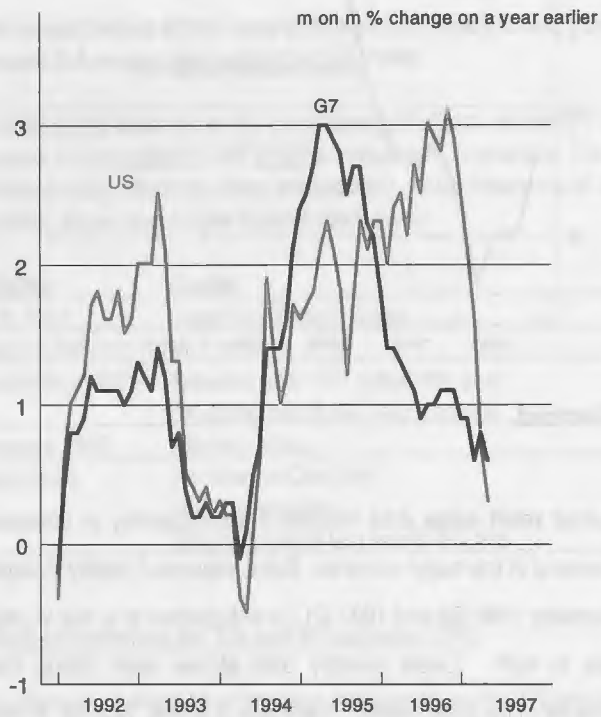
In the latest month **consumer price inflation** has moved by less than 0.2 percentage points in all countries except the United

Kingdom, Canada and Italy. Despite a small rise in June, consumer price inflation in the United States remains at historically low levels. Between 1997 Q1 and 1997 Q2, price growth fell in G7 countries, except Germany, where consumer price inflation edged higher, and the UK, where inflation remained stable.

Producer price inflation has moderated across the EU, and fallen considerably in the United States during 1996 to reach a level lower than the G7 average (shown in chart 2). However, producer price inflation "picked up" in Japan during April and May to be the highest in the G7, reversing a sustained period of deflation of producer prices.

Chart 2

Producer prices (manufacturing)



Labour market

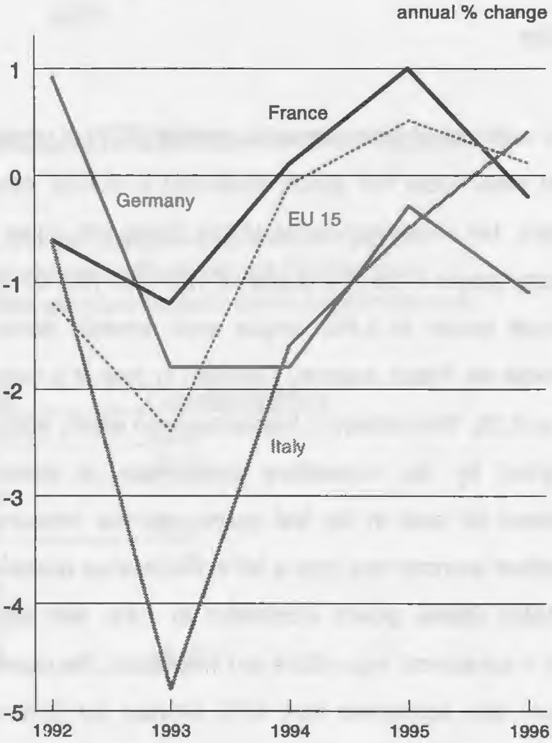
New information on **standardised unemployment** rates reveal further growth in unemployment in most G7 countries, but only in Germany and Japan has the movement been of more than 0.1 percentage point between April and May. In the United States, unemployment continued to fluctuate and rose slightly in June to 5%. It continued on its downward trend in the United Kingdom in May, reaching 6.9% of the workforce.

Average earnings growth in the 12 months to May remained constant in Japan following a rebound from a fall in March and rebounded slightly in the United States following a sharp fall in April. Earnings growth fell in Italy, Canada and the United Kingdom in April.

As chart 3 shows, **total employment** fell further in the EU between the fourth quarter of 1996 and the first quarter of 1997, with sharp falls in Germany and France. Employment in Germany has been affected by cold weather which has reduced employment in the construction sector.

Chart 3

Total employment



Notes

1. The series presented here are taken from the OECD's Main Economic Indicators, except for the United Kingdom. The series shown are for each of the G7 economies and for the European Communities (EC) and OECD countries in aggregate. Data for unified Germany is added to the article as they become available. Footnotes to the tables explain the commencement or otherwise of the data.
2. Comparisons of indicators over the same period should be treated with caution as the length and timing of these cycles varies across countries.

1 Gross domestic product at constant market prices

	United Kingdom	Germany[1]	France	Italy	EU	United States	Japan[2]	Canada	Major 7	OECD
Percentage change on a year earlier										
	ILFX	ILFY	ILFZ	ILGA	ILGB	ILGC	ILGD	ILGE	ILGF	ILGG
1985	3.8	2.3	1.9	2.6	2.6	3.7	4.4	4.8	3.5	3.4
1990	0.4	5.9	2.5	2.2	3.0	1.2	5.1	–0.2	2.4	2.6
1991	–2.0	12.5	0.8	1.1	3.0	–0.9	3.8	–1.8	1.3	1.3
1992	–0.5	1.8	1.2	0.6	0.9	2.7	1.0	0.8	1.7	1.8
1993	2.1	–1.1	–1.3	–1.2	–0.5	2.3	0.3	2.2	1.0	1.0
1994	3.8	2.9	2.8	2.2	2.9	3.5	0.6	4.1	2.8	2.8
1995	2.5	2.0	2.1	2.9	2.5	2.0	1.4	2.3	2.0	1.9
1996	2.1	1.4	1.5	0.7	1.6	2.4	3.5	1.5	2.3	2.5
1996 Q2	1.9	1.1	1.0	0.7	1.4	2.7	3.4	1.2	2.3	2.5
Q3	2.0	1.8	1.6	0.6	1.8	2.2	3.5	1.8	2.2	2.5
Q4	2.6	2.2	2.1	0.1	2.0	3.1	3.0	2.3	2.7	2.9
1997 Q1	3.0	2.8	1.0	..	..	4.1	2.6	2.8	..	..
Percentage change, latest quarter on previous quarter										
	ILGH	ILGI	ILGJ	ILGK	ILGL	ILGM	ILGN	ILGO	ILGP	ILGQ
1995 Q2	0.4	0.8	0.1	0.1	0.4	0.2	1.0	–0.3	0.4	0.2
Q3	0.4	–	0.2	0.6	0.3	0.9	0.3	0.3	0.6	0.6
Q4	0.6	–0.3	–0.3	0.3	0.1	0.1	1.3	0.2	0.3	0.3
1996 Q1	0.5	–0.1	1.3	0.2	0.5	0.5	2.0	0.3	0.7	0.9
Q2	0.4	1.5	–0.2	–0.4	0.5	1.1	–0.3	0.4	0.6	0.7
Q3	0.4	0.7	0.8	0.5	0.7	0.5	0.3	0.8	0.5	0.6
Q4	1.1	0.1	0.2	–0.2	0.4	0.9	0.9	0.7	0.7	0.7
1997 Q1	0.9	0.4	0.2	..	..	1.4	1.6	0.8	..	..

1 Data available for unified Germany since 1991

2 Total industrial production

	United Kingdom	Germany[1]	France	Italy	EU	United States	Japan[2]	Canada[3]	Major 7	OECD[4]
Percentage change on a year earlier										
	ILGR	ILGS	ILGT	ILGU	ILGV	ILGW	ILGX	ILGY	ILGZ	ILHA
1985	5.6	5.0	0.7	1.2	3.3	1.6	3.6	5.6	2.8	3.0
1990	–0.3	5.2	1.5	0.2	2.1	–	4.3	–3.3	1.5	1.7
1991	–3.7	3.7	0.3	–0.9	–0.2	–1.8	1.9	–4.2	–0.4	–0.4
1992	–0.1	–2.6	–0.1	–0.2	–1.2	3.4	–5.7	1.1	–0.3	–0.2
1993	2.9	–7.2	–2.7	–2.4	–3.2	3.5	–4.3	4.5	–0.5	–0.5
1994	5.4	3.6	3.8	5.2	4.7	5.0	1.2	6.9	4.1	4.4
1995	2.1	2.0	2.1	5.4	3.7	3.3	3.3	3.4	3.2	3.0
1996	1.1	0.5	0.6	–1.7	0.5	2.7	2.8	1.7	1.8	2.1
1997 Q1	1.1	3.6	1.0	–1.2	1.9	4.6	6.0	3.7	3.9	3.8
Q2	..	..	..	..	..	4.1	..	..	..	..
Percentage change, latest quarter on previous quarter										
	ILHB	ILHC	ILHD	ILHE	ILHF	ILHG	ILHH	ILHI	ILHJ	ILHK
1995 Q3	0.8	–0.9	0.4	1.5	0.1	0.7	–1.3	0.3	0.2	0.2
Q4	–0.1	–1.3	–2.0	0.9	–0.3	0.3	2.0	–0.3	0.2	0.4
1996 Q1	0.2	0.5	1.1	–2.4	–0.3	0.4	0.7	0.6	0.3	0.4
Q2	0.3	1.0	0.6	–0.5	0.6	1.6	–0.4	0.2	0.8	0.7
Q3	0.7	1.2	1.0	–0.8	0.8	0.8	1.8	2.0	1.0	1.1
Q4	0.4	–0.3	–0.6	–1.0	–0.1	1.1	2.2	0.6	0.8	0.8
1997 Q1	–0.2	1.6	–	1.0	0.7	1.1	2.3	0.9	1.2	1.1
Q2	..	..	..	..	..	3.8	..	..	..	..
Percentage change: latest month on previous month										
	ILKB	ILKC	ILKD	ILKE	ILKF	ILKG	ILKH	ILKI	ILKJ	ILKK
1997 Apr	0.9	0.6	3.0	..	2.2	0.4	–0.3	1.4	0.5	1.0
May	–0.9	..	..	..	..	0.2	3.6	..	..	..
Jun	..	..	..	..	..	0.3	..	..	..	..

1 Data available for Unified Germany from 1991
2 Not adjusted for unequal number of working days in a month
3 GDP in industry at factor cost and 1986 prices
4 Some countries excluded from area total

3 Retail Sales (volume)

	United Kingdom	Germany	France	Italy	EU	United States	Japan	Canada	Major 7	OECD
Percentage change on a year earlier										
	ILHL	ILHM	ILHN	ILHO	ILHP	ILHQ	ILHR	ILHS	ILHT	ILHU
1985	..	0.6	0.9	4.3	2.3	4.4	1.5	7.5	3.4	3.3
1990	0.8	8.5	0.6	–1.7	2.5	0.7	5.3	–2.2	1.7	1.9
1991	–1.5	5.7	0.1	–3.4	0.8	–2.4	2.0	–10.4	–1.0	–0.8
1992	0.8	–2.0	0.2	5.2	–0.1	3.4	–2.9	1.3	1.3	1.1
1993	3.0	–4.2	–	–2.4	–1.8	5.4	–4.8	3.0	1.8	1.0
1994	3.6	–1.3	0.5	–5.2	0.1	4.4	4.0	8.1	2.9	3.7
1995	1.1	1.0	–0.6	–6.4	–0.2	3.6	1.0	0.4	1.8	1.0
1996	3.0	–1.0	–0.2	..	–0.8	4.3	1.0	0.5	1.9	1.9
1997 Q1	4.7	..	–1.6	..	0.4	3.3	4.8	3.3	2.5	2.2
Q2	5.3	..	..	..	..	..	..	..	..	..
Percentage change, latest quarter on previous quarter										
	ILHV	ILHW	ILHX	ILHY	ILHZ	ILIA	ILIB	ILIC	ILID	ILIE
1995 Q3	0.2	..	1.2	2.0	0.7	1.3	1.2	0.9	1.1	1.0
Q4	0.7	..	–3.8	–9.9	–2.7	0.6	–0.6	–0.8	–0.8	–0.7
1996 Q1	0.5	1.0	4.1	..	1.6	0.8	2.6	0.4	1.4	1.2
Q2	1.2	1.0	–2.6	..	0.4	–0.6	–2.1	–0.6	–0.3	–0.6
Q3	1.0	–	–	..	–1.0	0.6	–1.3	2.0	–	–
Q4	1.1	–3.0	1.0	..	–1.0	0.8	2.4	1.0	–	–
1997 Q1	1.3	..	–	..	2.1	2.5	6.0	1.0	2.8	2.8
Q2	1.8	..	..	..	..	..	..	..	..	..
Percentage change, latest month on previous month										
	ILKL	ILKM	ILKN	ILKO	ILKP	ILKQ	ILKR	ILKS	ILKT	ILKU
1997 Apr	0.1	..	1.0	..	..	..	–17.0	1.0	..	..
May	1.1	..	2.0	..	..	..	2.2	..	..	..
Jun	0.6	..	..	..	..	..	..	..	..	..

4 Consumer prices[1]

	United Kingdom	Germany[2]	France	Italy	EU	United States	Japan	Canada	Major 7	OECD[3]
Percentage change on a year earlier										
	FRAN	HVLL	HXAA	HYAA	HYAB	ILAA	ILAB	ILAC	ILAD	ILAE
1985	6.1	2.2	5.8	8.6	6.1	3.5	2.0	4.0	4.0	7.0
1990	9.5	2.7	3.5	6.5	5.7	5.4	3.1	4.8	5.0	6.8
1991	5.9	3.5	3.2	6.5	5.2	4.2	3.3	5.6	4.3	6.1
1992	3.7	4.0	2.4	5.3	4.5	3.0	1.6	1.5	3.1	5.0
1993	1.6	0.7	2.1	4.2	3.6	3.0	1.1	1.9	2.7	4.3
1994	2.4	2.8	1.7	3.9	3.1	2.6	0.7	0.2	2.2	4.4
1995	3.5	1.8	1.8	5.3	3.1	2.8	–	2.2	2.4	5.5
1996	2.4	1.5	2.0	3.9	2.5	3.0	0.2	1.5	2.2	4.9
1995 Q3	3.7	1.8	1.8	5.7	3.1	2.6	–0.3	2.4	2.4	5.6
Q4	3.2	1.8	1.9	5.7	3.0	2.6	–0.6	2.0	2.3	5.5
1996 Q1	2.8	1.8	2.1	5.0	2.8	2.8	–0.4	1.4	2.2	5.6
Q2	2.2	1.7	2.4	4.3	2.6	2.8	0.4	1.4	2.2	5.1
Q3	2.1	1.5	1.8	3.5	2.4	3.0	0.8	1.4	2.2	4.6
Q4	2.6	1.4	1.7	2.9	2.3	3.3	1.0	2.0	2.3	4.6
1997 Q1	2.7	2.7	1.5	2.4	2.1	2.9	0.9	2.0	2.2	4.2
Q2	2.7	1.6	0.9	1.6	1.7	2.3	..	1.7	2.0	4.2
1997 Jan	2.8	1.4	1.8	2.7	2.4	3.0	1.1	2.2	2.4	4.3
Feb	2.7	5.2	1.6	2.4	2.1	3.0	1.2	2.0	2.3	4.3
Mar	2.6	1.5	1.1	2.2	1.9	2.8	0.5	1.8	2.0	4.1
Apr	2.4	1.4	0.9	1.7	1.6	2.5	1.9	1.7	2.1	4.2
May	2.6	1.7	0.9	1.6	1.8	2.2	2.0	1.5	1.9	4.1
Jun	2.9	1.7	1.0	1.4	1.8	2.3	..	1.8	2.0	4.2

1 Components and coverage not uniform across countries
2 Data available for Unified Germany from 1991
3 OECD data includes 'higher inflation' countries (Mexico and Turkey)

5 Producer prices (manufacturing)

	United Kingdom	Germany[1]	France[2]	Italy	EU	United States	Japan	Canada	Major 7	OECD[3]
Percentage change on a year earlier										
	EUAA	ILAF	ILAG	ILAH	ILAI	ILAJ	ILAK	ILAL	ILAM	ILAN
1985	5.7	2.1	4.5	7.8	4.9	0.9	–0.8	2.8	1.9	4.9
1990	5.8	1.5	–1.1	4.2	2.4	4.9	1.6	0.3	3.4	4.7
1991	4.8	2.2	–1.2	3.3	2.2	2.2	1.1	–1.0	1.9	3.3
1992	2.3	1.6	–1.4	1.9	1.3	1.3	–0.9	0.5	0.9	2.3
1993	2.6	–	–2.6	3.8	1.3	1.3	–1.6	3.3	0.8	2.1
1994	2.3	–2.9	1.1	3.7	2.2	0.6	–1.7	5.7	0.9	3.3
1995	4.4	2.2	6.4	7.9	4.7	2.0	–0.7	8.1	2.6	7.1
1996	2.0	0.3	–2.8	1.9	0.7	2.6	–0.8	0.5	1.1	3.7
1995 Q3	5.0	2.4	6.6	8.9	5.0	1.6	–0.7	7.7	2.7	7.1
Q4	4.6	1.7	2.7	7.2	3.7	2.3	–0.7	5.8	2.4	7.2
1996 Q1	3.5	0.8	–1.2	4.8	1.9	2.3	–0.9	1.7	1.5	6.8
Q2	2.3	0.1	–3.7	1.6	0.6	2.4	–0.9	0.4	1.1	2.9
Q3	1.2	–0.1	–3.8	0.4	–0.1	2.8	–0.7	–	0.9	2.7
Q4	0.8	0.2	–3.1	0.8	0.2	2.9	–0.6	–0.1	1.1	2.3
1997 Q1	0.5	0.3	–2.3	0.9	0.3	1.8	–0.3	0.3	0.9	0.6
1997 Mar	0.5	0.3	–2.0	1.0	0.2	1.6	–0.2	0.9	0.6	0.1
Apr	0.5	0.4	–1.4	0.9	0.4	0.7	1.8	1.5	0.8	–0.6
May	0.6	0.6	..	..	0.5	0.3	1.7	0.8	0.6	–0.9
Jun	0.6	..	..	..	..	..	..	..	..	..

1 Data available for Unified Germany from 1991
2 Producer prices in intermediate goods
3 OECD includes 'higher inflation' countries (Mexico and Turkey)

6 Average wage earnings in manufacturing[1]

	United Kingdom[2]	Germany[3]	France	Italy	EU	United States	Japan	Canada	Major 7	OECD
Percentage change on a year earlier										
	ILAY	ILAO	ILAP	ILAQ	ILAR	ILAS	ILAT	ILAU	ILAV	ILAW
1985	9.1	4.0	6.1	11.2	7.1	3.8	3.3	3.7	4.5	4.5
1990	9.3	5.7	4.4	7.3	6.9	3.3	5.0	4.7	5.1	5.0
1991	8.2	6.2	4.3	9.8	7.1	3.3	3.5	4.7	4.9	4.9
1992	6.6	–3.6	3.7	5.5	5.6	2.4	1.3	3.5	3.2	3.2
1993	4.5	3.0	2.4	3.7	4.5	2.5	0.5	2.1	2.6	2.6
1994	4.8	3.4	1.8	3.4	3.8	2.8	2.3	1.6	3.0	3.0
1995	4.5	3.3	2.3	3.1	3.8	2.5	3.1	1.5	3.0	3.0
1996	4.3	..	2.8	2.4	..	3.3	2.4	2.8	..	..
1995 Q2	4.7	4.1	2.2	2.3	3.9	2.4	2.6	0.9	2.7	2.7
Q3	4.4	3.3	2.6	3.6	4.0	2.8	3.0	2.3	3.5	3.5
Q4	3.9	4.1	2.6	3.9	4.2	2.6	2.6	2.1	3.2	3.2
1996 Q1	4.4	..	2.6	3.2	..	2.7	1.9	1.7	3.3	3.3
Q2	4.1	..	2.5	2.5	..	3.5	1.3	1.6	2.8	3.0
Q3	4.1	..	2.6	2.0	..	3.5	3.5	3.9	3.4	3.7
Q4	4.4	..	3.4	1.8	..	3.6	2.8	3.9	..	..
1997 Q1	4.4	..	2.5	2.6	..	3.5	2.9	3.4	..	..
1997 Jan	4.0	..	2.7	2.7	..	2.7	2.7	3.4	..	..
Feb	4.8	..	..	2.6	..	3.4	3.5	3.8	..	..
Mar	4.5	..	..	2.6	..	4.5	2.6	3.1	..	..
Apr	4.2	..	2.5	2.4	..	2.9	3.5	2.4	3.3	..
May	..	..	..	..	..	3.1	3.5	..	..	..

1 Definitions of coverage and treatment vary among countries
2 Figures for Great Britain refer to weekly earnings; others are hourly
3 Western Germany (Federal Republic of Germany before unification)

7 Total employment [1]

	United Kingdom	Germany[2,3]	France[3]	Italy	EU	United States[3]	Japan	Canada[3]	Major 7	OECD
Percentage change on a year earlier										
	ILIF	ILIG	ILIH	ILII	ILIJ	ILIK	ILIL	ILIM	ILIN	ILIO
1985	1.1	1.0	–0.1	0.5	0.5	2.0	0.7	2.9	1.3	1.3
1990	0.6	2.6	1.0	1.4	1.6	0.5	1.9	0.7	1.2	1.1
1991	–2.9	1.9	–	1.3	–0.1	–1.0	2.0	–1.9	–0.1	–0.1
1992	–2.5	0.9	–0.6	–0.6	–1.2	1.0	1.0	–0.6	0.2	–0.2
1993	–1.0	–1.8	–1.2	–4.8	–2.4	1.0	–	1.3	–	–0.2
1994	0.8	–1.8	0.1	–1.6	–0.1	3.4	0.3	2.2	1.2	1.1
1995	0.9	–0.3	1.0	–0.5	0.5	1.4	–	1.6	0.8	0.9
1996	0.6	–1.1	–0.2	0.4	0.1	1.5	0.5	1.3	0.7	0.8
1996 Q4	0.9	–1.4	–0.4	0.2	0.2	2.1	0.9	1.4	1.0	1.1
1997 Q1	1.3	–1.5	–0.5	–0.1	0.1	2.5	1.7	1.0	1.4	1.3
Percentage change,latest quarter on quarter										
	ILIP	ILIQ	ILIR	ILIS	ILIT	ILIU	ILIV	ILIW	ILIX	ILIY
1995 Q2	–	0.4	0.4	1.6	0.8	1.2	2.9	3.5	1.6	1.5
Q3	–	0.4	0.2	1.2	0.3	0.7	0.1	2.1	0.4	0.5
Q4	0.3	0.1	–0.3	–0.7	0.1	–0.2	–1.2	–2.5	–0.5	–0.5
1996 Q1	–	–2.0	0.1	–1.3	–0.9	–1.2	–1.6	–1.8	–1.4	–1.2
Q2	–	0.5	–0.3	1.2	0.6	2.0	3.2	3.5	1.9	1.8
Q3	0.5	0.2	–0.2	1.2	0.6	1.2	0.5	2.0	0.8	0.8
Q4	0.4	–0.1	–	–0.8	–0.1	0.1	–1.0	–2.3	–0.3	–0.3
1997 Q1	0.3	–2.1	–	–1.6	–1.0	–0.8	–0.9	–2.1	–1.0	–1.0
Percentage change, latest month on previous month										
	ILKV	ILKW	ILKX	ILKY	ILKZ	ILLA	ILLB	ILLC	ILLD	ILLE
1997 Mar	..	..	..	..	..	1.0	1.1	0.8	..	..
Apr	..	..	..	..	..	0.4	–0.5	0.4	..	..
May	..	..	..	..	..	..	..	0.2	..	..

1 Not seasonally adjusted except for the United Kingdom
2 Data available for Unified Gemany from 1991
3 Excludes members of armed forces

8 Standardised unemployment rates: percentage of total labour force[1]

	United Kingdom	Germany[2]	France	Italy	EU	United States	Japan	Canada	Major 7	OECD
	GABF	GABD	GABC	GABE	GADR	GADO	GADP	GADN	GAEQ	GADQ
1985	11.2	7.1	10.3	9.6	10.5	7.1	2.6	10.5	7.2	7.9
1990	6.9	4.8	8.9	10.3	8.1	5.5	2.1	8.1	5.6	6.1
1991	8.8	4.2	9.5	9.9	8.5	6.8	2.1	10.3	6.4	6.8
1992	10.1	4.6	10.4	10.5	9.3	7.4	2.2	11.3	6.9	7.4
1993	10.4	7.9	11.7	10.2	10.9	6.8	2.5	11.2	7.2	8.0
1994	9.6	8.4	12.3	11.1	11.4	6.0	2.9	10.3	7.0	7.9
1995	8.7	8.2	11.7	12.2	11.0	5.5	3.1	9.5	6.8	7.5
1996	8.2	9.0	12.3	12.0	10.7	5.4	3.3	9.7	6.8	7.5
1995 Q2	8.8	8.1	11.7	4.1	11.0	5.6	3.1	9.5	6.8	7.6
Q3	8.7	8.2	11.6	..	11.0	5.6	3.2	9.5	6.8	7.5
Q4	8.6	8.5	11.8	..	10.9	5.5	3.3	9.4	6.8	7.5
1996 Q1	8.4	8.9	12.1	12.0	10.7	5.6	3.3	9.5	6.8	7.5
Q2	8.3	8.9	12.2	12.0	10.7	5.4	3.5	9.6	6.8	7.6
Q3	8.2	8.9	12.4	..	10.7	5.2	3.3	9.7	6.8	7.5
Q4	7.8	9.2	12.4	..	10.8	5.3	3.3	9.9	6.8	7.5
1997 Q1	7.4	9.6	12.5	..	10.8	5.3	3.3	9.6	6.8	7.5
1997 Feb	7.4	9.6	12.5	..	10.9	5.3	3.3	9.7	6.8	7.5
Mar	7.2	9.7	12.5	12.3	10.8	5.2	3.2	9.3	6.7	7.4
Apr	7.0	9.6	12.5	12.4	10.8	4.9	3.3	9.6	6.6	7.3
May	6.9	9.8	12.6	..	10.8	4.8	3.6	9.5	6.6	7.3

1 Uses an ILO based measure of those without work, currently available for work, actively seeking work or waiting to start a job already obtained
2 Data available on Unified Germany from January 1993

9 Balance of payments current account as percentage of GDP

	United Kingdom	Germany[1,2]	France	Italy	United States[1]	Japan[1]	Canada
	ILAZ	ILBA	ILBB	ILBC	ILBD	ILBE	ILBF
1985	0.6	2.7	–0.1	–0.9	–3.1	3.6	–1.3
1990	–3.4	3.1	–0.8	–1.3	–1.7	1.2	–3.8
1991	–1.4	–1.2	–0.5	–2.1	–0.1	2.1	–4.1
1992	–1.7	–1.2	–0.3	–2.3	–1.1	3.2	–3.9
1993	–1.7	–1.1	0.7	1.1	–1.6	3.1	–4.3
1994	–0.4	–0.9	0.7	1.5	–2.2	2.8	–3.3
1995	–0.4	–0.7	1.1	2.5	–2.1	2.2	–1.7
1996	–	–0.7	1.3	3.7	–2.2	1.4	–0.2
1994 Q4	–0.2	–1.3	0.7	1.8	–2.5	2.6	–1.4
1995 Q1	0.2	–	1.9	1.0	–2.3	2.5	–3.7
Q2	–0.8	–0.1	1.3	3.0	–2.5	2.2	–2.6
Q3	–0.8	–0.8	0.3	3.2	–2.1	2.3	–1.2
Q4	–0.7	–1.4	0.9	2.6	–1.7	1.9	–0.2
1996 Q1	–0.7	–0.5	1.7	2.2	–1.9	1.4	–0.7
Q2	0.4	–1.1	0.8	3.7	–2.1	1.4	0.6
Q3	–0.2	–0.5	1.4	4.7	–2.5	1.5	0.1
Q4	0.5	–0.5	1.5	3.3	–2.1	1.5	–0.8

1 Balance as percentage of GNP
2 Data available for Unified Germany from July 1990

10 World trade[1]

	Export of manufactures			Import of manufactures			Export of goods			Import of goods			World trade	
	World	OECD	Other	World	OECD	Other	World	OECD	Other	World	OECD	Other	manufact-ures	goods
Percentage change on a year earlier														
	ILIZ	ILJA	ILJB	ILJC	ILJD	ILJE	ILJF	ILJG	ILJH	ILJI	ILJJ	ILJK	ILJL	ILJM
1985	5.0	5.5	2.5	4.1	7.1	–1.9	3.9	3.9	4.9	1.0	3.5	5.6	4.5	3.7
1990	5.2	5.0	6.1	4.4	5.3	2.2	5.0	5.0	4.9	5.3	5.2	4.8	4.8	5.1
1991	3.1	2.3	6.2	4.2	3.4	6.3	3.6	3.6	3.2	4.3	3.8	3.1	3.6	3.7
1992	4.6	4.7	4.3	6.2	6.2	6.3	5.9	5.9	5.1	2.4	4.3	6.0	5.4	5.1
1993	0.9	1.9	2.8	1.1	12.0	16.9	13.8	14.9	4.0	5.0	6.0	4.6	4.6	5.3
1994	9.9	9.4	11.4	10.4	11.5	8.1	8.2	8.6	7.7	8.8	9.5	7.1	10.0	8.6
1995	7.8	8.1	6.5	7.7	8.9	5.0	7.0	7.3	5.8	6.4	7.1	5.6	7.7	6.8
1996 Q1	7.6	5.6	14.6	8.5	6.3	14.2	8.0	6.8	5.7	10.2	7.8	5.0	14.3	7.5
Q2	7.7	6.0	13.8	7.7	5.4	13.8	7.7	7.0	6.2	11.4	7.5	4.7	13.8	7.3
Q3	8.2	7.1	12.0	8.3	6.5	12.9	8.3	8.1	7.9	11.0	8.3	5.9	12.9	8.2
Percentage change, latest quarter on previous quarter														
	ILJN	ILJO	ILJP	ILJQ	ILJR	ILJS	ILJT	ILJU	ILJV	ILJW	ILJX	ILJY	ILJZ	ILKA
1995 Q1	1.2	1.6	–0.4	0.6	0.8	0.1	6.8	1.3	1.3	0.9	0.8	0.7	0.9	1.0
Q2	0.9	0.9	0.9	0.9	1.1	0.5	5.0	0.5	–0.9	0.8	0.9	0.6	0.9	0.9
Q3	2.4	1.3	6.3	2.2	1.1	5.2	3.6	1.1	4.7	1.8	0.8	4.9	2.3	1.9
Q4	1.1	1.4	0.2	1.1	1.6	–0.2	5.9	2.0	–0.1	1.0	0.8	–0.1	1.1	0.9
1996 Q1	3.0	1.9	6.6	4.0	2.4	8.3	4.6	2.0	6.3	4.0	2.4	8.3	3.5	3.6
Q2	1.0	1.3	0.2	0.2	0.2	0.1	8.3	1.0	0.2	0.5	0.7	0.2	0.6	0.6
Q3	2.9	2.3	4.7	2.8	2.2	4.3	7.1	2.7	4.3	2.5	1.9	4.1	2.9	2.8

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

RESEARCH AND EXPERIMENTAL DEVELOPMENT (R&D) STATISTICS 1995

by Peter Jones ONS

RESEARCH AND EXPERIMENTAL DEVELOPMENT (R&D) STATISTICS, 1995

List of Tables

Summary of trends

- Measuring expenditure and employment of R&D is difficult because of the subjective judgements that have to be made about the dividing line between R&D and other activities. There are discontinuities in the series arising from the interpretation of definitions, and because of changes in the actual or perceived status of organisations (Ref 1, chapter 1 details this). Some general conclusions can be drawn, but significance should not be given to small percentage changes between years.

- In 1995 Gross Domestic Expenditure on R&D (GERD) was 2.05% of GDP, a decrease on previous years (Table 2). In terms of international comparisons in 1995 the UK held its middle position amongst G7 countries and was above the EU (1.91%) average (ref 5).

- Within the UK, net expenditure funding in real terms on R&D by government peaked in 1980/81. Since then there has been a gradual downward trend (Table 4). Net government expenditure on defence R&D shows a steady decline as a percentage of the total between 1989 and 1996 (Table 6).

- Expenditure in real terms performed by the business sector peaked in 1990 in the UK. After falling in 1991, expenditure increased each year to 1993 (Table 7) and then declined slightly to 1995.

- In the government sector, spending as a percentage of regional gross domestic product is highest in the South East. In the business sector the proportion is highest in the Eastern region (Table 14).

- Within the business sector, the pharmaceuticals broad product group has the largest share of total manufacturing R&D expenditure at 19 % (Table 8).

Background

This article updates statistics published in the August 1996 edition of *Economic Trends.* Most of the figures have already been published by the Office for National Statistics, the Department of Trade and Industry (Office of Science and Technology) or the OECD (refs 1,2,4,5). Last year's article generated a great deal of interest within the R&D community and our aim is to continue to inform and stimulate debate. In addition to the usual R&D statistics this article provides some information about a Eurostat/OECD pilot survey which collected data on stocks of Human Resources in Science and Technology. The article also provides some background information about the UK's participation in the 1997 Community Innovation Survey.

The R&D statistics are consistent with OECD's Frascati Manual (ref 3) which defines Research and Experimental Development (R&D) and gives guidelines on how to measure expenditure and employment on R&D. The manual is applied throughout the OECD so it is possible to make comparisons between countries (refs 5,6,7).

R&D is defined as creative work undertaken systematically to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this knowledge to devise new applications. Care should be exercised when using R&D statistics for economic analysis. R&D can lead to the technological inventions that are necessary for a successful innovative economy. However, such inventions are not a sufficient condition for success - many other economic and social factors are important. Undue weight should not be given to the economic significance of R&D's role as a generator of inventions. On the other hand, the economic benefit of R&D is not limited to that role: R&D develops skills and techniques that are important for any economy.

Sources of information

Performers and funders of R&D are divided into four economic sectors: Government, Business, Higher Education Institutions (HEIs), and the Private Non-Profit (PNP) sector. Definitions are provided at the end of this article.

The ONS conducts an annual survey of Central Government R&D which is addressed to all Government departments. The survey collects data on expenditure and employment for outturn and planning years. Detailed recent results were published in July 1997 in OST's *Science, Engineering and Technology Statistics 1997* (SET 1997) (ref 1).

The ONS also conducts an annual survey of R&D in businesses. The 1995 survey again used a small scale sample survey to minimise burdens on contributors. The register of R&D performers is continually updated and results and detailed methodology notes can be found in the Business Monitor of 1995 (ref 2).

Statistics on expenditure and employment on R&D in Higher Education Institutions (HEIs) are based on information collected by Higher Education Funding Councils and HESA (Higher Education Statistics Agency). In 1994 a new methodology was introduced to estimate expenditure on R&D in HEIs. This was based on the allocation of various Funding Council Grants. Full details of the new methodology are contained in Chapter 1 of the SET 1997 (ref 1).

For some time ONS has been concerned about the reliability of estimates of R&D performed by the Private non-profit (PNP). For this reason in 1996 a project to improve the estimates was undertaken. An R&D filter question was included in the 1996 ONS survey of Charities (published in Economic Trends, No 517, November 1996) (ref 8). From 'yes' respondents a small sample was contacted for information which enabled overall revised estimates for 1995 to be produced. This resulted in a substantial decrease in the R&D estimates for this sector as a performer, especially in respect of that part funded by the business sector. GERD figures from 1985 have been revised to reflect the new PNP estimates established for 1995. Further investigation will be undertaken in 1997 to provide a firmer estimate for 1995 and 1996.

The Tables

Gross Domestic Expenditure on R&D (GERD) (Tables 1-3)

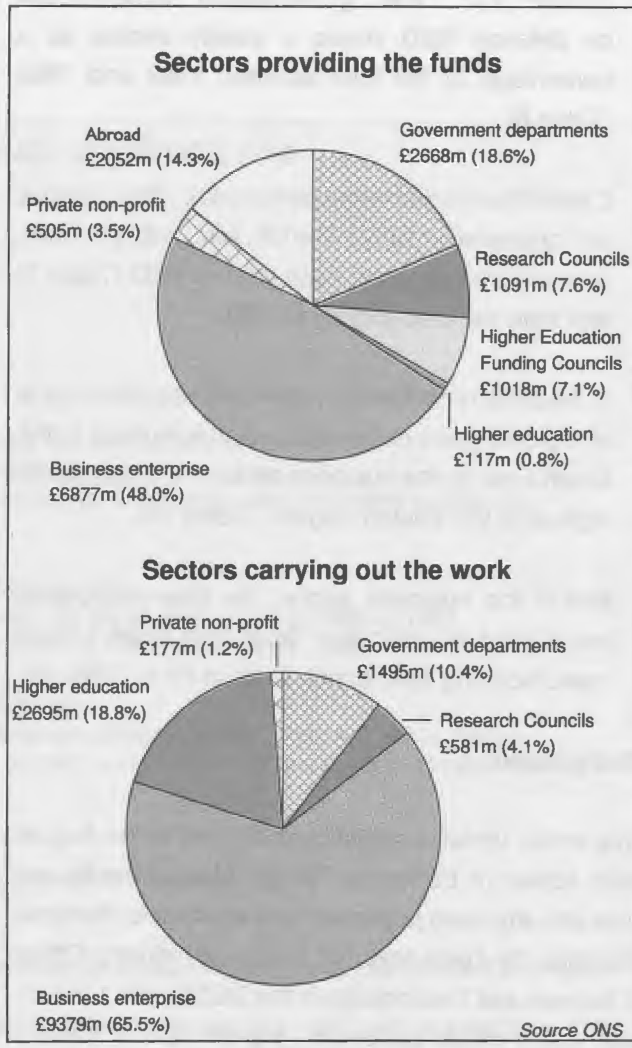
These tables show the performers and funders of R&D in the UK. Measuring expenditure on R&D performed within each sector avoids problems of omission and double counting that can arise when measuring funds provided for R&D. GERD is the sum of R&D performed in the four sectors. Tables 1 and 2 show that UK GERD in 1995 was £14.3 billion in cash terms. GERD is often quoted as a percentage of GDP when making international comparisons. In 1995 UK GERD was 2.05% of GDP, a decrease on the previous year's figure but still above the EU average of 1.91%.

Table 1 shows the interaction between R&D funders and performers. For example £9379m was spent on R&D in the business sector. Of this, £1122m was provided by the government, £1780m came from abroad and £6478m was funded by businesses from their own sources. Funds from abroad includes those from overseas parent companies, contracts for R&D projects, support for R&D provided through European Union schemes and international collaborative projects typically for aerospace or defence projects.

Figure 1 shows that the business sector is the most important sector of the economy in terms of providing funds for and carrying out R&D.

Figure 1
Gross Expenditure on R&D) in the UK, by sectors, 1995

£ million



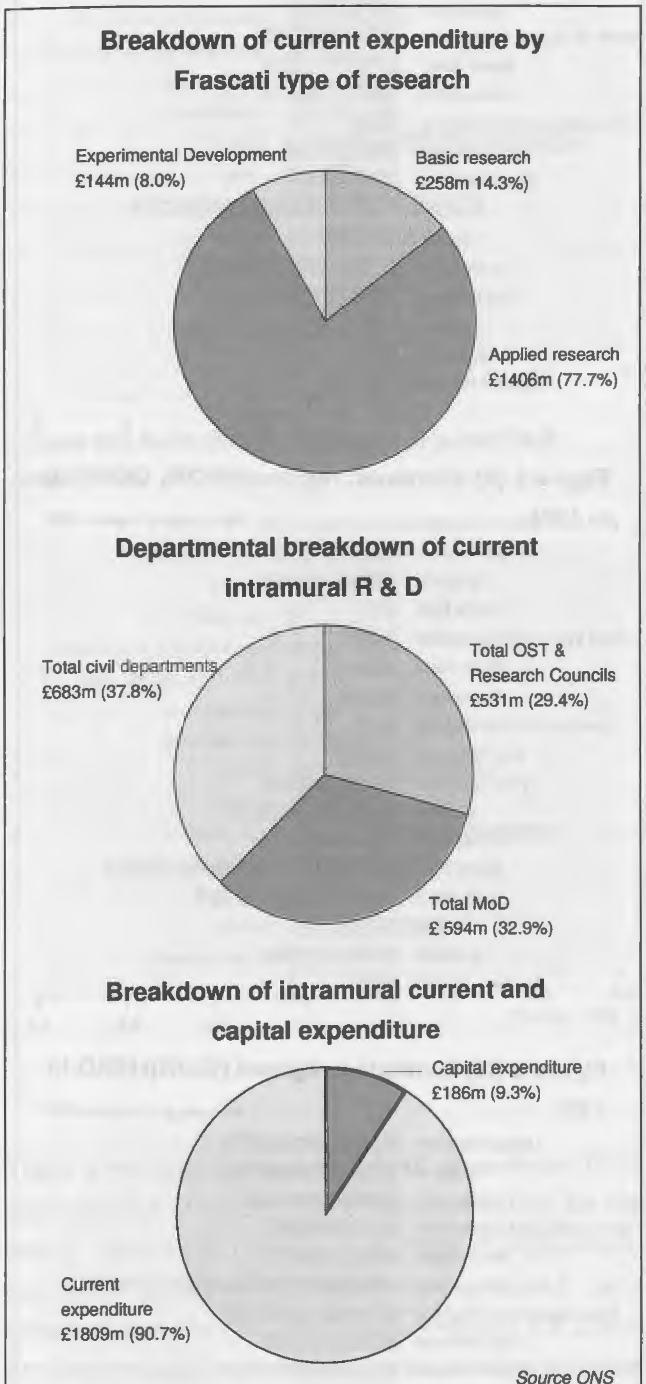
Government R&D expenditure, (Tables 4 to 6)

A department's net expenditure on R&D is its expenditure on R&D performed within the department (intramural) plus its expenditure on R&D outside the department (extramural) minus receipts for R&D.

The sum of a department's net expenditure is the R&D element of the government's budget expenditure. This is used for international comparisons of Government appropriations for R&D (eg Table 18). The UK has a high proportion of Central Government expenditure devoted to R&D for defence purposes.

Figure 2
Analysis of Central Government intramural expenditure, 1995-96

£ million



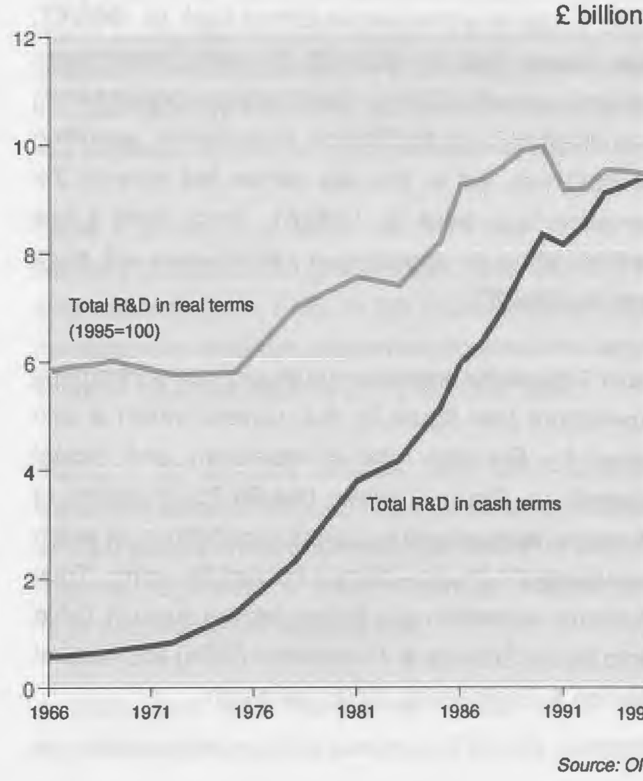
Source ONS

Figures in Tables 4 and 6 for Government's net expenditure on R&D differ from Government funding figures in Tables 1 and 3. This is because Tables 1 to 3 are based on information supplied by R&D **performers** whilst Tables 4 to 6 contain expenditure figures reported by Government departments (**funders**). The gap is mainly accounted for by differences in the reporting of Government contracts with businesses for certain types of defence R&D and R&D performed abroad but funded by the UK Government. In addition the difference is also attributed to other factors such as time lag problems due to differences in accounting periods and not all monies given being used in that financial period, treatment of VAT and sub contracting of R&D work.

For the first time the support cost of R&D in NHS hospitals has been included in Table 5 on the basis of the Culyer report (ref 9). The figures for Central Government intramural R&D in Table 5 are slightly lower than those performed by the government sector in Tables 1 and 2. This is because the latter includes estimates for a small amount of R&D not available from the Government survey and R&D performed by local authorities.

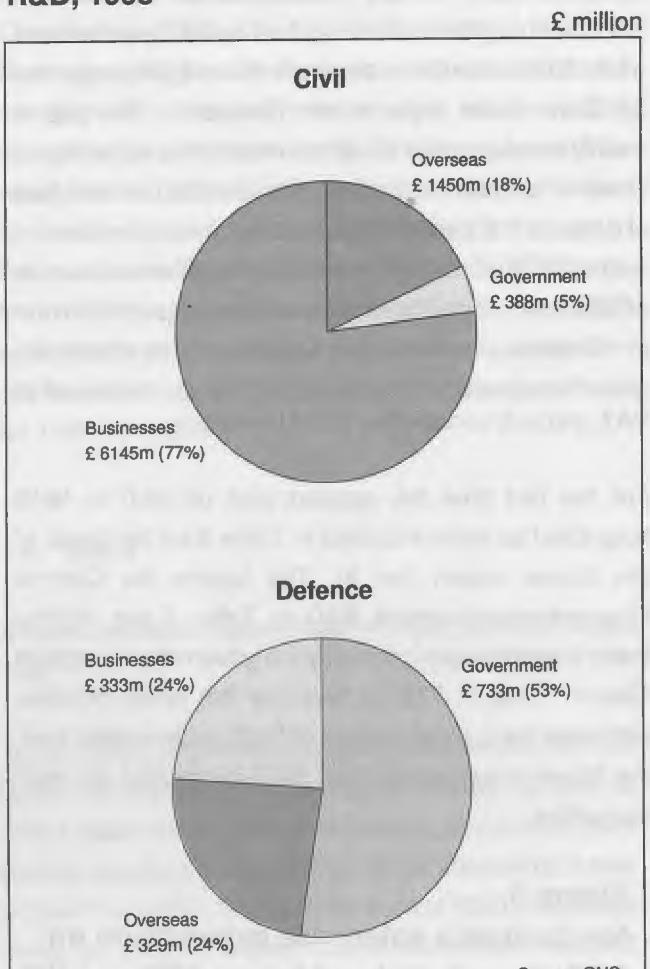
Figure 3
Net Business enterprise expenditure on R&D, in cash and real terms, 1966 to 1995

£ billion



Source: ONS

Figure 4
Sources of funds for Business Enterprise R&D, 1995



Source: ONS

Table 4 shows a time series dating back to 1966/67. This shows that in 1995/96 the net Government expenditure on R&D (by civil and defence departments) excluding NHS was £5.3 billion. In real terms, spending on R&D was flat in the late sixties but rose in the seventies to a peak in 1980/81. Since then it has declined although spending in 1995/96 was still more than in 1966/67.

Table 5 shows the breakdown of departmental intramural expenditure (see figure 2); the current (which is also shown by Frascati type of research) and capital expenditure. Figure 2 shows that 90.7% (£1809m) of intramural expenditure is current expenditure, of which the majority 77.7% (£1406m) is Applied Research. Total intramural expenditure is further broken down in Table 5 into Social Science & Humanities (SSH) and Natural Science & Engineering (NSE) research.

Figure 5 (i) Estimated regional (GOR) BERD in 1995

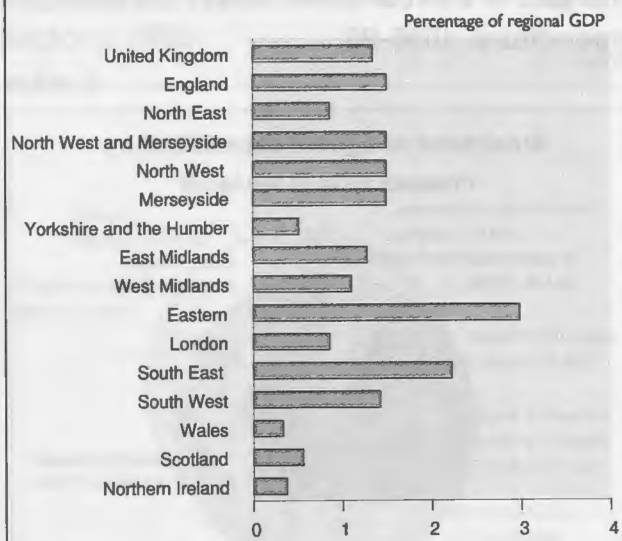


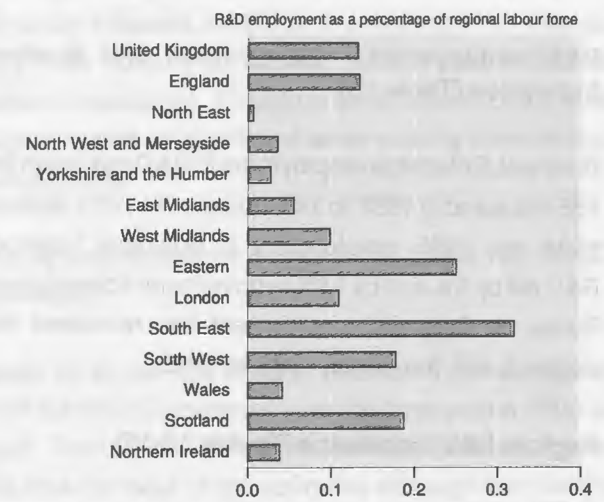
Figure 5 (ii) Estimated regional (GOR) GOVERD in 1995

Figure 5 (iii) Estimated regional (GOR)HERD in 1995

Source: ONS

Figure 6(i) Estimated Business regional (GOR) R&D 1995

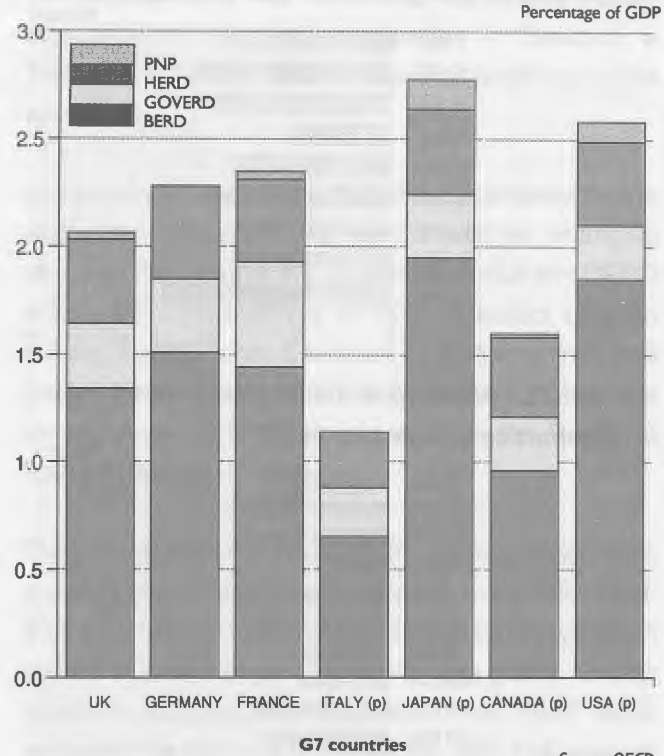
Figure 6(ii) Estimated Government regional R&D employment in 1995



Source: ONS

Table 6 provides an analysis of net government R&D expenditure by Frascati type of research activity for the period 1988-89 to 1995-96. The share of expenditure attributed to applied research has remained fairly constant over the ten year period, whereas the share attributed to basic research has increased at the expense of the share attributed to experimental development. The breakdown between civil and defence expenditure shows a steady decline in defence expenditure . In 1988-89 defence expenditure accounted for 44% of total expenditure. This share had declined to 40% by 1995-96.

Figure 7
Comparison of BERD, GOVERD, HERD and ORD as a percentage of GDP, 1995



Source: OECD

R&D performed by the Business Sector (Tables 7-12)

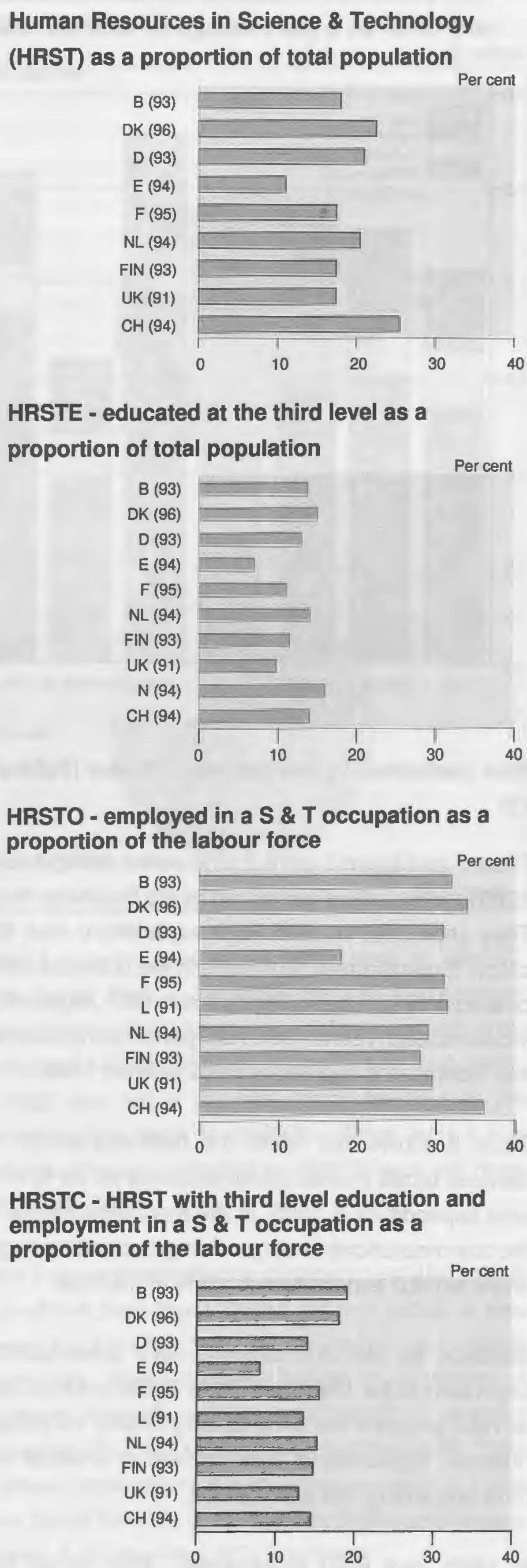
Table 7 and figure 3 show a time series dating back to 1966 for expenditure performed by the Business sector. They show that in 1995 R&D expenditure was £9.4 billion. Expenditure in real terms in the business sector peaked in 1990. After falling by 9 % in 1991, expenditure increased each year to 1994. R&D performed by business has increased in real terms by 62% since 1966.

Table 8 shows that within the business sector, the services broad product group accounts for 26 % of the total expenditure in 1995. In the manufacturing sector the pharmaceuticals broad product group had the largest share of R&D expenditure at 19 % of the total.

Statistics for civil and defence have been collected separately since 1989 (see Table 9). Defence includes all R&D programmes undertaken primarily for defence reasons, regardless of their content or whether they have secondary civil applications.

In 1995, civil R&D represented 85% of all R&D expenditure performed by business (Table 9), compared

Figure 8



Source: EUROSTAT

to 77% in 1989. Table 10 (and figure 4) show that, in 1995, 77% of civil R&D performed by businesses was funded by businesses themselves. Government funded 5% of civil R&D, whereas it funded 53% of defence R&D.

The breakdown into detailed product groups is shown in Tables 11 and 12. The product group with the largest expenditure is pharmaceuticals, medical chemicals and botanical products, which accounts for £1788m in 1995, followed by Research and Development consultancy, technical testing and analysis at £935m.

Table 12 shows the split of current and capital expenditure on R&D performed by UK businesses. Current expenditure is the sum of salaries and wages, basic and applied research and experimental development. Capital is the expenditure on land, buildings, plant and machinery.

R&D employment - Government and Business Enterprise (Table 13)

Business Enterprise employment in R&D has fallen from 185 thousand in 1988 to 148 thousand in 1995. Between 1994 and 1995, employment in Business Enterprise R&D fell by 6% and by 14% in government departments. Research Councils' employment has remained fairly stable during the period 1988 to 1995.

Regional R&D statistics (Tables 14-15)

Regional estimates for the Government and Business sectors are derived from the ONS surveys of Government and Business Enterprises. The HEI regional R&D estimates are less reliable and should be treated with special caution. The expenditure estimates are obtained by allocating total R&D performed by HEIs (HERD) to individual HEIs in proportion to their income from research grants and contracts. An estimate of the labour force in FTEs is not available.

Estimates are given for UK Government Office Regions (GOR) and not standard statistical regions (NUTS1 - see definitions) as in previous years.

Of the 14 GOR regions the South East of England has the highest number of R&D personnel and the largest expenditure on R&D (this reflects in part the greater size of the South East). To adjust for this the R&D expenditure estimates are also shown as a percentage of GDP and the personnel estimates as a percentage of the labour force (see figures 5 and 6). Tables 14 and 15 show that, within the UK , the Eastern and South East have the highest concentration of R&D expenditure performed by business. For the Government sector the dominant regions are the South East, the South West and the Eastern region, whilst for the Higher Education Sector, Merseyside, London and Scotland are prominent (see figure 6 iii). In terms of personnel estimates as a percentage of the labour force (see figure 7) the South East and the Eastern region are prominent in both the Business and Government sectors.

International comparisons of R&D (Tables 16-19)

Although the guidelines in the Frascati Manual are generally followed, methods of collecting R&D data do vary from country to country (refs 5 and 6 discuss national variations). Therefore small differences should not be treated as significant when making international comparisons.

The figures shown for Japan in the tables are OECD estimates.

Table 16 shows the trend of R&D as a percentage of GDP for the G7 countries over the time period 1988 to 1995. The ratio for GERD has been fairly constant over this time for most of the countries although Germany's spending has shown a decline which may be due in part to reunification. Figure 7 shows the position in 1995. The UK continues to be ranked in the middle. Table 16 also shows BERD and GOVERD as a percentage of GDP.

Table 17 shows the international comparisons of GERD by sector of performance and source of funding. Table 18 shows R&D performed in the business sector. Table 16 also shows this as a percentage of GDP; Japan and the USA are the top spenders with the UK holding a middle ranking position. International comparison of Government funding of R&D in 1995 by socio-economic objective is shown in Table 19. Of the G7 countries, the USA and the UK devoted the highest proportion of their total Government funding of R&D to defence. For Germany, Italy and Japan about half of their total Government funding of R&D was classified as the advancement of knowledge compared to approximately a third for Canada and France.

Human Resources in Science & Technology (HRST)

Human Resources in Science & Technology (HRST) concerns persons who have either completed tertiary education or have an occupation in Science & Technology, or both - the most skilled members of the work force.

It is generally recognised that little is currently known about the composition of HRST and its changing structure. To address this problem Eurostat and OECD conducted a pilot survey in 1996 to collect data on stocks of HRST from a number of EEA countries and Switzerland. The methodology framework for the measurement of HRST is laid down in the Canberra Manual (Ref 10).

The initial objective of the pilot survey was to collect data enabling some basic stock indicators to be calculated. The total HRST stock was requested to be broken down by field of study, by gender, and by age group. Further questions requested information on the HRST stock regarding the sector of the economy, with PhD holders shown separately.

The pilot survey presented a number of challenges, in that the data collected for the different countries often related to different years and came from different sources; eg the UK data was extracted from the 1991 Population census, whereas many other countries extracted data from their Labour Force Surveys. Nevertheless Eurostat published a paper (Statistics in Focus, Research & Development 1997 (HRST) (Ref 11)) which they saw as a good way of introducing this topic and giving an indication of the scope of future work on HRST.

Some of the tables on basic stock indicators published by Eurostat are reproduced in Figure 8. The first graph shows seven countries falling within a band ranging between, around 18% and 23% with Switzerland having the highest proportion of HRST. In the second graph it is Norway which has the highest proportion of its population with a third level qualification (16%). The UK proportion is just below 10%. In the third graph Switzerland has the highest percentage of persons working in S&T occupations (over 35%); the UK has just under 30%. In the final graph it is Belgium and Denmark who are prominent.

Further information on this project can be obtained from M. Pino / G. Paterson Eurostat, L2920, Luxembourg, tel 4301 34462, fax 4301 -34149.

Community Innovation Survey (CIS)

The ONS is currently undertaking a voluntary survey of Innovation on behalf of the DTI and Eurostat, as part of the European Community Innovation Survey for 1997. The aim of the survey is to gather up-to-date information on the levels and characteristics of innovation activity from 6000 UK businesses across all industrial and many commercial sectors. The survey results will provide information about which sorts of firm are innovating in terms of both products and processes, which is a key policy area. This will benefit businesses by allowing DTI to target more closely its science and technology policies. It will also enable the UK to benchmark its performance against our main international competitors. Results are expected to be published by the DTI by mid-1998.

Definitions

Type of R&D

Basic or fundamental research is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any particular application or use in view.

Applied research is research undertaken with either a general or a particular application in view.

Experimental Development is the use of the results of basic and applied research directed to the introduction of new materials, processes, products, devices and systems, or the improvement of existing ones. It should include the prototype or pilot plant stage, design and drawing required during R&D and innovative work done on contracts with outside organisations, government departments, and public bodies. Firms in the aerospace industry are asked to include expenditure on development batches.

Sectors of the Economy

The four sectors of the economy are defined in an ONS publication (ref 4). However higher education is identified separately as recommended in the Frascati Manual.

Central Government includes the central government departments, research councils, higher education funding councils, NDPBs, and Executive Agencies.

Business Enterprises include private businesses, public corporations, and research associations serving businesses.

Higher Education includes the former polytechnics and central institutions in Scotland as well as the old universities.

Private Non-Profit sector makes up the remainder and includes medical research charities.

Regional data

Data is classified according to the Government Office Regions (GOR).

Rounding

Throughout the tables components of totals have been rounded independently of the totals. Therefore the rounded totals will not always be equal to the sums of the rounded components. Symbols follow the conventions used elsewhere in Economic Trends.

Revisions and Discontinuities

GERD figures from 1985 have been revised to reflect the new PNP estimates established for 1995.

In the Government Tables, a new method for estimating Government funded R&D in HE was introduced in 1994/95, therefore 1993/94 figures have been revised. It is not possible to revise the data for prior years because of the structural changes in the HE sector.

Government figures for 1995/96 now include NHS Hospital R&D estimates for the first time.

The 1994 Business results, have been revised due to company misreporting (expenditure and classification) whilst the methodology for estimating expenditure for unsampled businesses has also been improved in the light of 1995 returns.

In the International Comparison Tables, there is some discontinuity in the UK data following the reclassification of the Scottish Agricultural Research Institutes from the PNP sector to the Government sector, from 1992.

Regional data is published using GOR regions and these should not be compared to NUTS regional data previously published in this annual article.

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Business R&D (Ref 2)	Jane Morgan Tel. 01633 813109
Community Innovation Survey	Michelle Whyman-Williams Tel. 01633 813061
Definitions of R&D (Ref 3)	Peter Jones Tel. 01633 813063
GERD (Ref 4)	Peter Jones Tel. 01633 813063
General information on Science & Technology (Ref 1)	Steve Knight Tel. 01633 812003
International comparisons (Ref 5,6,7)	Steve Knight Tel. 01633 812003

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(2) *ONS UK Business Reference, Research and Development in UK Business, MA14. The Stationery Office, January 1997, ISBN 0-11-536351-3.*

3) *Proposed Standard Practice for Surveys of Research and Experimental Development (The Frascati Manual), OECD Paris 1993.*

4) *ONS First Release ONS(97)67 20 March 1997, Gross Domestic Expenditure on Research and Development 1995.*

(5) *Main Science and Technological Indicators 1996/1, OECD, Paris 1996.*

(6) *International Comparisons of Research and Development Spending, Cabinet Office, December 1992, HMSO.*

(7) *Research and Development: Annual Statistics 1995, Eurostat, Luxembourg 1995.*

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(9) *"Supporting Research and Development In The NHS", (A report to the Minister of Health by a research and development task force chaired by Professor Anthony Culyer), September 1994; ISBN 0-11-321831-1.*

(10) *Manual on the measurement of Human Resources devoted to Science & Technology - the Canberra Manual, (OECD/EC DGX11 and EUROSTAT), Group of National Experts on Science & Technology Indicators, OECD, Paris 1995.*

(11) *Statistics in Focus, Research & Development 1997 (2), Human Resources in Science & Technology, Luxembourg; ISSN 1024-7971.*

Abbreviations

BERD	Business Expenditure on R&D
CIS	Community Innovation Survey
EEA	European Economic Area
EU	European Union
EUROSTAT	The Statistical Office of the European Communities
FTE	Full Time Equivalent
G7	Group of Seven countries, comprising: UK, Germany, France, Italy, Japan, Canada, USA
GDP	Gross Domestic Product
GERD	Gross (Domestic) Expenditure on R&D
GOVERD	Government Intramural Expenditure on R&D
GOR	Government Office Regions
HEFC	Higher Education Funding Council
HEIs	Higher Education Institutions
HERD	Higher Education Expenditure on R&D
HESA	Higher Education Statistics Agency
MSTI	Main Science and Technological Indicators (an OECD publication)
NABS	Nomenclature for the Analysis and Comparison of Scientific Programmes and Budgets
NDPB	Non-Departmental Public Body
NHS	National Health Service
NUTS	Nomenclature of Territorial Units for Statistics
OECD	Organisation for Economic Co-operation and Development
ONS	Office for National Statistics
ORD	Other (Private Non-Profit) R&D
OST	Office of Science and Technology (part of DTI since April 1996)
PPP	Purchasing Power Parities
PNP	Private Non-Profit
R&D	Research and (Experimental) Development

Table 1 Gross expenditure on civil and defence R&D performed in the UK in 1995[1]

£ million

Sectors providing the funds[2][3]	Sectors carrying out the work[2][3]: Government departments[4]	Research Councils	Higher education	Business enterprise	Private non-profit	Totals	Abroad
Government departments[4]	1264	84	154	1114	52	2668	165
Research Councils	6	398	651	8	27	1091	134
Higher Education Funding Councils	-	-	1018	-	-	1018	
Higher education institutions	-	3	114	-	-	117	
Business enterprise	192	36	167	6478	5	6877	
Private non-profit	7	27	380	-	90	505	
Abroad	26	33	211	1780	3	2052	
TOTAL	1495	581	2695	9379	177	14328	N/A
Civil							
Government departments[4]	687	77	119	381	52	1315	152
Research Councils	6	398	651	8	27	1091	134
Higher Education Funding Councils	-	-	1018	-	-	1018	
Higher education institutions	-	3	114	-	-	117	
Business enterprise	83	36	148	6145	5	6416	
Private non-profit	5	27	380	-	90	503	
Abroad	8	33	211	1451	3	1706	
TOTAL	790	574	2641	7984	177	12166	N/A
Defence							
Government departments[4]	577	8	35	733	-	1352	13
Research Councils	-	-	-	-	-	-	-
Higher Education Funding Councils	-	-	-	-	-	-	
Higher education institutions	-	-	-	-	-	-	
Business enterprise	109	-	19	333	-	461	
Private non-profit	2	-	-	-	-	2	
Abroad	17	-	-	329	-	346	
TOTAL	705	8	54	1395	-	2162	N/A

Source: ONS

Notes:

General Note:

These estimates are derived from the ONS surveys of government and business enterprise R&D and from information from the HEFC. More details are in the ONS First Release ONS(97)(67).

Notes:

1. Research in the social sciences and humanities is included.
2. The OECD terminology is used for describing the breakdown of GERD by sector.
3. Some of the numbers have been estimated.
4. The total for R&D performed by government includes estimates for a small amount of R&D not available from the Government Survey; R&D performed by local authorities. For 1995 UK NHS figures have been obtained from the Department of Health and the Scottish Office on the basis of the Culyer report.

Table 2 Gross expenditure on R&D in the UK by performing sector 1988 to 1995[1]

£ million

	1988	1989	1990	1991	1992	1993	1994	1995
Expenditure in cash terms (£m):								
Performed by:								
Government	1360	1534	1566	1757	1846	1928	2051	1495
Research Councils	-	-	-	-	-	-	-	581
Business enterprise	6922	7650	8318	8135	8489	9069	9204	9379
Higher education	1575	1689	1873	2020	2129	2312	2623	2695
Private non-profit	179	196	234	220	224	232	168	177
TOTAL	**10035**	**11069**	**11991**	**12132**	**12689**	**13541**	**14046**	**14328**
Expenditure in real terms (1995=100)[2] (£m):								
Performed by:								
Government	1871	1972	1864	1966	1982	2012	2103	1495
Research Councils	-	-	-	-	-	-	-	581
Business enterprise	9521	9835	9903	9102	9114	9463	9437	9379
Higher education	2166	2171	2230	2260	2286	2413	2689	2695
Private non-profit	246	252	279	246	240	242	172	177
TOTAL	**13802**	**14231**	**14276**	**13574**	**13624**	**14130**	**14402**	**14328**
Total as % of GDP[3]	**2.14**	**2.15**	**2.18**	**2.11**	**2.13**	**2.15**	**2.11**	**2.05**

Notes:
1 See notes at Table 1.
2 Using the GDP deflator adjusted for the abolition of domestic rates.

The deflators are:

	1988	1989	1990	1991	1992	1993	1994	1995
	72.7	**77.8**	**84.0**	**89.4**	**93.1**	**95.8**	**97.5**	**100.0**

3 Gross domestic product at market prices (average based) based on the UN definition.
Gross domestic product values are:

£ million

	1988	1989	1990	1991	1992	1993	1994	1995
	469760	**514241**	**549386**	**573909**	**597010**	**628555**	**665058**	**697485**

Source: ONS

Table 3 Gross expenditure on R&D in the UK by source of funds 1988 to 1995[1]

£ million

	1988	1989	1990	1991	1992	1993	1994	1995
Sector providing funds								
Expenditure in cash terms (£m):								
Funded by:								
Government	3664	4031	4262	4248	4355	4522	4708	2668
Research Councils	-	-	-	-	-	-	-	1091
Higher Education Funding Councils	-	-	-	-	-	-	-	1018
Higher education	77	81	84	90	98	101	114	117
Business enterprise	5164	5599	5948	6019	6425	6937	6999	6877
Private non-profit	202	236	287	336	376	389	485	505
Abroad	928	1122	1411	1439	1435	1593	1740	2052
TOTAL	**10035**	**11069**	**11991**	**12132**	**12689**	**13541**	**14046**	**14328**
Expenditure in real terms (1995=100)[2] (£m):								
Funded by:								
Government	5041	5182	5074	4753	4676	4719	4827	2668
Research Councils	-	-	-	-	-	-	-	1091
Higher Education Funding Councils	-	-	-	-	-	-	-	1018
Higher education	106	104	100	101	105	105	117	117
Business enterprise	7103	7198	7081	6735	6898	7239	7176	6877
Private non-profit	278	303	342	376	404	406	497	505
Abroad	1276	1442	1680	1610	1541	1662	1784	2052
TOTAL	**13802**	**14231**	**14276**	**13574**	**13624**	**14130**	**14402**	**14328**
Total as % of GDP[3]	**2.14**	**2.15**	**2.18**	**2.11**	**2.13**	**2.15**	**2.11**	**2.05**

Source: ONS

Notes:
1. See notes at Table 1.
2. Using the GDP deflator adjusted for the abolition of domestic rates.
3. Gross domestic product at market prices (average based) based on the UN definition.

Table 4 Net Government expenditure on R&D in cash terms and real terms 1966-67 to 1995-96

£ million

	Total Net Government R&D	
Year	In cash terms excluding NHS estimate	In real terms [1] (1995=100)
1966-67	486	4863
1967-68	503	4893
1968-69	531	4915
1969-70	562	4944
1970-71	606	4925
1971-72	755	5622
1972-73	847	5832
1973-74	964	6211
1974-75	1169	6295
1975-76	1495	6418
1976-77	1647	6229
1977-78	1814	6039
1978-79	2097	6279
1979-80	2601	6673
1980-81	3184	6904
1981-82	3395	6712
1982-83	3519	6494
1983-84	3730	6580
1984-85	3964	6658
1985-86	4175	6648
1986-87	4255	6576
1987-88	4408	6468
1988-89	4496	6185
1989-90	4772	6135
1990-91	4955	5899
1991-92	5027	5625
1992-93	5078	5452
1993-94	5402	5637
1994-95	5200	5332
1995-96 [2]	5333	5333

Source: ONS

Notes:
1. Using the GDP deflator adjusted for the abolition of domestic rates.
2. Figures for 1995-96 are available for NHS in SET (ref 1).

Table 5 Analysis of Government Intramural expenditure, 1995-96[(1)(2)]

£ million

	Current expenditure	Breakdown of current Frascati R&D expenditure: Basic	Applied	Experimental development	Capital expenditure	TOTAL INTRAMURAL	SSH	NSE
OST - DTI	-	-	-	-	-	-	-	-
Research Councils								
BBSRC	134.3	61.8	72.6	-	14.1	148.5	-	148.5
ESRC	3.6	3.6	-	-	0.3	3.9	3.9	-
MRC	135.3	70.4	64.9	-	20.5	155.8	-	155.8
NERC	117.6	32.7	77.1	7.7	18.9	136.5	-	136.5
EPSRC	21.4	8.5	12.8	-	1.1	22.5	-	22.5
PPARC	24.1	21.7	2.4	-	2.6	26.7	-	26.7
CCLRC	95.0	24.4	70.6	-	6.6	101.6	-	101.6
Total OPSS & Research Councils	**531.2**	**223.1**	**300.4**	**7.7**	**64.3**	**595.5**	**3.9**	**591.6**
Higher Education Funding Councils	-	-	-	-	-	-	-	-
Total Higher Education Funding Councils	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Civil departments								
MAFF	85.7	14.5	49.8	21.5	6.5	92.2	0.1	92.1
DFEE	11.6	-	3.4	8.3	-	11.6	11.6	-
DOE	23.0	0.3	22.5	0.2	0.4	23.4	3.1	20.3
DH	32.8	1.9	25.4	5.5	2.3	35.1	5.7	29.4
NHS	334.0	-	334.0	-	-	334.0	-	334.0
DSS	0.8	-	0.8	-	-	0.8	0.8	-
HSC	8.8	-	7.9	0.9	2.4	11.1	0.1	11.1
HO	9.7	0.0	7.7	2.0	0.7	10.5	5.2	5.3
DNH	9.8	8.0	1.6	0.2	0.5	10.3	0.8	9.5
DFID (Formerly ODA)	18.1	-	15.3	2.8	0.6	18.7	0.6	18.1
DTI (ex OST)	50.8	2.8	37.0	11.0	0.0	50.8	-	50.8
DOT	25.5	-	21.2	4.4	2.2	27.7	4.3	23.4
NI	9.1	1.0	6.9	1.2	1.5	10.6	1.3	9.3
SO	47.0	5.9	40.2	0.9	6.3	53.3	3.6	49.7
WO	0.4	-	0.4	-	-	0.4	0.4	0.0
Other departments	16.0	0.8	12.6	2.6	1.0	17.1	2.6	14.4
Total civil departments	**683.4**	**35.3**	**586.7**	**61.4**	**24.3**	**707.8**	**40.3**	**667.5**
Total civil R&D	**1214.7**	**258.4**	**887.1**	**69.2**	**88.6**	**1303.3**	**44.2**	**1259.1**
MOD	594.3	-	519.0	75.3	97.4	691.6	4.5	687.1
TOTAL	**1808.9**	**258.4**	**1406.1**	**144.4**	**186.0**	**1994.9**	**48.8**	**1946.2**

Source: ONS

Notes:
1. Excludes Research Councils' pensions/other costs.
2. Includes intramural R&D funded by other departments.

Table 6 Analysis of net Government R&D expenditure by Frascati type of research activity 1988-89 to 1995-96 (1)

£ million

		1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96 (2)
Total Government R&D									
Basic		925.0	1189.2	1290.1	1362.0	1510.8	1570.9	-	-
	- pure	-	-	-	-	-	-	1252.6	1273.5
	- orientated	-	-	-	-	-	-	471.9	504.2
Applied	- strategic	810.4	731.9	767.7	849.9	952.7	1019.4	879.3	920.5
	- specific	985.9	950.8	1031.4	884.4	869.9	1050.2	1074.9	1013.6
Experimental development		1775.1	1899.9	1865.9	1930.9	1744.2	1761.8	1492.4	1613.4
Total £m		**4496.5**	**4771.8**	**4955.1**	**5027.4**	**5077.6**	**5402.3**	**5171.1**	**5325.2**
Civil R&D									
Basic		925.0	1189.2	1290.1	1362.0	1510.8	1570.9	-	-
	- pure	-	-	-	-	-	-	1252.6	1273.5
	- orientated	-	-	-	-	-	-	471.9	504.2
Applied	- strategic	771.6	687.7	727.3	815.0	906.9	961.8	810.5	838.7
	- specific	653.3	588.2	682.9	508.0	403.0	453.8	478.6	466.0
Experimental development		182.9	166.9	93.1	128.7	176.5	137.4	126.0	135.8
Total £m		**2532.9**	**2631.9**	**2793.3**	**2813.8**	**2997.2**	**3123.8**	**3139.5**	**3218.2**
Defence R&D									
Basic		-	-	-	-	-	-	-	-
	- pure	-	-	-	-	-	-	-	-
	- orientated	-	-	-	-	-	-	-	-
Applied	- strategic	38.8	44.2	40.5	34.9	45.8	57.6	68.9	81.8
	- specific	332.6	362.7	348.5	376.5	467.0	596.5	596.3	547.5
Experimental development		1592.2	1733.0	1772.8	1802.2	1567.7	1624.4	1366.4	1477.6
Total £m		**1963.6**	**2139.9**	**2161.8**	**2213.6**	**2080.5**	**2278.5**	**2031.5**	**2106.9**

Source: ONS

Notes:
1. For the purpose of this analysis Research Councils expenditure for Pensions / Other costs have been excluded from 1994-95 onwards.
2. Excludes NHS estimates which is available in SET (ref 1).

Table 7 Business Enterprise R&D, in cash terms and real terms 1966 to 1995

£ million

	Total Business Enterprise R&D	
	In cash terms	In real terms
Year		(1995=100)[1]
1966	580	5804
1967	605	5885
1968	639	5914
1969	680	5982
1970	N/S	N/S
1971	N/S	N/S
1972	831	5722
1973	N/S	N/S
1974	N/S	N/S
1975	1340	5752
1976	N/S	N/S
1977	N/S	N/S
1978	2324	6959
1979	N/S	N/S
1980	N/S	N/S
1981	3793	7499
1982	N/S	N/S
1983	4163	7343
1984	N/S	N/S
1985	5122	8155
1986	5951	9198
1987	6335	9296
1988	6922	9521
1989	7650	9835
1990	8318	9903
1991	8135	9102
1992	8489	9114
1993	9069	9463
1994	9204	9437
1995	9379	9379

Source: ONS

Notes:
1. Using the GDP deflator adjusted for the abolition of domestic rates.

(N/S) = No survey carried out.

Table 8 Expenditure on R&D performed in UK businesses: broad product groups, in cash & real terms 1988 to 1995

£ million

In cash terms	1988	1989	1990	1991	1992	1993	1994	1995
Manufacturing: Total[1]	5272	5784	6383	6136	6318	6713	6829	6927
Chemicals	749	767	842	825	840	839	803	855
Pharmaceuticals	825	925	1185	1178	1422	1649	1789	1788
Mechanical engineering[1]	409	617	514	520	562	641	738	659
Electrical machinery[1]	1431	1408	1555	1317	1245	1369	1203	1234
Transport equipment	511	548	590	609	640	677	673	794
Aerospace[1]	725	818	984	1005	898	782	860	879
Other manufacturing	622	701	713	682	711	754	764	719
Services[1]	1650	1865	1935	1998	2173	2356	2375	2452
TOTAL	**6922**	**7650**	**8318**	**8135**	**8489**	**9069**	**9204**	**9379**

In real terms (at 1995 prices)	1988	1989	1990	1991	1992	1993	1994	1995
Manufacturing: Total	7251	7436	7599	6866	6783	7005	7002	6927
Chemicals	1030	986	1002	923	902	875	823	855
Pharmaceuticals	1135	1189	1411	1318	1527	1721	1834	1788
Mechanical engineering	563	793	612	582	603	669	757	659
Electrical machinery	1968	1810	1851	1474	1337	1429	1233	1234
Transport equipment	703	705	702	681	687	706	690	794
Aerospace	997	1052	1172	1124	964	816	882	879
Other manufacturing	856	901	849	763	763	787	783	719
Services	2269	2398	2304	2236	2333	2458	2435	2452
TOTAL	**9521**	**9835**	**9903**	**9102**	**9114**	**9463**	**9437**	**9379**

Source: ONS

Notes:
1. There have been shifts in expenditure in product groups because of company misreporting, mainly in Radio, television and communication equipment, Aerospace, Other machinery, Post and telecommunications. Where possible, figures have been revised for previous years.

Table 9 Expenditure on civil and defence R&D performed by Business Enterprises, 1989 to 1995

(i) in cash terms (£m)

	Civil							Defence						
	1989	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**
All product groups	5923	6557	6669	7092	7710	7770	7984	1727	1761	1466	1397	1359	1433	1395
All manufactured products	4222	4785	4832	5060	5526	5518	5643	1562	1598	1304	1256	1187	1311	1284
Chemicals and pharmaceuticals	1673	2013	1986	2242	2463	2583	2640	19	14	17	20	26	10	3
Mechanical engineering	257	237	263	326	396	404	393	360	277	257	236	245	334	266
Electrical machinery	869	1040	962	887	995	825	818	539	516	355	358	375	378	416
Transport equipment	491	525	550	575	619	659	784	57	65	59	64	59	14	10
Aerospace	335	357	478	404	372	379	405	483	627	527	494	410	480	473
Other manufacturing	597	613	592	626	681	669	603	104	100	90	84	73	95	116
Services	1701	1773	1837	2032	2184	2252	2341	165	163	162	141	172	122	110

(ii) in real terms (£m 1995 prices)(1):

	Civil							Defence						
	1989	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**
All product groups	7615	7807	7462	7614	8045	7967	7984	2220	2097	1640	1500	1418	1469	1395
All manufactured products	5428	5697	5406	5433	5766	5658	5643	2008	1903	1459	1349	1239	1344	1284
Chemicals and pharmaceuticals	2151	2397	2222	2407	2570	2648	2640	24	17	19	21	27	10	3
Mechanical engineering	330	282	294	350	413	414	393	463	330	288	253	256	342	266
Electrical machinery	1117	1238	1076	952	1038	846	818	693	614	397	384	391	388	416
Transport equipment	631	625	615	617	646	676	784	73	77	66	69	62	14	10
Aerospace	431	425	535	434	388	389	405	621	746	590	530	428	492	473
Other manufacturing	768	730	662	672	711	686	603	134	119	101	90	76	97	116
Services	2187	2111	2055	2182	2279	2309	2341	212	194	181	151	179	125	110

Source: ONS

Notes:
1. See table 2 for deflators.

Table 10 Sources of funds for business enterprise R&D in cash terms, 1988 to 1995

£ million, cash terms

		Government	Overseas	Mainly own resources[1]	Total intramural R&D
		£m	£m	£m	£m
1988		**1177**	**831**	**4914**	**6922**
1989		**1312**	**1023**	**5315**	**7650**
of which:	**Civil**	306	739	4879	5923
	Defence	1007	284	436	1727
1990		**1392**	**1289**	**5638**	**8318**
of which:	**Civil**	428	904	5227	6557
	Defence	964	385	411	1761
1991		**1189**	**1299**	**5647**	**8135**
of which:	**Civil**	479	950	5240	6669
	Defence	710	349	407	1466
1992		**1171**	**1270**	**6048**	**8489**
of which:	**Civil**	478	981	5633	7092
	Defence	693	289	415	1397
1993		**1129**	**1398**	**6542**	**9069**
of which:	**Civil**	390	1103	6217	7710
	Defence	739	295	324	1359
1994		**1088**	**1474**	**6642**	**9204**
of which:	**Civil**	363	1135	6272	7770
	Defence	726	338	370	1433
1995		**1122**	**1780**	**6478**	**9379**
of which:	**Civil**	388	1450	6145	7984
	Defence	733	329	333	1395

Per Cent

		Government	Overseas	Mainly own resources(1)	Total intramural R&D
		%	%	%	%
1988		**17**	**12**	**71**	**100**
1989		**17**	**13**	**69**	**100**
of which:	**Civil**	5	12	82	100
	Defence	58	16	25	100
1990		**17**	**15**	**68**	**100**
of which:	**Civil**	7	14	80	100
	Defence	55	22	23	100
1991		**15**	**16**	**69**	**100**
of which:	**Civil**	7	14	79	100
	Defence	48	24	28	100
1992		**14**	**15**	**71**	**100**
of which:	**Civil**	7	14	79	100
	Defence	50	21	30	100
1993		**12**	**15**	**72**	**100**
of which:	**Civil**	5	14	81	100
	Defence	54	22	24	100
1994		**12**	**16**	**72**	**100**
of which:	**Civil**	5	15	81	100
	Defence	51	24	26	100
1995		**12**	**19**	**69**	**100**
of which:	**Civil**	5	18	77	100
	Defence	53	24	24	100

Source: ONS

Notes:
1. Mainly own resources includes Other Private sector funds which is shown separately in ONS's First Release for Business Enterprise R&D.

Table 11 Intramural expenditure on R&D performed in UK businesses: detailed product groups, 1989 to 1995

£ million

	1989	1990	1991	1992	1993	1994	1995
Total	**7650**	**8318**	**8135**	**8489**	**9069**	**9204**	**9379**
Agriculture, hunting and forestry; Fishing [1]	59	67	76	80	89	80	(d)
Extractive Industries	110	115	129	126	62	66	65
Electrical machinery and apparatus	426	502	518	523	576	567	494
Radio, television and communication equipment[2]	485	581	472	466	542	502	590
Chemicals, man made fibres. Processing of nuclear fuel	767	842	825	840	839	803	855
Pharmaceuticals, medical chemicals and botanical products	925	1185	1178	1422	1649	1789	1788
Refined petroleum products and coke oven products	72	105	102	108	53	53	61
Aerospace[2]	818	984	1005	898	782	860	879
Motor Vehicles and parts	517	541	576	605	643	631	755
Shipbuilding and repairs	17	33	16	16	18	17	20
Other transport equipment	14	16	17	18	17	24	18
Casting of iron and steel	45	50	40	43	50	51	46
Non-ferrous metals	25	31	24	22	16	15	20
Fabricated metal products	55	52	48	63	72	72	100
Precision instruments	289	268	276	283	312	273	303
Office machinery and computers	497	471	327	256	252	134	150
Other machinery[2]	562	462	472	498	569	665	559
Food products and beverages; Tobacco products	168	185	185	214	177	215	172
Textiles, clothing and leather products	17	19	23	25	44	22	19
Rubber and plastic products	41	46	35	25	67	72	60
Other non-metallic mineral products	55	48	39	37	36	49	47
Pulp, paper and paper products; printing and publishing[3]	41	43	38	38	33	37	29
Furniture; wood and straw products[3]	(d)	(d)	(d)	(d)	8	11	16
Other manufactured goods; Recycling	20	21	21	23	21	18	7
Electricity, gas and water supply	187	188	192	187	214	177	168
Construction	29	19	19	15	11	11	4
Transport and storage	6	7	8	10	13	8	15
Post and telecommunications[2]	352	341	317	386	389	408	414
Research and development consultancy; Technical testing and analysis	616	628	631	675	850	802	935
Computer related activities	404	435	494	555	635	744	674
Miscellaneous business activities[1]	11	11	12	12	14	13	(d)
Public administration	16	15	15	14	11	5	8
Wholesale and retail trade	4	4	4	4	5	6	9

Source: ONS

Notes:
1. (d) denotes disclosive figures.
2. There have been shifts in expenditure in product groups because of company misreporting, mainly in Radio, television and communication equipment, Aerospace, Other machinery, Post and telecommunications. Where possible, figures have been revised for previous years.
3. From 1989 to 1992 Furniture; Wood and straw products was included with Pulp, paper and paper products; Printing and publishing.

Table 12 Current and capital expenditure, and as a percentage, on R&D performed in the UK Businesses detailed product groups, 1995

	£ million					Per Cent				
	Total	Capital Total	Current Total	Salaries & Wages	Other current	Total	Capital Total	Current Total	Salaries & Wages	Other current
Total	**9379**	**1026**	**8352**	**3685**	**4668**	**100**	**11**	**89**	**39**	**50**
Agriculture, hunting and forestry; Fishing(1)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Extractive Industries	65	6	59	28	30	100	9	91	43	46
Electrical machinery and apparatus	494	28	466	192	274	100	6	94	39	55
Radio, television and communication equipment	590	52	539	265	274	100	9	91	45	46
Chemicals, man made fibres. Processing of nuclear fuel	855	94	761	322	438	100	11	89	38	51
Pharmaceuticals, medical chemicals and botanical products	1788	402	1386	573	814	100	22	78	32	46
Refined petroleum products and coke oven products	61	15	46	22	24	100	25	75	36	39
Aerospace	879	46	833	309	524	100	5	95	35	60
Motor Vehicles and parts	755	100	656	273	382	100	13	87	36	51
Shipbuilding and repairs(2)	20	*	20	12	8	100	*	100	60	40
Other transport equipment	18	1	18	6	12	100	6	100	33	67
Casting of iron and steel	46	1	45	27	18	100	2	98	59	39
Non-ferrous metals	20	1	19	9	10	100	5	95	45	50
Fabricated metal products	100	4	96	46	50	100	4	96	46	50
Precision instruments	303	18	285	147	138	100	6	94	49	46
Office machinery and computers	150	19	131	58	73	100	13	87	39	49
Other machinery	559	22	537	247	290	100	4	96	44	52
Food products and beverages; Tobacco products	172	17	155	85	70	100	10	90	49	41
Textiles, clothing and leather products(2)	19	*	19	5	14	100	*	100	26	74
Rubber and plastic products	60	9	51	26	25	100	15	85	43	42
Other non-metallic mineral products	47	3	44	22	22	100	6	94	47	47
Pulp, paper and paper products; printing and publishing	29	1	28	11	18	100	3	97	38	62
Furniture; wood and straw products	16	2	14	6	8	100	13	88	38	50
Other manufactured goods; Recycling(2)	7	*	7	4	3	100	*	100	57	43
Electricity, gas and water supply	168	19	149	78	72	100	11	89	46	43
Construction(2)	4	*	4	3	1	100	*	100	75	25
Transport and storage(2)	15	*	15	9	6	100	*	100	60	40
Post and telecommunications	414	26	388	177	211	100	6	94	43	51
Research and development consultancy; Technical testing and analysis	935	66	869	411	458	100	7	93	44	49
Computer related activities	674	54	620	273	347	100	8	92	41	51
Miscellaneous business activities(1)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
Public administration	8	1	7	4	3	100	13	88	50	38
Wholesale and retail trade	9	2	7	3	4	100	22	78	33	44

Source: ONS

Notes:
1. (d) denotes disclosive figures.
2. * denotes a value too small to display.

Table 13 Government and business enterprise personnel engaged on R&D in the UK, 1988 to 1995.

Full time equivalents, thousands

	1988	1989	1990	1991	1992	1993	1994	1995	% change in 1995 from 1994
PERSONNEL ENGAGED ON R&D									
- Business Enterprise	185	176	171	159	159	164	157	148	-6
- Research Councils	13	13	13	12	13	13	12	12	-3
- Government Departments[1]	24	23	24	24	25	22	20	17	-14
Total Civil	**n/a**	**159**	**159**	**153**	**156**	**164**	**155**	**146**	**-6**
Total Defence	**n/a**	**53**	**49**	**42**	**40**	**33**	**35**	**31**	**-10**
RESEARCHERS									
- Business Enterprise	89	85	83	80	82	86	83	84	2
- Research Councils	6	6	6	6	6	6	6	6	-2
- Government Departments[1]	9	9	9	9	9	8	8	8	-3
Total Civil	**n/a**	**76**	**77**	**77**	**79**	**83**	**79**	**81**	**2**
Total Defence	**n/a**	**24**	**21**	**18**	**18**	**17**	**18**	**17**	**-4**
TECHNICIANS									
- Business Enterprise	46	46	43	38	38	40	40	33	-16
- Research Councils	2	2	2	2	2	3	2	2	-5
- Government Departments[1]	4	4	4	4	4	4	4	4	-3
Total Civil	**n/a**	**40**	**38**	**35**	**36**	**41**	**38**	**33**	**-15**
Total Defence	**n/a**	**12**	**11**	**9**	**8**	**6**	**8**	**7**	**-14**
ADMIN & OTHER STAFF									
- Business Enterprise	50	45	45	41	39	37	34	30	-12
- Research Councils	5	5	5	5	5	4	4	4	-4
- Government Departments[1]	11	10	11	11	11	9	8	5	-33
Total Civil	**n/a**	**44**	**44**	**41**	**41**	**41**	**37**	**33**	**-12**
Total Defence	**n/a**	**17**	**17**	**15**	**14**	**10**	**9**	**7**	**-25**

Source: ONS

Note:
1. Excludes NHS employment, as these figures were not available.

Table 14 Estimated Government Office Regional (GOR) breakdown of expenditure on Intramural R&D in the Business, Government and Higher Education sectors, 1995

	R&D performed within business (BERD)		R&D performed within Government Establishments (GOVERD) [1]		R&D performed within Higher Education Institutions (HERD)	
	£m	percentage of regional GDP	£m	percentage of regional GDP	£m	percentage of regional GDP
United Kingdom	**9379**	**1.34**	**2076**	**0.30**	**2695**	**0.39**
North East	230	0.86	16	0.06	91	0.34
North West and Merseyside	1121	1.50	82	0.11	223	0.30
North West	993	1.50	71	0.11	162	0.24
Merseyside	128	1.49	11	0.13	60	0.71
Yorkshire and the Humber	279	0.52	46	0.08	209	0.39
East Midlands	615	1.28	65	0.13	142	0.30
West Midlands	663	1.10	179	0.30	149	0.25
Eastern	2024	2.98	261	0.39	195	0.29
London	881	0.86	281	0.27	669	0.65
South East	2301	2.22	674	0.65	404	0.39
South West	777	1.42	249	0.46	122	0.22
England	**8890**	**1.50**	**1852**	**0.31**	**2205**	**0.37**
Wales	96	0.33	31	0.11	102	0.35
Scotland	332	0.56	175	0.29	336	0.56
Northern Ireland	61	0.38	18	0.11	52	0.32

Source: ONS

Note:
1. Figures include estimates for those areas of Central Government not available from the Government Survey and local authorities.

Table 15 Estimated regional breakdwn of personnel engaged on R&D in the Business and Government sectors, 1995[1][2]

	R&D performed within business		R&D performed within Government Establishments[3]	
	Full time equivalents 000's	% of the regional Labour Force[4][5]	Full time equivalents 000's	% of the regional Labour Force[4][5]
United Kingdom	**148.3**	**0.67**	**28.9**	**0.13**
North East	4.2	0.48	0.1	0.01
North West and Merseysid	17.1	0.68	0.9	0.03
Yorkshire and the Humber	6.2	0.33	0.5	0.03
East Midlands	11.5	0.74	0.8	0.05
West Midlands	12.4	0.61	2.0	0.10
Eastern	32.7	1.73	4.7	0.25
London	11.4	0.36	3.5	0.11
South East	33.1	1.16	9.1	0.32
South West	13.1	0.76	3.1	0.18
England	**141.8**	**0.77**	**24.7**	**0.13**
Wales	2.1	0.22	0.4	0.04
Scotland	6.1	0.31	3.6	0.19
Northern Ireland	1.2	0.21	0.2	0.04

Source: ONS

Notes:
1. Regional breakdown is based on the GOR (Government Office Region) classification.
2. There is no regional breakdown for Higher Education for 1995, as only research staff personnel have been collected in this period.
3. Government sector covers Central Government only. Local Authorities, NHS and those areas of Central Government not available from the Government survey are excluded.
4. Labour Force figure used is a head count. An estimate of the Labour Force in full-time equivalents(FTE) is not available. Using the head count figure gives a lower percentage than a FTE would give.
5. Labour Force figures are for March 1996.

Table 16 OECD Science and Technology indicators

Gross Expenditure on R&D: International Comparisons, 1988 to 1995

	Year	UK	Germany(1)	France(2)	Italy	Japan(3)	Canada	USA(4)
Gross Domestic Product (GDP)(5) (£ billion at ppp)(6)	1988	469.8	560.2	486.5	464.0	1056.0	263.3	2788.6
	1989	514.2	623.6	543.4	511.7	1186.0	288.7	3069.0
	1990	549.4	699.8	592.8	556.1	1326.2	306.4	3306.4
	1991	573.9	865.6	661.0	620.6	1512.0	329.8	3609.0
	1992	597.0	916.8	671.6	634.9	1535.8	325.8	3608.8
	1993	628.6	957.2	686.3	644.1	1644.1	356.3	3989.7
	1994	665.1	1035.8	720.3	690.9	1709.5	385.6	4297.1
	1995	697.5	1025.8	751.2	707.3(e)	1696.9(e)	397.7(e)	4441.9(e)
Gross Expenditure on R&D (GERD) (£ billion at ppp)(6)	1988	10.0	16.0	11.1	5.6	28.0	3.7	77.8
	1989	11.1	17.9	12.7	6.3	32.8	4.0	84.8
	1990	12.0	19.2	14.3	7.2	37.9	4.5	93.0
	1991	12.1	22.6	15.9	8.2	42.6	5.0	102.5
	1992	12.7	22.8	16.3	8.3	42.3	5.1	100.2
	1993	13.5	23.3	16.8	8.1	44.0	5.8	105.5
	1994	14.0	24.2	17.1	8.0	45.1	6.2	108.9
	1995	14.3	23.4	17.6	8.1(p)	47.2(p)	6.4(p)	114.6(p)
GERD as a percentage of GDP	1988	2.14	2.86	2.28	1.22	2.66	1.39	2.79
	1989	2.15	2.87	2.33	1.24	2.77	1.39	2.76
	1990	2.18	2.75	2.41	1.30	2.85	1.47	2.81
	1991	2.11	2.76	2.41	1.32	2.82	1.52	2.84
	1992	2.13	2.48	2.42	1.31	2.76	1.57	2.78
	1993	2.15	2.43	2.45	1.26	2.68	1.63	2.64
	1994	2.11	2.33	2.38	1.16	2.64	1.62	2.53
	1995	2.05	2.28	2.34	1.14(p)	2.78(p)	1.60(p)	2.58(p)
BERD as a percentage of GDP	1988	1.47	2.07	1.35	0.70	1.93	0.77	2.00
	1989	1.49	2.07	1.41	0.73	2.06	0.75	1.96
	1990	1.51	1.98	1.46	0.76	2.15	0.79	2.00
	1991	1.42	1.81	1.48	0.77	2.12	0.81	2.07
	1992	1.42	1.70	1.51	0.77	2.03	0.86	2.01
	1993	1.44	1.62	1.51	0.71	1.90	0.93	1.88
	1994	1.38	1.54	1.47	0.65	1.87	0.94	1.80
	1995	1.34	1.51	1.44	0.65(p)	1.95(p)	0.96(p)	1.85(p)
GOVERD as a percentage of GDP	1988	0.29	0.36	0.57	0.27	0.25	0.28	0.30
	1989	0.30	0.37	0.65	0.27	0.24	0.28	0.30
	1990	0.29	0.35	0.58	0.27	0.23	0.30	0.30
	1991	0.31	0.36	0.55	0.28	0.23	0.30	0.28
	1992	0.31	0.35	0.51	0.28	0.25	0.29	0.27
	1993	0.31	0.37	0.52	0.26	0.27	0.28	0.27
	1994	0.31	0.36	0.49	0.23	0.26	0.27	0.25
	1995	0.30	0.34	0.49	0.23(p)	0.29(p)	0.25(p)	0.24(p)

Source : OECD databank (March 1997).

Notes:
1. There are breaks in series between 1990 and 1991, and 1991 and 1992.
2. For government and business enterprise data there is a break in series between 1991 and 1992.
3. Data from Japan are adjusted by OECD.
4. Excludes most or all capital expenditure. There is a break in series betwwen 1990 and 1991.
5. The measure of GDP used is at market prices, based on the UN definition.
6. Amounts are converted to £ sterling using the purchasing power parities (ppp) developed by the OECD.

(P) = Provisional
(E) = Estimate

Table 17 International comparison of gross expenditure on R&D by sector of performance and source of funding 1995

Per cent

	UK	Germany(1)	France	Italy(p)	Japan(2)(p)	Canada(p)	USA(3)(p)
Percentage by sector of performance							
Government	14.5	15.0	20.9	20.1	10.4	15.8	9.5
Business enterprise	65.5	66.1	61.6	57.1	70.3	60.0	71.8
Higher education	18.8	18.9	16.2	22.9	14.5	22.9	15.2
Other	1.2	-	1.3	-	4.8	1.3	3.4
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Percentage by source of funds (4)							
Government	33.3	37.1	41.6	47.4	19.5	37.9	36.1
Business enterprise	48.0	60.8	48.7	48.7	73.4	46.7	59.9
Abroad	14.3	1.8	8.3	3.9	0.1	10.5	-
Other	4.3	0.3	1.4	-	6.9	4.9	4.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: OECD databank (March 1997).

Notes:
1. Data for 'other' included elsewhere.
2. Data for Japan are OECD estimates.
3. Excludes most or all capital expenditure.
4. Data for France and Japan are for 1994.

(P)=PROVISIONAL

Table 18 R&D performed in the Business Enterprise sector (BERD), 1988 to 1994

£ billion at ppp(1)

Year	UK	Germany(2)	France(3)	Italy	Japan(4)	Canada	USA(5)
1988	6.9	11.6	6.6	3.3	20.4	2.0	55.7
1989	7.7	12.9	7.6	3.7	24.4	2.2	60.2
1990	8.3	13.8	8.6	4.2	28.6	2.4	66.1
1991	8.1	15.7	9.8	4.8	32.1	2.7	74.6
1992	8.5	15.6	10.2	4.9	31.1	2.8	72.4
1993	9.1	15.5	10.4	4.6	31.3	3.3	74.8
1994	9.2	16.0	10.6	4.5	32.0	3.6	77.3
1995	9.4	15.5	10.8	4.6(p)	33.1(p)	3.8(p)	82.3(p)

Source : OECD databank (March 1997).

Notes:
1. Amounts are converted to £ sterling using the purchasing power parities (ppp) developed by the OECD.
2. There are breaks in series between 1990 and 1991, and 1991 and 1992.
3. There is a break in series between 1991 and 1992.
4. Data for Japan are adjusted by OECD.
5. Excludes most or all capital expenditure. There is a break in series between 1990 and 1991.

(P)=PROVISIONAL

Table 19 International comparison of Government funding of R & D in 1995 by socio-economic objective (percentage distribution)

Per cent

		UK(1)	Germany(p)	France	Italy(p)	Japan(2)(p)	Canada(p)	USA(3)
Agriculture, forestry and fishing		5.0	2.6	3.5	2.7	3.4	13.8	2.5
Industrial development		2.9	13.2	5.1	8.8	3.8	10.4	0.8
Energy		0.9	3.5	4.5	3.1	20.4	8.2	4.1
Infrastructure		1.7	1.6	0.6	0.5	1.9	5.1	2.8
Environmental protection		2.3	3.5	2.0	2.4	0.6	2.5	0.8
Health		13.4	3.1	5.0	8.8	2.8	8.9	17.0
Social development and services		2.4	2.4	0.8	2.8	1.2	3.7	1.1
Earth and atmosphere		1.9	2.4	0.8	1.4	1.3	1.6	1.3
Advancement of knowledge		29.4	52.8	35.0	52.8	51.1	33.4	4.1
Civil space		2.7	5.1	10.6	8.7	7.4	7.5	11.5
Defence		37.0	9.1	30.3	4.7	6.2	4.8	54.1
Not elsewhere classified		0.4	0.7	1.9	3.3	-	-	-
	%	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total	**£million(4)**	**5679**	**9367**	**8391**	**4109**	**8819**	**2075**	**43994**

Source: OECD databank (March 1997).

Notes:
1. Includes NHS net expenditure
2. Data for Japan are OECD estimates.
3. Excludes most or all capital expenditure.
4. Amounts are converted to £ sterling using the purchasing power parities (ppp) developed by the OECD.

(P)=PROVISIONAL

THE BUDGET - 2 JULY 1997

The following are the proposed changes in taxation and national insurance as set out in the *Financial Statement and Budget Report 1997* (The Stationery Office July 1997, ISBN 0 10 263398 3, price £16.80)

Note: Figures in brackets refer to the appropriate line of the Revenue effects of Budget tax measures which follows the article, where the yield or cost of each proposal is shown. The symbol " - " in brackets means that the proposal has no effect; the symbol " $ " in brackets means that it has negligible effects of less than £3 million a year.

Promoting economic stability

In order to encourage stability in the housing market and balanced economic growth the Budget:

- reduces mortgage tax relief from 15 per cent to 10 per cent with effect from 6 April 1998. Relief will remain at the basic rate for those aged 65 and over who take out a loan to buy a life annuity (1); and

- increases the rate of stamp duty on transfers of property (except shares) from 1 per cent to 1.5 per cent if the price is more than £250,000, or to 2 per cent if the price is more than £500,000. The new rates will apply from 8 July, except where the transfer is made in pursuance of a contract made on or before 2 July (2).

Encouraging long-term investment

The Budget builds on the work of the corporate tax review the Government carried out whilst in Opposition and which has continued into Government.

Companies and shareholders

The Budget contains major changes to corporation tax. The Government's objective is to create an improved climate for long term investment. To achieve this objective, the following measures are proposed:

- **reduction in the main corporation tax rate** - the main rate of corporation tax will be reduced from 33 per cent to 31 per cent from 1 April 1997, enhancing the UK's position as the major industrialised country with the lowest corporate tax rate, 50,000 companies will benefit (3).

- **reduction in the small companies' rate** - the small companies' rate of corporation tax will be reduced from 23 per cent to 21 per cent from 1 April 1997, 400,000 companies will benefit (4).

- **abolition of payments of tax credits** (5):

  - payment of tax credits to pension schemes and UK companies (other than charitable companies) will be abolished for dividends paid on or after Budget day;

  - other shareholders will generally not be affected by changes to tax credits until 6 April 1999, when tax credits will normally no longer be payable to other shareholders with no tax liability;

  - the rate of tax credits will halve to 10 per cent from April 1999. No individual shareholder paying tax at the lower, basic, or higher rates on all his or her dividends will face a higher income tax bill as a result of the changes, because dividend income within the lower or basic rate bands will be taxed at 10 per cent and higher rate income at 32.5 per cent (the halving of the rate of tax credits to 10 per cent reduces the amount of gross dividend income, so the 22.5 per cent extra tax payable at the higher rate is equivalent to the 20 per cent extra payable under the existing system);

  - the April 1999 change is timed to fit with the introduction of individual savings accounts which will be available for holders of TESSAs and PEPs as well as other individual shareholders and savers;

  - transitional relief for charities will be available from April 1999 through public expenditure over a five year period.

- **advance corporation tax** - will continue to be paid by companies at the same rate as now.

- **abolition of foreign income dividends from April 1999** - with the exception of the arrangements for international holding companies, the special rules for foreign income dividends will cease to apply from 6 April 1999. The change will protect the Exchequer yield of advance corporation tax once the abolition of payable tax credits has made shareholders indifferent whether they receive an ordinary dividend (which currently carries a payable tax credit) or a foreign income dividend (which does not)(6).

- **temporary doubling of capital allowances for small and medium enterprises' plant and machinery** - expenditure on plant and machinery by small and medium sized enterprises for 12 months after Budget day will qualify for a first year allowance at double the previous rate of writing down allowance, that is at 50 per cent, or 12 per cent if the long-life asset rules apply (7).

- **restriction of loss carry back to one year** - the period for which a company can carry back trading losses and certain other reliefs will be reduced from three years to one year, except for losses made in the 12 months before a trade ceases. This reverses a change introduced in 1991 at the depth of the recession (8).

The film industry

To stimulate the production of British films and thereby promote employment, investment and opportunities in the film industry, the Budget will introduce 100 per cent write-off for production and acquisition expenditure incurred after Budget day on British qualifying films costing £15 million or less to make and completed in a period of three years from Budget day (9).

Modernising the welfare state

Welfare to Work

The Budget introduces the Government's Welfare to Work programme, to attack youth and long-term unemployment and the low levels of employment among lone parents, and break the spiral of escalating spending on social security. A total of £5.2 billion will be invested in this programme.

- From January 1998, in 10-15 pathfinder areas, and from April 1998 nationally, the New Deal for young people will help those aged under 25 who have been unemployed for more than six months through four routes from welfare into work.

- In a New Deal for the long-term unemployed, from June 1998 businesses will be offered a subsidy of £75 a week for six months if they employ anyone who has been unemployed for a period of two years or more. This will help business cover the increased costs it faces while the new employee's work skills are being upgraded. The Government will also reform the "16 hour" rule to help this group access full-time training and education where it improves their employability.

- Lone parents whose youngest child is in the second term of full-time school will be offered help with job search, training, re-skilling and if necessary childcare. The programme will be voluntary and will be delivered by designated Employment Service caseworkers. The Government's approach will be demonstrated in eight areas starting in July 1997, and will be available nationally from October 1998. The programme will be supported, as part of the Government's national childcare strategy, by extra help with childcare costs within Family Credit, Housing Benefit and Council Tax Benefit; by the use of lottery money to deliver after-school clubs; and by 50,000 new places for trainee child carers taken on under the New Deal for the unemployed.

Welfare to Work - a New Deal for the young unemployed

The New Deal for the young unemployed will begin in around 10 per cent of the country in January 1998. It will start nationally in April 1998. It will be delivered by the Employment Service, in partnership with a wide range of other government agencies and departments, and with the private and voluntary sectors. For each young person, the programme will start with a gateway period of careers advice and intensive help with looking for work, and with training in the skills required as entrants to the world of work. Young people will be helped towards the New Deal option that best suits their needs. Throughout the whole process they will be supported by a designated caseworker. As young people near the end of their option, further help and support will be provided to help them stay in work. Extra help will be focused on those with most disadvantages.

The employer option

Many young people will find they can move straight from welfare into a job. To encourage employers to play their part, the Government will offer a £60 a week subsidy payable for up to six months. The payment will be made with the minimum of bureaucracy, and will be accompanied by a national effort to engage the business community. In addition, £750 per person has been allocated to finance training towards accredited qualifications.

Full-time education or training

For some young people the most appropriate option will be full-time training in skills up to NVQ level 2. The method will vary from on-the-job training in vocational skills to a course at the local college. In each case the emphasis will be on improving employability. For this programme, the Government will reform the "16 hours study rule" which has prevented unemployed people from accessing full-time education and training.

A job with the voluntary sector

Voluntary organisations will be invited to come forward with innovative ideas to provide young people with the work experience and skills that will help improve their employability. The placement must have a training element. The Government is looking in particular for placements that help meet other social and economic objectives, for example tackling the causes of crime. Particular emphasis will be placed on voluntary sector placements to provide 50,000 new trained childcarers to support other aspects of the Welfare to Work programme.

The Environmental Task Force

The aim of the new Environmental Task Force will be to improve the employability of young people through projects of benefit to the whole community, including projects to help meet the Government's target for heat conservation and efficiency. It will be delivered by a wide variety of private and voluntary sector providers. Again, training for accredited qualifications will be an important element.

Under the New Deal, rights need to be balanced by responsibilities. Benefit sanctions will apply to young people who refuse an offer of help.

Table 1 Financing Welfare to Work[1]

£ million

	1997 to 98	1998 to 99	1999 to 00	2000 to 01	2001 to 02	**1997 to 02**
Spending by programme: [2] [3]						
A New Deal for young people	100	700	830	770	740	**3150**
A New Deal for the long-term unemployed	0	100	80	80	80	**350**
Sub-total	**100**	**800**	**910**	**850**	**830**	**3500**
of which - initially allocated to departments	100	700	800	700	700	3000
unallocated						500
A New Deal for Lone Parents [4]	0	40	50	60	60	**200**
A New Deal for Schools	100	300	300	300	300	**1300**
Provision for Future Measures [5]	0	50	50	50	50	**200**
Total expenditure	**200**	**1180**	**1310**	**1260**	**1240**	**5200**
Windfall tax [6]	**2600**	**2600**	**0**	**0**	**0**	**5200**

1 The spending in this table, financed by the windfall tax, is outside the Control Total.

2 Illustrative levels of spending based on current levels of unemployment. Actual provision for any particular year will be decided in the light of the number of eligible people and the effectiveness of the programme.

3 Departmental breakdown of spending on the basis of these illustrative figures would be:

Department for Education and Employment	*160*	*900*	*1010*	*920*	*920*	*3900*
Department of Social Security	*20*	*50*	*50*	*.60*	*60*	*240*
Scottish Office	*10*	*30*	*30*	*30*	*30*	*120*
Welsh Office	*0*	*20*	*20*	*20*	*20*	*60*
Northern Ireland	*10*	*40*	*40*	*40*	*40*	*180*

4 Plus extra help with child care through Family Credit and other in-work benefits.

5 Including the Universitry for Industry and Welfare to Work help for people on Incapacity Benefit.

6 Forecast receipts.

While there is a pressing need to target spending on the problems of the existing young and long-term unemployed, a root of the unemployment problem lies in under-achievement at school. The New Deal for schools will start to tackle the run-down infrastructure of schools, so that youngsters will be educated in schools fit for the twenty first century, not the nineteenth. It will also cover IT equipment to equip school leavers with technology skills. In order to benefit, individual schools will have to commit themselves to improved performance.

For the programmes for the unemployed to be successful in breaking the cycle of despair, an enthusiastic response from employers and the voluntary sector will be essential. A task force, headed by Sir Peter Davis, Chief Executive of the Prudential Group, has been established to advise on the development of the programme and monitor its effectiveness.

These programmes are a first step. The Government aims to extend the approach adopted on behalf of the young and long-term unemployed and lone parents to other groups excluded from the labour market, including people on Incapacity Benefit. The Government also plans to improve skills and employability through a new University for Industry. Detailed proposals will be announced in due course. Provision has also been made within the resources provided by the windfall tax for future initiatives in support of the Welfare to Work strategy.

Windfall tax

The Welfare to Work programme will be funded by a one-off tax on the excess profits of the privatised utilities. The tax will apply to companies, privatised by flotation, and subject to economic regulation under specified Acts.

A company's windfall tax liability will be assessed as a proportion of the difference between the value placed on the company at the time of sale and a valuation figure derived by applying a single price-earnings ratio of 9 to its average annual post-tax profits for normally four full accounting years following privatisation.

The tax will be charged at a rate of 23 per cent. It will be paid in two instalments due on 1 December 1997 and 1 December 1998. Table 1 shows the profile of receipts from the tax, compared with the expected spending.

The yield from the windfall tax will be about £5.2 billion. Taking into account the change to the gas levy, which the Government considered appropriate in part because of its impact on Centrica, the yield of the two measures to the Exchequer is some £4.8 billion over the next three years.

The windfall tax will be complemented by a forward-looking review of utility regulation which will seek to ensure a long-term stable framework of regulation for the utilities, one which adequately protects consumers and provides the right incentives for the firms themselves. Any proposals from the review which have implications for companies will be introduced only after the windfall tax instalments are paid.

Individual Learning Accounts

ILAs could provide individuals with the incentive to invest in training to gain the skills they want. One model for an ILA would be a savings account dedicated to training with special rules controlling payments in and withdrawals. The Government will launch a consultation process for employers and other interested parties. Issues include what the rules should be, what sort of training should be covered and what incentives would be justified.

Moving towards a fairer tax system

VAT on fuel and power

One of the Government's key election pledges was to reduce the 8 per cent rate of VAT on fuel and power to 5 per cent, the lowest level allowed under European Community law. This will come into effect on 1 September 1997 in time for domestic, charity non-business and small-scale business users to get the benefit of the lower rate in their bills for the winter period (11).

The change will cost £220 million in 1997-98 and £485 million in the first full year (1998-99). To pay for it, the Budget contains the following tax changes, which are also designed to improve the fairness of the tax system.

Private medical insurance

Tax relief on premiums for private medical insurance for the over 60s, which is received by about 1/3 million people, is to be withdrawn in respect of contracts taken out on or after Budget day. Premiums on pre-Budget day annual contracts will continue to qualify for relief until these contracts come to an end and in certain circumstances relief will be given to those who have not finalised contracts by Budget day (12).

Anti-avoidance measures

The Budget contains the following measures designed to secure the tax base and combat avoidance by blocking tax loopholes and restricting the use of special reliefs:

Corporation tax

- **taxing dividends on trading assets as trading profits** - from Budget day, include dividend income as part of the holder's trading profits when shares are held as trading assets rather than investments (13).

- **Finance Leasing: acceleration of capital allowances** - from Budget day, prevent acceleration of capital allowances on machinery and plant through the use of finance leases and subsidiaries with different year ends(14).

- **Finance Leasing: sale and leaseback, transfers of unused past allowances** - prevent the sale of unused capital allowances through the sale of machinery and plant and finance leaseback on or after Budget day(15).

- **"Company Purchase schemes"** - from Budget day when a company is sold to avoid paying corporation tax liabilities, the Inland Revenue will be able to collect the unpaid tax from the previous owners of the company, or from other companies previously in the same group. This reinforces a similar measure in the 1994 Finance Act. The legislation will be included in the 1998 Finance Bill (16).

PAYE

- **PAYE avoidance (trade debts)** - prevent employers from avoiding their obligation to operate PAYE by paying their employees in trade debts. Legislation taking effect from Budget day will be included in the 1998 Finance Bill (17).

VAT

- **Second-hand goods margin scheme** - restrict the use of the special scheme for accounting for VAT on second-hand goods on the seller's margin, where the goods have been acquired tax-free under the transfer of a going concern provision, from 3 July ($).

- **Cash accounting scheme** - counter the use of the VAT cash accounting scheme for tax avoidance, from 3 July (18).

- **Capital goods scheme** - extend the scope of the VAT capital goods scheme to include building refurbishment and fitting out costs and civil engineering works, and to block other potential loopholes, from 3 July ($).

Insurance premium tax

- **Health care insurance** - reinforce the liability borderline between taxable and exempt health care insurance by applying the 4 per cent insurance premium tax rate to certain long-term health care insurance, from 1 October 1997. This will also prevent distortion of trade (19).

Other anti-avoidance measures

Strengthening tax rules for multinationals - the Government intends to change and modernise the tax rules on transfer pricing and Controlled Foreign Companies in the Finance Bill following the next Budget. The purpose of the changes will be to make the tax provisions more effective, to allow them to be applied more fairly, and to protect UK tax revenue. This will strengthen the legislation and bring it into line with modern practice in other major countries. The Government proposes to publish draft legislation during 1997 and consult on the detail. This will build on existing work and comments already made by taxpayers and their representatives in their responses to consultations carried out by the Inland Revenue under the previous Government, which had itself announced its intention to legislate in these areas.

Protecting the environment and health

The Government places a high priority on use of the tax system to deliver environmental objectives. Where environmental taxes can make an efficient contribution to a cleaner environment, and where their distributional implications are acceptable, the Government will consider their use.

In line with this, the Budget includes further announcements:

- work is to be undertaken on the environmental costs associated with the **extraction of aggregates and other quarrying**. These costs include impacts on landscape, on local residents and effects of noise and dust. Results of this work will feed into consideration of policy measures. They will be considered alongside assessment of the operation and level of the landfill tax;

- the Department of the Environment, Transport and the Regions will be issuing, in time to inform the next Budget, a consultation document examining ways of improving **water quality**, by reducing discharges of pollutants and encouraging greater clean-up. There are a number of policy options, including economic instruments, and consultation will contribute to the choice of measures;

- vehicle excise duty is being indexed in November. The Government also intends to go ahead with the proposal, made by the last administration, to reduce **VED** by up to £500 for lorries which meet a low emission standard. Details are being worked up following recent completion of consultation. This will encourage the fitting of particulate traps or conversion to gas power. But the existing measure did not go far enough and it will be extended to buses, which also make a significant contribution to harmful urban emissions ($);

- the Government will review the structure of bus **fuel duty rebate**, including looking at its role in promoting lower emission vehicles;

- the changes to **excise duties on fuels** signal the Government's commitment to placing the environment at the core of the tax system by discouraging environmental pollution by road users. The freeze on road fuel gases will give another signal to help encourage conversion of vehicles to use road fuel gases ($);

- the Government has stated that one of its objectives is to help those on low incomes to **save energy** and will consult on the best means to achieve this. Section 111 of the Finance Act 1997 requires the Treasury to produce a report on the consequences to the Exchequer of VAT relief for energy-saving materials by May 1998. This deadline has now been brought forward to the end of October 1997 and the scope has been extended into a wider consultation exercise which will also look at other options for meeting the objective.

Excise duties

Tobacco - The Government is committed to increasing tobacco duties on average by at least 5 per cent a year in real terms (compared to the previous Government's 3 per cent commitment) as one measure aimed at reducing tobacco consumption and dissuading young people from starting smoking. From 1 December this year, cigarette duty will be increased by approximately 5.2 per cent in real terms, and the duties on cigars and on other smoking tobacco and chewing tobacco will be increased by 5 per cent in real terms. There will be no increase for hand-rolling tobacco (23).

Fuel duties - The tax (duty plus VAT) on leaded, unleaded and super-unleaded petrol, and diesel, will rise by 4 pence per litre from 6 pm on Budget day(20). The previous Government's commitment to future annual increases averaging at least 5 per cent in real terms will be raised to at least 6 per cent. Also from 6 pm on Budget day, the duties on gas oil and fuel oil will rise by 0.08 pence per litre and 0.06 pence per litre respectively (22). The duty on road fuel gases (liquefied petroleum gas and compressed natural gas) will be held at current levels and the duty differential with diesel will be at least maintained for this Parliament.

Alcohol duties - The duties on all alcoholic drinks will be increased by 3 per cent, in line with inflation, from 1 January 1998 (26).

Changes to excise duties

	Changes in duty (per cent)	Effect of tax [1] on typical item (increase in pence)	Unit
Tobacco			
Cigarettes	8.2 [2]	19	packet of 20
Cigars	8	8	packet of 5
Hand-rolling tobacco	0	0	25g
Pipe tobacco	8	10	25g
Fuel			
Leaded petrol	8.2	4	litre
Unleaded petrol	9.3	4	litre
Super-unleaded petrol	8.5	4	litre
Diesel	9.3	4	litre
Gas oil	3.2	0.08 (exc VAT)	litre
Fuel oil	3.1	0.08 (exc VAT)	litre
AVGAS	8.2	2	litre
Road fuel gas	0	0	kg
Alcohol			
Spirits	3	19	70cl bottle
Beer	3	1	pint
Table wine	3	4	75cl bottle
Cider	3	1	pint
Coolers	3	1	33cl bottle
Sparkling wine	3	5	75cl bottle
Fortified wine	3	5	70cl bottle

1 Tax refers to duty plus VAT unless otherwise stated.

2 Specific duty up by 9.2 per cent; ad valorem duty unchanged at 21 per cent of retail price.

Vehicle Excise Duty

Vehicle Excise Duty (VED) on private/light goods vehicles (PLG), chiefly cars, taxis and vans will rise by £5 to £150 (3.4 per cent) for licences taken out after 15 November 1997. Duty rates on goods vehicles will also rise by the same percentage (rounded to the nearest £10). (All linked rates will rise accordingly.) (21).

A measure will be taken to enable the Driver and Vehicle Licensing Agency (DVLA) to charge motor manufacturers and vehicle fleet operators for the setting up and use of computer links for registration and licensing ($).

Other tax measures

Gilt Interest

From 6 April 1998 anyone holding gilt-edged securities will be able to receive their interest gross rather than after deduction of tax if they want to. This simplifies and helps make the gilt market more attractive to investors.

VAT turnover thresholds

The annual turnover threshold above which traders must register for VAT will rise from £48,000 to £49,000 on 1 December 1997, and the deregistration threshold will rise from £46,000 to £47,000. The registration and deregistration thresholds for acquisitions from other Member States will rise from £48,000 to £49,000 on 1 January 1998 ($).

Gas levy reduction

The Government proposes to cut the gas levy to zero, with full effect from April 1998. Under present market circumstances the levy distorts the market and consumers suffer through higher prices. It also imposes an unreasonable handicap on those companies affected. In taking the decision, the Government has considered the tax burden on Centrica which would result from having to pay both the windfall tax and gas levy. Appropriate legislation to bring about this change will be introduced in the next year (25).

Tax policy reviews

North Sea taxation

The Budget also announces a review of the North Sea fiscal regime to ensure that an appropriate share of North Sea profits are being taxed while continuing to maintain a high level of oil industry interest in the future development of the UK's oil and gas reserves.

Capital Gains taxation

The Budget announces that the Government will consult industry widely on the reform of capital gains tax. The findings of the review will be reported in the next Budget.

Charities

The Budget announces a review of charities' taxation. The review aims to explore options for a simpler, more coherent system of tax reliefs which is better suited to the way charities work today. Charities will be asked to send initial views by 1 December 1997 and these will then be worked into a consultation paper for publication in Spring 1998.

Anti-avoidance

The Budget announces a review of leakage and avoidance of direct taxes. This will include identifying situations in which significant amounts of tax are, or are at risk of, leaking from the Exchequer and how the Inland Revenue approaches the defeat and deterrence of tax avoidance schemes. One outcome of the review is expected to be proposals for legislation to counter tax leakage in future Finance Bills.

Alcohol and tobacco duties

The Budget announces a review aimed at reducing loss to Government and industry revenue through alcohol and tobacco fraud, smuggling and cross border shopping, to report by the end of 1997. It will also look at health and law and order issues. Trade associations and other interested parties will be consulted at an early stage and their views sought on the extent of the problem and practical ways in which it can be tackled

EIS/VCT Scheme

Arrangements where a substantial part of the return to investors is guaranteed, or which are backed by property, will be excluded from the Venture Capital Trust scheme and Enterprise Investment Scheme. After taking views from interested parties, the Government will publish draft legislation on guarantee arrangements for the Finance Bill following the next Budget, taking effect from 2 July 1997, and will lay regulations in Parliament on asset-backed arrangements.

Table 2 Revenue effects of Budget tax measures

	£ million yield (+)/cost (-) of measure			
	Changes from a non-indexed base	Changes from an indexed base		
	1997 to 98	1997 to 98	1998 to 99	1999 to 00
Promoting economic stability				
1 Mortgage interest relief - restricted to 10 per cent	0	0	900	950
2 Stamp duty - increase in rate on transfers of property above £250,000	240	240	490	540
Encouraging long-term investment				
Companies and shareholders				
3 Reduce the main rate of corporation tax from 33 per cent to 31 per cent from 1 April 1997	0	0	-1400	-1950
4 Reduce small companies' rate from 23 per cent to 21 per cent from 1 April 1997	0	0	-200	-250
5 Abolish payable tax credits for pension schemes and UK companies from Budget day: changes for everyone else from 6 April 1999	2300	2300	3950	5400
6 Abolish foreign income dividends from 6 April 1999	0	0	100	-200
7 Double capital allowances for small and medium enterprises' plant and machinery for one year	0	0	-230	-170
8 Limit carry back of trading losses for one year	0	0	100	250
Other measures				
9 Films: 100 per cent write-off for production costs	$	$	-5	-15
Funding the modernisation of the welfare state				
10 Windfall tax on privatised utilities	2600	2600	2600	0
Moving towards a fairer tax system				
VAT on domestic fuel and power				
11 Reduce rate from 8 per cent to 5 per cent from 1 September 1997	-220	-220	-485	-510
Private medical insurance				
12 End income tax relief	25	25	115	135
Anti avoidance measures				
13 Corporation tax: block tax leakage by taxing dividents on trading assets as trading profits	0	0	110	190
14 Corporation tax: finance leasing: block acceleration of capital allowances	250	250	300	70
15 Corporation tax: finance leasing (sale and leaseback): block transfer of unused past allowances	0	0	40	40
16 Corporation tax: block tax leakage through company purchase avoidance schemes	$	$	100	100
17 PAYE: take action against trade debt schemes	10	10	$	$
18 VAT: cash accounting scheme	10	10	15	0
19 IPT: extension of 4 per cent rate to certain long-term health insurance from 1 October 1997	$	$	5	5
Protecting the environment and health				
Excise duties on:				
20 Road fuels - increase escalator to 6 per cent real (1)	730	730	230	440
21 VED indexed for licences after 15 November 1997	35	5	20	20
22 Fuel and gas oil indexed	5	5	0	0
23 Cigarettes duty up 5.2 per cent real, hand-rolling tobacco frozen, other tobacco up 5 per cent real; tobacco escalator increased to 5 per cent (1) from 1 December 1997	5	5	160	360
Other measures				
24 Gilt interest: simplificaiton	0	0	-75	-30
25 Reduction on gas levy	0	0	-170	-190
26 Alcohol duties indexed from 1 January 1998	20	0	0	0
27 Not indexing air passenger duty in November	0	0	-5	-5
Total cost(-)/yield(+)	**6010**	**5960**	**6665**	**5180**
Total cost(-)/yield(+) (excluding windfall tax)	**3410**	**3360**	**4065**	**5180**

$ negligible

1 Tax increases previously announced and at a minimum confirmed in this Budget				
5 per cent increase in road fuel duties	*340*	*210*	*880[2]*	*965*
3 per cent real increase in tobacco duties	*15*	*10*	*250[2]*	*265*
Total	***355***	***220***	***1130***	***1230***

2 Yields in 1998 to 99 onn a non-indexed base are £1,420 million and £500 million for road fuels and tobacco respectively

Providing high quality public services

The Government's policy is to keep to the Control Totals announced by the previous Government in respect of 1997-98 and 1998-99. The Control Totals for those years are unchanged from previous plans. (See table 4.)

There will be no Public Expenditure Survey in 1997. Instead the Government is carrying out the Comprehensive Spending Review which it promised before the General Election. It will provide the basis for spending plans to be set for 1999 - 2000 onwards.

The Control Total

No change has been made to the departmental ceilings within the Control Total for 1997-98. Each department is expected to work within its existing ceiling.

For 1998-99 the Government has allocated part of the existing Reserve within the Control Total to its priorities of health and schools. Within the 1998-99 Control Total, the previous Government set a Reserve of £5 billion, part of which would normally be allocated to priority programmes, and part retained in the Reserve to deal with unforeseen contingencies. The Government has allocated part of the Reserve in this way to its priorities. It has made this allocation rather earlier than usual in order to allow the key public services to plan ahead. The details of the allocation are shown in Table 3.

Table 3 The 1998 to 99 Control Total and Reserve

	£ billion
Reserve set in 1996 Budget	5
Allocation to NHS	1.2
Allocation to schools	1
New Reserve	2.8
Control Total unchanged at:	273.6

An extra £1.2 billion has been allocated to the National Health Service, and £1 billion to schools. Scotland, Wales and Northern Ireland will receive shares of these allocations based on their relative population, according to the long-standing Barnett formula.

This allocation provides an additional £1 billion for the NHS in England, and £835 million for schools in England. Correspondingly, Scotland has been allocated an extra £195 million, Wales an extra £110 million, and Northern Ireland an extra £60 million.

The Government intends to announce guideline budget increases for local authorities to ensure that councils do not increase spending excessively. If necessary the Government will use its capping powers to ensure councils stay within these limits. For the longer term, the Government is working on a number of measures to improve local authority accountability, so that it can abolish universal capping

Other departments will be expected to work within their existing spending ceilings for 1998-99. If there are fluctuations in spending on demand-led programmes which would involve an excess of spending over departmental ceilings, then, first, departments will take policy measures to offset these, and secondly any excess will be borne on the Reserve. The Reserve for 1998-99 has been set at £2.8 billion.

No plans are being published for the Control Total for the years after 1998-99, because spending plans for these years will be set as part of the Comprehensive Spending Review. The fiscal arithmetic is based on illustrative projections of Control Total expenditure from 1999-00 onwards.

General Government Expenditure

Table 4 shows the components of General Government Expenditure up to 1998-99. The Control Total is unchanged. In addition to the Control Total, there are two new special, one-off elements of expenditure which the Government promised before the General Election

- the Welfare to Work package financed by the windfall tax on the excess profits of the privatised utility companies. This provides a New Deal for the under 25s and long-term unemployed, lone parents, and for schools, beginning with £0.2 billion in 1997-98 and £1.2 billion in 1998-99.

- investment in housing under the Capital Receipts Initiative. The Government has started to meet its commitment to reinvest capital receipts from the sale of council houses by allowing increased capital expenditure of £200 million in 1997-98 and £700 million in 1998-99. The investment will be used to improve local authority housing stock, to provide new social housing and to fund housing-related regeneration projects. The allocation of these sums between the different countries of the United Kingdom will be announced shortly.

Other components of General Government Expenditure have been newly forecast in the Budget:

Table 4 **The Control Total, GGE(X) and GGE**

	Provisional Outturn	Plans/forecasts		Changes from previous plans/forecasts		£ billion
	1996 to 97	1997 to 98	1998 to 99	1996 to 97	1997 to 98	1998 to 99
Control Total	**260.4**	**266.4**	**273.6**	**-0.2**	**0**	**0**
Welfare to Work		0.2	1.2	0	0.2	1.2
LA spending under the capital receipts initiative		0.2	0.7	0	0.2	0.7
Cyclical social security	14.3	13.7	14.0	0	-0.5	-0.3
CG net debt interest	22.3	24.6	24.4	0.1	-0.2	0
Accounting adjustments	11.4	10.1	10.7	1.1	0.9	0.8
GGE(X)	**308.4**	**315.3**	**324.7**	**0.9**	**0.6**	**2.5**
Privatisation proceeds	-4.4	-2.0	0	0.1	0	1.5
Other adjustments	5.1	6.2	6.6	-0.5	-0.2	0.1
GGE	**309.0**	**319.4**	**331.3**	**0.5**	**0.4**	**4.1**
GGE(X) as a percentage of GDP	41.0	39.5	38.75	-0.25	-0.5	-0.25

- cyclical social security - the figures in Table 4 are new forecasts based on the Government's convention of assuming flat unemployment for planning the public finances, and taking into account measures to reduce the arrears of child maintenance payments and to limit backdating of social security claims;

- the figures for debt interest are new forecasts based on the Government's new market interest rate assumption;

- the accounting adjustments are new forecasts based on latest information from the Office for National Statistics.

The spending aggregate GGE(X) measures the share of national income taken by public expenditure. This aggregate is a measure of the combined expenditure of central and local government, based on national accounts aggregates: General Government Expenditure is adjusted to exclude privatisation proceeds, expenditure out of the proceeds of the National Lottery, and receipts of interest and dividends from public corporations and the private sector are also netted off. GGE(X) is the resulting aggregate. The ratio of GGE(X) to GDP is shown in Table 4.

Annex A

Explaining the Tax Costings

This annex explains how the effects of Budget measures on tax yield are calculated.

The revenue effect of a Budget measure is generally calculated as the difference between the tax yield from applying the pre-Budget and post-Budget tax regimes to the levels of total income and spending at factor cost expected after the Budget. The estimates do not therefore include any effect the tax changes themselves have on overall levels of income and spending. They do, however, take account of other effects on behaviour where they are likely to have a significant and quantifiable effect on the yield, and any consequential changes in receipts from related taxes. These include estimated changes in the composition or timing of income, spending, or other tax determinants. For example, the estimated yield from increasing the excise duty on tobacco includes the change in the yield of VAT on that duty, and the change in the yield of VAT and other excise duties resulting from the new pattern of spending. Where the effect of one tax change is affected by the implementation of others the measures are costed in the order in which they appear in Table 2.

The non-indexed base column in Table 2 shows the revenue effect of changes in allowances, thresholds and rates of duty from their pre-Budget levels (including any measures, such as the real increases in fuel and tobacco duties, previously announced but not yet implemented). The indexed base columns strip out the effects of inflation by increasing the allowances, thresholds and rates of duty in line with prices in this and in future Budgets (again taking account of measures previously announced but not yet implemented). Measures announced in this Budget are assumed to be indexed in the same way in future Budgets.

In calculating the indexed base it is assumed that each year excise duties and VAT thresholds rise in November (January for alcohol) and allowances and other thresholds rise in April, in line with the assumed increase in the RPI over 12 months to the previous September. The assumed RPI increase in the year to September 1997 is 3 per cent. The commitments for real increases in fuel and tobacco duties of 5 and 3 per cent respectively are also built in.

Notes on individual Budget measures

Inland Revenue taxes

Mortgage interest relief

The yield assumes interest rates are unchanged from current levels. There will also be a reduction in public spending of £50 million in 1998-99 and 1999-2000 on mortgage interest relief for borrowers who are non-taxpayers.

Private medical insurance

There will also be a reduction in public spending of £5 million a year in 1998-99 and 1999-2000 on relief for policy holders who are non-taxpayers.

Tax Credit

The yield is estimated from the pre-Budget forecast of dividends and allows for tax relief expected to continue through the use of individual savings accounts when they are introduced during 1999. Allowance is also made for an increase in 1997-98 and 1998-99 in foreign income dividends (which do not carry tax credits) and for a fall in corporation tax resulting from companies increasing their contributions to pension funds. From 2000-01 there will be a cost of £50million per year because individuals whose dividend income is partly but not taxed wholly at the higher rate will benefit from the changes

Foreign Income Dividends

The yield is expected to be £250 million from 2000-01. The costings allow for companies bringing forward some dividends to before 6 April 1999 to retain the benefits of foreign income dividends.

Double Capital Allowances

There will be some increase in tax in later years as the balance of unrelieved capital expenditure carried forward is reduced by the higher allowances. The revenue effects include those for companies and unincorporated businesses.

Films

There will be a cost in 2000-01 after which some companies may pay higher tax because their expenditure will have been relieved in earlier years

Anti-avoidance measures

The yields represent the estimated direct effect of the measures with the existing level of activity. Without these measures there could be a more significant loss of revenue in the future.

Company purchase schemes

The changes strengthen those announced in the 1994-95 FSBR which are no longer producing the yield forecast at the time.

Annex B

Tax changes announced before the Budget

Inland Revenue taxes

An amendment to the Finance Bill 1997 countered avoidance devices which turned interest income into capital gains, thereby paying less tax. The devices worked by using combinations of options or futures which produced a certain overall return, irrespective of any changes in the price of the underlying commodity etc which was the subject of the future or option (1).

An amendment to the Finance Bill 1997 denied tax relief to life insurance companies making payments under annuity arrangements which in substance last for a short period, but were dressed up to last for a much longer one (2).

Customs and Excise taxes

Amendment 10 to the Finance Bill 1997 withdrew Clause 54 on attachment of debts. The provision, which was announced in the 1996 Budget as part of a package of measures to rationalise and consolidate Customs and Excise debt recovery legislation, would have allowed Customs to recover money from a third party that was owed to a tax defaulter, for example money in a tax defaulter's bank or building society account (3).

The World Trade Organisation agreed in March 1997 the Information Technology Agreement (ITA), to take effect from 1 July 1997, which will progressively reduce tariffs on imports of IT products to zero by 1 January 2000. The table shows the effect on receipts of tax revenue, mainly customs duties; 90 per cent of customs duty revenues are subsequently passed to the European Union as Own Resources (4).

An extra-statutory concession was announced on 27 May 1997 which provides, in certain cases, for the remission or repayment of landfill tax incurred between 1 October 1996 and 30 June 1997 by owners or developers of contaminated land. Claims must be made by 30 September 1997 (5).

Inland Revenue taxes

The changes to the construction industry scheme are expected to take effect no sooner than August 1999 (1).

The 1997 Finance Act provides for the progressive withdrawal of the tax relief for profit-related pay. The measure will first affect schemes with profit periods beginning on or after 1 January 1998 (2).

Customs & Excise taxes

The then Chancellor said in the November 1993 Budget that road fuel duties would be increased on average by at least 5 per cent in real terms in future Budgets (3).

The then Chancellor said in the November 1993 Budget that tobacco duties would be increased on average by at least 3 per cent in real terms in future Budgets (4).

The yields shown in lines (3) and (4) of Table 2 include the effects of duty increases in future Budgets. The footnote to Table 2 shows only the yield from implementing the commitments in this Budget.

Table B1 Revenue effects of measures announced since the 1996 Budget

	£ million yield (+)/(-) of measure			
	Changes from a non-indexed base	Changes from an indexed base		
	1997 to 98	1997 to 98	1998 to 99	1999 to 00
Inland Revenue taxes				
1 Futures and options	*	*	50	50
2 Artificial annuities paid by insurance companies	10	10	20	20
Customs and Excise taxes				
3 Withdrawal of Finance Bill clause on attachment of debt	-5	-5	0	0
4 Information Technology Agreement	-95	-95	-270	-420
5 Remission of repayment of landfill tax	-5	-5	0	0
Total	**-95**	**-95**	**-200**	**-350**

** Negligible*

Table B2 Measures announced in the 1996 budget or earlier which take effect after the 1997 Budget

	£ million yield (+)/(-) of measure			
	Changes from a non-indexed base	Changes from an indexed base		
	1997 to 98	1997 to 98	1998 to 99	1999 to 00
Inland Revenue taxes				
1. Construction industry scheme	0	0	0	300
2. PRP: withdrawal of tax relief	200	200	800	1800
Customs and Excise taxes				
3. 5 per cent real increase in road fuel duties	340	210	1115*	2135
4. 3 per cent real increase in tobacco duties	15	10	260*	530
Total	**555**	**420**	**2175**	**4765**

** Yields in 1998 to 99 on a non-indexed base are £1,790 million and £520 million for road fuels and tobacco respectively.*

The economy: developments and prospects

Overview

Longer-term perspective

Despite the current position of above-trend growth and relatively modest inflationary pressures, the performance of the UK economy continues to suffer from a number of fundamental weaknesses.

Over the past 25 years, GDP growth has been slower in the UK than in any of its major competitors. The level of GDP per head in the UK is below the level in all other major industrial (G7) countries, and the UK has failed to narrow the gap with the OECD average since the 1970s.

The level of productivity in the UK has been lower than that in other G7 economies since the early 1970s.

Weak growth performance has at least partly reflected under-investment. The UK's ratio of investment to GDP is low by both historical and international standards, and this has been associated over the cycle with similarly low domestic saving. The investment ratio gap with other industrialised countries has been widening in recent years.

The economy has suffered from a high degree of instability. In the past 25 years, the UK has suffered the two deepest and longest recessions in post-War history; its record on growth stability has been one of the worst in the G7; and inflation has been more volatile than in any other G7 country.

Recent developments

Output began to grow in the first half of 1992, following two years of continuous decline. But recovery has not been evenly spread across sectors. While total output is now 11 per cent above its pre-recession peak, manufacturing output is just 3.25 per cent above its previous peak and only 8 per cent above the level reached during 1974. Whole economy investment is still 2.25 per cent lower than when the recession began.

GDP grew at an annual rate of 2 to 2.5 per cent in the second half of 1995 and for much of 1996. But it accelerated sharply last autumn, since when it has been rising at an annualised rate of 3.5 to 4.5 per cent, driven by strong consumer spending growth. Unemployment has continued to fall, and the rate of decline appears to have gathered pace since the autumn (although the fall in the claimant count has been amplified by the introduction of the Jobseeker's Allowance). Underlying retail price inflation (i.e. excluding mortgage interest payments) has fallen from around 3 per cent at the end of last year to 2.5 per cent at present, reflecting the effects of sterling's appreciation.

Prospects

GDP is forecast to grow by 3.25 per cent in 1997. Consumer spending is likely to remain buoyant. Investment growth over the past two years or so has undershot expectations, although survey evidence of strong service sector investment intentions and rising capacity utilisation point to business investment accelerating further this year. But GDP growth is forecast to slow from the second half of the year as the appreciation of sterling affects net export growth, and domestic demand growth moderates, partly in lagged response to the tightening of monetary and fiscal policy. GDP is forecast to rise by 2.5 per cent in 1998.

As lower producer prices continue to feed through to retail prices, underlying retail price inflation is forecast to remain at around 2.5 per cent during the second half of this year. It is forecast to edge up temporarily next year.

Table 1 Summary of short-term forecast

		Forecast	
	1996	1997	1998
Real GDP growth (per cent)	2.5	3.25	2.5
Inflation (RPI excluding MIPs, Q4)	3.25	2.5	2.75

Risks

However, there are substantial risks to the forecast. On the upside, the risk of heavier than expected spending from windfall payments poses the prospect of very strong consumers' expenditure growth. On the downside, investment could once again turn out weaker than expected, especially if the high exchange rate hit exports hard. Were the economy to evolve unchecked along these lines, there would be further imbalance in the composition of growth. The Budget strategy has been designed to counter this risk. But given the chances of output already being above trend and consumer spending continuing to grow rapidly, there is a risk of growth remaining unbalanced.

Developments and short-term prospects

Output and demand - overview

Growth and productivity performance

Since 1973, UK GDP has grown at only about two thirds of the rate achieved during the earlier post-War years. GDP growth over the past 25 years has also been slower in the UK than in any of its major competitors. Annual growth has averaged around 1.75 per cent in the UK since 1973, compared with an average of around 2.5 per cent for the major (G7) industrial economies.

The level of GDP per head in the UK is below the OECD average and the level in all other G7 countries. Despite some relative improvement since 1992, reflecting a cyclical upswing from a deep trough, the UK has failed to narrow the gap with the OECD average since the 1970s.

As in all other industrial countries, the growth of productivity (output per worker) slowed sharply after 1973. Following growth of close to 3 per cent a year between 1960 and 1973, productivity growth has since averaged around 1.75 per cent a year - similar to the European Union and OECD averages.

However, the level of output per worker in the UK has been lower than that in other G7 economies since the early 1970s. After widening during the second half of the 1960s and the 1970s, this productivity gap has remained broadly constant during the 1980s and 1990s.

Productivity performance has been mixed across the sectors of the economy over the 1980s and 1990s. In manufacturing and the privatised utilities, productivity has grown strongly, partly associated with substantial labour shedding. But in much of the service sector (where productivity is less well-measured) productivity growth has been comparatively low, both relative to manufacturing and to growth in the 1960s and early 1970s. This has contributed to comparatively fast growth of employment in the service sector

The UK economy has also suffered from a high degree of instability. Over the past 25 years, the UK has experienced the largest boom and the two deepest and longest recessions in the post-War period. In the early 1980s recession, output fell by 5.25 per cent from peak to trough, while there was a peak-to-trough fall in output of 3.75 per cent in the early 1990s. Since 1973, fluctuations in GDP growth have been larger in the UK than in any other G7 economy apart from Canada. This has been associated with a relatively high degree of inflation volatility.

Recent developments

The UK economy started a cyclical upswing in the first half of 1992, following a deep trough in output. GDP grew at an annualised rate of around 2 per cent between mid-1992 and mid-1993. But growth then picked up sharply to 4.5 per cent in 1994, as exports grew strongly in response to rapid world trade growth.

The growth of both domestic demand and exports slowed during 1995, the former reflecting a tightening of monetary policy and the latter a slackening of world trade growth. However, the impact on GDP was cushioned by higher stockbuilding, which was probably largely involuntary, and GDP rose by 2 per cent in the year to the fourth quarter of 1995.

Domestic demand has been strengthening again since the beginning of 1996, but lower stockbuilding at first held back GDP growth, which remained at an annual rate of 2 to 2.5 per cent over the first three quarters of the year. However, GDP accelerated sharply towards the end of the year, rising at an annualised rate of almost 4.5 per cent in the fourth quarter of 1996 and 3.5 per cent in the first quarter of 1997. On balance, it seems likely that the output gap is currently close to zero, though there is a significant risk that output could already be above its trend level.

Over the past year, growth has been led by the service sector, where output increased at an annualised rate of 5.25 per cent in the first quarter, and by 4.25 per cent on a year earlier. Growth has been particularly strong in the financial and business services and transport and communication sectors. After showing little change for almost a year, construction output has been rising strongly since the middle of 1996, and in the first quarter of 1997 was 3.75 per cent higher than a year earlier. Manufacturing output remained broadly flat between late 1994 and mid-1996, but has picked up since last summer and in the three months to April was almost 2 per cent higher than a year earlier.

Prospects

Consumers' expenditure should continue to expand quite strongly in response to rising incomes and wealth and increasing consumer confidence, with scope for very strong growth in the event of heavier than expected spending out of windfall payments. Business investment is expected to pick up further this year, though manufacturing investment is expected to remain weak. But whole economy investment has been sluggish in recent years, and forecasts of strong growth over the past two years or so have failed to materialise. Moreover, investment prospects could be adversely affected if the high exchange rate hit exports hard. So the investment forecast is particularly uncertain. The drag on growth from stock adjustment now appears to have passed, and stockbuilding is expected to make little contribution to growth over the next 18 months. Total domestic demand is forecast to grow by 3.75 per cent this year.

However, export growth is expected to be slower from the second half of the year as the impact of the exchange rate appreciation begins to build up. Towards the end of the year and into next year domestic demand is also expected to decelerate, partly in lagged response to the tightening of monetary and fiscal policy, and as the effect of spending out of windfalls on growth recedes. GDP is forecast to grow by 3.25 per cent in 1997 as a whole, with growth slowing through the year. Growth of 2.5 per cent is forecast for 1998. Lower domestic demand growth and net trade are expected to contribute roughly equally to this slowdown.

Spare capacity and the output gap

The output gap is the difference between actual output and a measure of "potential" or "trend" output. It can be used as a measure of demand pressure - i.e. the degree of under or over-heating in the economy. If actual output were above trend - a positive output gap - for a sustained time, experience suggests there would tend to be upward pressure on inflation.

It is impossible to measure the output gap with any degree of certainty. Business surveys of capacity utilisation provide an indication of short-term capacity pressures in product markets. And surveys of skilled labour shortages, together with other labour market indicators - unemployment, vacancies and average earnings - can be used to estimate the degree of slack in the labour market.

Capacity utilisation

The most quoted measure of capacity utilisation, from the CBI survey of manufacturing, has been just above its long-run average since mid-1994. But it is unlikely that the economy as a whole was above trend in 1994, so soon after the early 1990s recession.

Other surveys suggest that capacity utilisation may be tighter in the service sector. The British Chambers of Commerce (BCC) survey shows that it has continued to rise in services in recent quarters and is now above itslevel in 1989, when demand pressure was certainly high. The Building Employers' Confederation (BEC) survey indicates that capacity utilisation is also slightly above its long-run average in construction.

Skilled labour shortages

Indicators of skilled labour shortages are more conflicting. The CBI survey suggests that they may still be slightly below average in manufacturing. However, the BCC survey suggests that skill shortages are back to their 1989 levels in both manufacturing and services.

Labour market indicators

Other indicators suggest that the labour market has tightened in recent months and may now have little or no slack remaining. (If this were correct, the scope for further falls in unemployment, without putting upward pressure on inflation, would depend solely on structural reforms.) Unemployment has continued to fall, although part of the sharp decline in the claimant count since last autumn can be attributed to distortionary effects from the introduction of the Jobseeker's Allowance (JSA). Vacancies in early 1996, even before JSA had distortionary effects, were already back to the levels seen in the late 1980s. There has also been a pick-up in average earnings growth since mid-1995, with a steady rise in manufacturing and a sharper rise in service sector earnings growth.

Speed limits

It is possible that if the economy is growing fast enough, inflation could still rise even when the economy is operating below its supply potential, i.e. with a negative output gap. This is the so-called "speed limit" effect.

High levels of capacity utilisation, which may reflect the weakness of investment in recent years, began to show in the manufacturing sector as early as 1994. Since then manufacturing growth has slowed, but service sector output has accelerated, and this has been reflected in the acceleration in service sector earnings.

The output gap

These modest inflationary pressures probably reflect the economy running into speed limits in first the manufacturing and then the service sector, though they do not necessarily imply that the output gap in the economy as a whole has turned positive. The evidence overall suggests that the output gap is now close to zero. But there is a significant risk that output could already be above its trend level (a positive output gap).

The composition of demand growth over the next two years is likely to continue to be relatively favourable to the service sector.

Manufacturing output is forecast to grow by just 1.5 per cent this year and 0.75 per cent in 1998.

Were the possible upside risk to consumer spending from windfalls and the downside risks to investment and exports from the high exchange rate to materialise, there would be further imbalance in the composition of growth. The Budget strategy has been designed to reduce the risks of growth remaining unbalanced.

Personal sector and the housing market

Longer-term perspective

The personal saving ratio (saving as a percentage of disposable income) was very low in the immediate post-War period. But it rose progressively during the 1960s and 1970s: higher rates of inflation required people to save more simply to maintain the real value of their savings, while it is likely that increasing unemployment led to greater job insecurity and higher precautionary saving. The saving ratio peaked in 1980 at 13.5 per cent.

However, fuelled by the expansionary impact of financial liberalisation, lower oil prices, and a relaxation of both fiscal and monetary policy, consumers' expenditure accelerated unsustainably in the second half of the 1980s and the saving ratio fell sharply. Between 1986 and 1988, consumer spending increased at an average rate of 6.5 per cent a year, and the saving ratio fell to 6 per cent in 1988. The housing market boomed - prices increased by around 90 per cent between 1986 and 1989 - and many homeowners borrowed for consumption on the back of rising house prices. With falling saving and a sharp increase in housing investment, the personal sector moved into financial deficit in the late 1980s for the first sustained period since the 1950s.

The subsequent recession and housing market downturn left the personal sector with a high debt burden and many homeowners with negative equity (the value of the mortgage outstanding exceeding the market value of the property). Consumers' expenditure fell by 3.5 per cent from peak to trough and house prices fell on average by almost 13 per cent. The saving ratio peaked at almost 13 per cent during 1992 and, despite relatively low inflation, has remained at a high level since, partly reflecting increased consumer caution after the experience of the late 1980s.

Consumption, income and saving

Consumer spending is by far the largest expenditure component of GDP, accounting for over 60 per cent of the total. Having increased by 1.75 to 2.75 per cent a year between 1993 and 1995, it grew by 3.5 per cent last year, with the annual growth rate picking up to 4.25 per cent in the final quarter. Spending on durable goods was particularly strong

Strong growth continued in the first quarter of 1997. Recent monthly indicators also point to strong consumer demand. Retail sales (which account for about 40 per cent of total consumption) were 4.9 per cent higher in the three months to May than a year earlier. New car registrations in the three months to May were 4.1 per cent up on a year earlier. Consumer credit continues to grow strongly (up by 17.0 per cent in the year to May) and consumer confidence is now back to levels last seen in mid-1988.

Real personal disposable income grew by 3.75 per cent last year - well above its long-term trend rate of around 2.5 per cent - reflecting income tax cuts, rising employment, higher real average earnings growth and further strong growth of dividend receipts. Dividend receipts are unlikely to grow as quickly this year as last, but with lower inflation, real average earnings growth is likely to be higher. Real personal disposable income is therefore forecast to grow strongly again this year, by 3 per cent. It is forecast to increase by 1.75 per cent in 1998

Net personal financial wealth has grown by 30 per cent over the past two years, as a result of high personal sector saving (particularly in pensions) and rapid increases in equity prices. The FT-SE All-Share index rose by around 30 per cent between the beginning of 1995 and the end of 1996, and has risen by a further 10 per cent so far this year. Rising house prices have also been boosting total wealth since mid-1995.

Personal wealth is being further increased by "windfall payments". People have already received around £25 billion this year from the flotation of building societies and insurance companies, and this is likely to rise to over £30billion in the year as a whole. There is a further £5 billion from maturing TESSA accounts, which does not increase total wealth but makes existing wealth more liquid.

The forecast assumes that most of this money will be saved, and hence the effect on consumer spending will be relatively small - adding around 0.75 to 1.0 per cent to consumption this year. Evidence from previous flotations and consumer surveys tends to support the view of relatively modest spending from these windfalls. However, it could be much larger, and this represents a significant upside risk to the forecast. For example, if a quarter of the windfalls were to be spent (compared with a central assumption of around 15 per cent), this would add a further 0.5 to 0.75 per cent to consumers' expenditure this year.

With consumption growth matching that of personal disposable income, the personal sector saving ratio remained at around 11.5 to 12 per cent for most of last year. However, high levels of consumer confidence (at least partly associated with falling unemployment and rising house prices), high wealth and spending out of windfalls will all be tending to reduce the saving ratio. The forecast assumes that it falls to 8.75 per cent next year.

Table 2 Personal expenditure and income

Percentage changes on a year earlier

		Forecast	
	1996	1997	1998
Consumers' expenditure	3.5	4.5	4
Real personal disposable income	3.75	3	1.75
Saving ratio (level, per cent)	12	10.5	8.75

Reflecting the rise in real incomes and the fall in the saving ratio, consumer spending is forecast to grow by 4.5 per cent in 1997. But, as already noted, heavier than expected spending from windfalls could lead to much stronger consumption growth in 1997. In any case, as a matter of arithmetic, the effect of windfalls on the growth of consumer spending is likely to recede during the course of next year. Moreover, towards the end of this year consumer spending is expected to start decelerating under the influence of the tightening of monetary and fiscal policy. Growth in consumers' expenditure is therefore forecast to slow to 4 per cent in 1998.

Housing market

House prices have been rising strongly since late 1995. The Halifax index shows prices in May 6.6 per cent higher than a year earlier, while the Nationwide index puts the increase in the year to June at 11.0 per cent. A shortage of properties on the market appears to be contributing to the upward pressure on prices. The May survey from the Royal Institute of Chartered Surveyors reported that the number of properties for sale was down 28 per cent on a year earlier. This now appears to be having an effect on turnover. The number of particulars delivered at the Land Registry has flattened off in the past few months, having risen sharply since early last year.

In real terms, house prices remain well below their previous peak. With the house price-earnings ratio still low, housing remains very affordable. Higher demand and limited increases in supply are therefore likely to combine to put upward pressure on house price inflation for a time. However, thereafter the rate of increase in house prices should begin to moderate, damped by the reduction in mortgage interest tax relief, and with slower growth in real incomes in 1998 acting as a restraint on housing demand. On the supply side, the supply of new houses should increase as the rise in private sector housing starts over the past year feeds through into completions.

Private housing investment

Private housing investment includes both new housebuilding and improvements to existing properties. It was virtually unchanged in 1996 as a whole, but picked up through the year, mainly led by higher investment in existing dwellings. However, investment in new dwellings also began to pick up in the second half of last year, and should increase further in 1997 as housing completions pick up. Investment in existing dwellings should grow quite quickly too: personal incomes are forecast to grow strongly and some of the windfalls are likely to be spent on home improvements.

Financial position

With little change in either saving or investment, the personal sector financial surplus remained at around 6 per cent of disposable income last year, well above its long-run average of around 3.5 per cent. But with a fall in the saving ratio and a pick-up in housing investment, this surplus is projected to decline to around 2 per cent of income in 1998.

Corporate sector and investment

Investment performance

The UK's relatively weak growth performance over the past 25 years partly reflects under-investment. The UK's ratio of investment to GDP is low by both historical and international standards.

The ratio of whole economy fixed investment to GDP has consistently been well below the OECD average since at least 1960, and the gap has been widening in recent years. Since 1960, the investment-GDP ratio for the OECD as a whole has averaged around 21 per cent, compared with a UK figure of 18 per cent. Between 1960 and 1994, the UK invested a lower share of GDP than any other OECD country. On the other hand, the UK's record on plant and machinery (and business) investment has not been so clearly out of line with other industrial countries. However, it seems unlikely that the UK can catch up, or at least narrow the gap, with its main competitors in terms of the level of GDP per head without a significant rise in the ratio of investment to GDP.

Whole economy saving has also been low relative to income by the standards of the rest of the industrialised world. The difference between domestic saving and investment is equivalent to the balance of payments current account balance. Despite international capital mobility, the current account has not tended to drift a long way from balance for protracted periods of time. In other words, there has been a fairly close association between domestic saving and investment over the cycle.

The investment recovery over the past five years has been weak by historical standards. During the current economic upswing, the ratio of whole economy investment to GDP has fallen continuously, in contrast to the 1980s recovery, though this time round it has fallen from an historic high rather than rising from an historic low. In 1996, it was lower for than for most of the past 30 years. While output has increased by 15.25 per cent from its trough at the beginning of 1992, total investment has increased by only 10.25 per cent.

Sluggish whole economy investment mainly reflects falling general government investment. Business investment, which accounts for around 65 per cent of the total, has been stronger; but it has still grown at a slower pace than in the 1980s recovery. From the trough of output, total business investment has increased by 17.5 per cent compared to the increase in GDP of 15.25 per cent. (In contrast, while GDP increased by around 15 per cent in the first five years of the last upswing - between early 1981 and the end of 1985 - the increase in business investment was 23.5 per cent.)

Manufacturing investment has been relatively weak. It remains almost 13 per cent below its 1990 peak, and last year its ratio to GDP fell to the lowest level since at least 1955.

Profits

The profits of industrial and commercial companies (ICCs) rose by over 10 per cent last year. However, dividend payments also rose strongly - they were 13.5 per cent up on 1995 - and there was therefore only a small increase in ICCs' undistributed income. Nevertheless, the rate of return on investment remains high by historical standards, and while a balance of 20 per cent of manufacturers in the April CBI survey cited a lack of internal finance as a constraint on investment, this is no higher than the long-run average for the series.

Business investment

Manufacturing investment bottomed out at the end of 1993, and recovered strongly in 1994 and 1995 as activity strengthened and capacity utilisation increased. But it then fell again last year, by 5.5 per cent, despite business surveys consistently showing strong investment intentions. It appears that this fall partly reflected firms' uncertainty about the strength of demand. Over the past year, an increasing proportion of manufacturers in the CBI survey have been reporting uncertainty about demand as a factor likely to limit investment, and in recent years this has been a more significant constraint than in the 1980s recovery. Despite a sharp increase on the previous quarter, in the first quarter of 1997 manufacturing investment was 4.5 per cent lower than a year earlier.

While domestic demand is expected to continue growing strongly through this year, the high exchange rate is likely to hit profitability, especially in the traded goods sector, and lead some manufacturers to postpone investment plans. Manufacturing investment is therefore expected to rise only modestly over the next 18 months

Non-manufacturing business investment (which includes investment in private sector services, construction and the utilities) grew by 9.75 per cent last year, and by a further 7.25 per cent in the first quarter of this year. But it is still only 3.75 per cent above its level at the pre-recession peak. According to the British Chambers of Commerce survey, investment intentions in services remain strong, while capacity utilisation has continued to rise over the past year and is now back to 1989 levels. Service sector firms are more sheltered from the effects of sterling's appreciation than manufacturers, and it is likely that they will need further to increase investment to meet higher domestic demand. Investment will also be boosted by the growing number of Private Finance Initiative projects and projects aided by the National Lottery and Millennium funds.

With North Sea investment also strong, total business investment is forecast to grow by 9.25 per cent in 1997 and 6.25 per cent in 1998. However, growth in business investment has undershot expectations in the past two years or so. For example, the November 1994 Budget forecast showed a rise of 10.75 per cent in 1995, and the November 1995 Budget forecast showed a rise of 9 per cent in 1996. In the event, the increases were just 4.25 per cent and 5.75 per cent respectively. This experience suggests that once again there must be a clear downside risk to the forecast for business investment, especially if the high exchange rate hit exports hard, though the Budget is designed to improve the climate for long-term investment.

Government and whole economy investment

General government investment is expected to stabilise in 1998-

99, partly as a result of additional spending under the local authority Capital Receipts Initiative. The large fall and rise in general government investment projected for calendar years 1997 and 1998 respectively (Table 3) result from an abnormally low outturn for the first quarter of this year.

Despite the expected pick-up in housing investment, whole economy investment is likely to continue to grow more slowly than business investment in 1997, reflecting the expected fall in general government investment. Although business investment growth is forecast to slow in 1998, whole economy investment is expected to accelerate on the back of higher general government investment.

Table 3 Gross domestic fixed capital formation

Percentage changes on a year earlier

		Forecast	
	1996	1997	1998
Whole economy[1]	1.75	5	6
of which:			
Business[2, 3]	5.75	9.25	6.25
Housing[2]	-0.25	7	5
General government[2, 4]	-13.5	-15.5	9.25

1 *Includes transfer costs of land and existing buildings*

2 *Excludes net purchases of land and existing buildings.*

3 *Private sector and public corporations (except National Health Service Trusts) non-residential investment. Includes investment under the Private Finance Initiative.*

4 *Includes National Health Service Trusts.*

Stockbuilding

The ratio of stocks to output has been on a downward trend since the early 1980's, reflecting improvements in stock management techniques, particularily in manufacturing.

The stock-output ratio rose during 1995, as heavy stockbuilding cushioned the impact on output of slackening demand growth. But it then fell back again as lower stockbuilding in the middle of last year held back output growth at the time when final demand was strengthening.

Stock adjustment now appears to be largely complete: both manufacturers and distributors destocked in mid-1996, but there has been a return to stockbuilding in these sectors since the fourth quarter. In manufacturing, a rise in stocks of work in progress in the first quarter of 1997 is consistent with manufacturers expecting recent increases in output to continue (while a fall in manufacturers' stocks of finished goods suggests that actual demand may have been stronger than expected). In retailing, although the ratio of stocks to sales is relatively high, there is little survey evidence that retailers are carrying excess stocks, and increases in stocks probably reflect expectations of strong domestic demand.

The forecast assumes a resumption of the long-run downward trend in the stock-output ratio, with movements in stockbuilding making little contribution to the forecast of GDP growth over the next 18 months.

Trade and the balance of payments

Longer-term trade performance

The UK's share of world trade in manufactures has been falling over time, at least partly reflecting developing countries "catching up" with industrialised countries such as the UK and also trading more amongst themselves.

But the decline was particularly rapid during the second half of the 1960s and the 1970s. This decline was accelerated in the late 1970s and the early 1980s by the loss of price competitiveness associated with the appreciation of the exchange rate. In terms of the proportionate loss of market share, the UK's performance in the 1970s was the worst of the major six industrialised economies.

Since the early 1980s, the UK's share of world trade has continued to trend downwards, though at a slower rate than in previous decades. It is likely that this relative improvement in export performance reflected a number of factors, including a shift in the geographical and product mix of world trade growth in favour of the UK, an improvement in the relative quality and variety of UK exports, and an increase in foreign direct investment in high-technology, export-orientated industries.

However, at around the time when these more favourable developments in export performance started to emerge, the trend in import growth picked up and the balance of trade in manufactures moved into deficit. Exports are dominated by a relatively small number of large companies, while imports compete against a wider front of domestic industry and so give a more representative indication of competitive strength. The relatively rapid growth of imports during the 1980s and the persistence of the trade deficit since then suggest ample scope for improvement in the underlying strength of British industry.

Competitiveness

As a result of sterling's appreciation since last summer, cost competitiveness has deteriorated sharply. The deterioration in

Table 4 Trade in goods and services

Percentage changes on a year earlier											£ billion
	Volumes (1)				Prices (1, 2)						
	Exports		Imports		Exports		Imports		Terms of trade (3)		Goods and services balance
1996	7	(7.5)	8.5	(9)	1.75	(0.5)	0.5	(-0.5)	1.25	(1)	-5.5
Forecast											
1997	6.25	(6.75)	7.25	(7)	-5	(-5.75)	-6.25	(-6.25)	1.25	(0.75)	-5
1998	5	(5.75)	7.75	(8.5)	1.5	(1.25)	0.25	(-0.5)	1.5	(1.75)	-8.25

1 Non-oil goods in brackets.
2 Average value indices.
3 Ratio of export to import prices.

export price competitiveness appears to have been smaller, as manufacturers have allowed their profit margins to be squeezed.

There is likely to be some considerable delay before the appreciation has its full effect on export volumes:
Many exporters have long order books and forward contracts and hedge against foreign exchange exposure.

Some exporters are in niche markets, where non-price factors such as quality and service are particularly important, and may be relatively insulated from the appreciation

Until they feel more certain about whether the appreciation is likely to persist, exporters may be willing to accept a temporary cut in profit margins, rather than make permanent reductions in employment and capacity.

World background

UK export market growth slowed sharply in the first half of last year, reflecting the slowdown in activity in Europe. But with Europe picking up and healthy demand growth expected in the US, UK export market growth is forecast to increase to 7.5 per cent this year and 7.75 per cent in 1998. Details of world economic developments and prospects are set out in Annex A.

Export volumes of goods and services

There is little evidence that the appreciation as yet has had an adverse impact on export volumes. The volume of exports of goods and services continued to expand through the second half of last year, and in the fourth quarter they were still over 7 per cent higher than a year earlier. Export volumes have increased further so far this year - rising by 1.5 per cent in the first quarter.

However, there is increasing survey evidence that the high exchange rate is now beginning to reduce export orders. The May CBI survey reported that manufacturing orders had fallen to their lowest level relative to normal for three and a half years, and although they improved slightly in June they remain below their long-run average. And the latest BCC survey reported a slowdown in the growth of export orders in both manufacturing and services. Despite the expected pick-up in the growth of UK export markets, export volume growth for goods and services is forecast to slow to an annualised rate of around 4.5 per cent in the second half of this year and the first half of 1998

Import volumes of goods and services

Import volumes have been rising on the back of strengthening domestic demand, though they have been erratic from quarter to quarter. The decline in import price competitiveness appears to have been modest in relation to the exchange rate appreciation, reflecting only partial downward adjustment of import prices combined with downward pressure on the prices of domestic manufactures. Import volumes of goods and services are forecast to grow by 7.25 per cent in 1997 and 7.75 per cent in 1998, as the effects of the higher exchange rate feed through against the background of still buoyant consumer demand.

Balance of trade in goods and services

The terms of trade are likely to improve both this year and next as import prices continue to grow more slowly than export prices.

Table 5 The current account

£ billion

	Non-oil goods	Oil	Services	Total goods and services	Transfers	Net investment income	Current balance
1995	-16	4.25	7	-4.75	-7	8	-3.75
1996	-17.5	5	7.25	-5.5	-4.75	9.75	-0.5
Forecast							
1997	-16.75	5.25	6.75	-5	-6.5	5.5	-6.75
1998	-19.5	5.5	5.75	-8.25	-6.25	5.5	-9.75

However, the deficit on trade in goods and services is projected to widen next year as the effect of the loss of competitiveness on trade volumes progressively dominates the terms of trade effect.

Net investment income

The appreciation of sterling would normally be expected to have a large and relatively rapid impact on net investment income, as the sterling value of income from abroad falls. The geographical pattern of the UK's ownership of assets should tend to moderate this effect: around 40 per cent of overseas investment is in the US, and sterling has risen by only around 6 per cent against the US dollar since lastsummer. Nevertheless, net investment income is forecast to fall from £9.75 billion in 1996 to £5 billion in 1997 and £5.5 billion in 1998.

Current account

The current account was close to balance in 1996, with surpluses on services, net investment income and oil offsetting deficits on non-oil goods and transfers. It is projected to move into larger deficit over the next two years, reflecting the widening non-oil goods deficit and lower net investment income. Acurrent account deficit of around 0.75 per cent of GDP is projected for 1997, increasing to 1 per cent of GDP in 1998.

Overseas assets

The sterling value of the UK's stock of net overseas assets is estimated to have been around £40 billion (5.5 per cent of GDP) in the first half of 1996, up from around £26 billion at the end of 1995. However, reflecting the adverse effect of the appreciation on the sterling value of overseas assets, the net stock is provisionally estimated to have fallen sharply to under £5 billion (around 0.5 per cent of GDP) in the final quarter of last year. Largely due to an increase in net portfolio investment, the UK's stock of net overseas assets is estimated to have risen to around £14 billion in the first quarter of 1997. But difficulties in measuring certain capital flows - reflected in the large balancing item in the overseas account - means that estimates of net overseas assets are subject to a wide margin of error.

Pattern of financial balances

As a result of falls in both the personal and company sector surpluses, the private sector financial balance is projected to decline from a surplus of 4.75 per cent of GDP in 1996 to close to zero in 1998. The main counterpart to this is a continued fall in the public sector deficit.

Labour market

Longer-term perspective and concepts

Unemployment remains well above the levels seen throughout the 30 years to the end of the 1970s, despite falling sharply since the end of 1992. Around one in five working-age households have no-one in work. Long-term and youth unemployment are particularly serious concerns. The Welfare to Work programme is designed to address these problems

The quarterly Labour Force Survey (LFS) provides a more comprehensive measure of unemployment than the claimant count measure. It covers all those without a job who are available for, and have been actively seeking, work, whereas the claimant count excludes unemployed people who are not eligible for, or simply not claiming, benefits.

Although the claimant count includes some people who are not classified as unemployed in the LFS, the LFS records consistently higher levels of unemployment. For example, the latest LFS shows GB unemployment of 2.11million (7.5 per cent of the workforce) in winter 1996-97 (December to February), which is over 350,000 higher than the equivalent claimant count figure. The LFS measure, like the claimant count, is affected by changes in the eligibility criteria for unemployment benefit (such as those associated with the introduction of the Job Seeker's Allowance (JSA)). But whereas the claimant count is affected both directly and indirectly, the effect on the LFS measure comes only through the impact on people's labour market behaviour, in particular job search activity.

Unemployment remains high. It was exceptionally high in the mid-1980s and early 1990s, and the share of long-term unemployment (12 months or more) has been related, usually with a lag, to the level of total unemployment. This reflects the association between higher unemployment and higher average duration of unemployment, together with rising unemployment reducing average duration for a while if it comes about through increased inflows.

The LFS shows the long-term share recently standing at about 40 per cent (over 800,000), compared to previous peaks of around 45 per cent in spring 1994 and 48 per cent in spring 1985, and a trough of 27 per cent in spring 1991. The claimant count shows a similar pattern, with the long-term share currently around 37 per cent, compared to peaks of 39 per cent in October 1994 and 43 per cent in October 1987, and a trough of 25 per cent in July 1991

At 633,000 in winter 1996-97, youth unemployment (those under 25) accounts for about 30 per cent of total LFS unemployment, while long-term youth unemployment (around 150,000 in winter 1996-97) accounts for around 19 per cent of total long-term unemployment. The LFS youth unemployment rate stands at over 14 per cent (and is higher amongst the under 20s), almost double the total LFS unemployment rate.

Even though the LFS gives a conceptually reasonable, and internationally accepted, measure of unemployment, it does not capture the full extent of labour under-utilisation. The latest LFS identifies a further 2.5 million economically inactive people who say they want a job. However, less than 1 million of those said they were available to start work. Inadequate work incentives are a major cause of economic inactivity. Nevertheless, the total number of people saying they want work (over 4.5 million) is still likely to overstate the potential pool of non-employed labour that could be drawn into the labour force. On the other hand, over 750,000 part-time workers (about one in eight) work part time only because they could not find a full-time job.

Despite LFS employment increasing by over 1 million since its trough in winter 1992-93, it is still over 400,000 below its pre-recession peak in Spring 1990. From peak to trough it fell by almost 1.5 million, or 6 per cent (and the alternative employer survey-based measure recorded an even larger fall). The increase in employment since winter 1992-93 has exceeded the fall in unemployment of 850,000, implying some increase in the numbers of economically active people. But this rise in participation (employment plus unemployment) started only in early 1995: until then, participation had continued to edge down, and it has still not regained its pre-recession levels.

Moreover, the participation rate (the proportion of the working age population who are economically active) remains well below 1990 levels. It has done little better than stabilise since early 1995, as growth in the population of working age has picked up to around 125,000 a year. Economic inactivity carried on rising through to last summer, and is still over 650,000 above its 1990 trough.

Changes in demographic trends and participation rates do much to explain the relative peaks in unemployment between the 1990s and the 1980s, because it takes time for the labour market to absorb changes in labour supply. Had the population of working age been increasing in recent years as rapidly as in the early and mid-1980s, and the participation rate not continued to fall, it seems very likely that the peak in unemployment in the 1990s would have exceeded that in the 1980s. So the lower 1990s peak does not in itself provide convincing evidence of improved labour market performance.

Nevertheless, the proportion of working age people in work throughout the 1990s has been higher than in the mid-1980s. On the other hand, the proportion of working-age households with nobody in work has increased from around one in six in the mid-1980s and early 1990s to around one in five in 1996. The number of non-pensioner workless households in Great Britain in 1996 was over 3.5 million, up by around a third since the mid-1980s.

Recent developments

Labour market activity appears to have accelerated since the middle of last year. Employment increased by around 250,000 in the second half of the year on both the LFS and employer survey-based measures, compared to a much weaker performance in early 1996. The employer survey showed a further rise in employment, of almost 90,000, between December and March. Faster growth in employment has led to faster rates of decline in unemployment.

But while both the LFS and claimant count measures were falling at a similar rate in the first half of 1996, claimant unemployment has fallen particularly sharply since last autumn. Between September 1996 and May 1997, GB claimant unemployment has fallen by over 50,000 a month on average, to 1.57 million (5.8 per cent), compared to a fall of less than 20,000 a month between January and September 1996. Moreover, LFS unemployment fell by 110,000 in the quarter to winter 1996-97, but the comparable fall in the claimant count was over 180,000.

It seems clear that the decline in the claimant count between September 1996 and May 1997 was amplified by the introduction of JSA, not least through tighter eligibility rules and deterred benefit claims. Nevertheless, the evidence overall suggests that the underlying rate of decline in unemployment has gathered pace as economic activity more generally has accelerated.

However, the extent of the rise in employment (and fall in unemployment) since mid-1996 has been surprising. More typically employment responds with a lag to changes in output, so that productivity - output per person employed - accelerates with output. Productivity slowed, particularly in manufacturing, from late 1994 as output growth slackened. Subsequently non-oil productivity growth has been fairly subdued, and has not picked up significantly since last autumn, despite accelerating output. This may be partly explained by changes in hours worked. Average hours worked fell in the second half of 1996, and total hours were more or less flat. So output per hour worked did accelerate in line with output.

Financial developments

Exchange rate

The sterling exchange rate index, which measures the sterling exchange rate against a basket of currencies, rose by 12.5 per cent over the final four months of 1996, and has risen by a further 7.5 per cent over the first six months of this year. The appreciation has been mainly against the deutschemark and the yen rather than the US dollar. The forecast is based on the conventional assumption that the sterling index remains close to recent levels.

Interest rates

Base rates have moved within a relatively narrow range of 5.25 to 6.75 per cent over the past four years. In pursuit of the Government's inflation objective, they were increased by 0.25 percentage point, to 6.25 per cent, in early May. The Monetary Policy Committee increased rates by a further 0.25 percentage point on 6 June.

Long rates

Long rates fell during the second half of last year and into this year, largely reflecting a fall in inflation expectations. Yields on ten-year gilts troughed at just over 7 per cent in February. After picking up to over 7.5 per cent, they fell sharply following the Government's announcement on 6 May that it was giving operational responsibility for setting interest rates to the Bank of England. Long rates are now a little over 7 per cent. This fall has resulted in a sharp narrowing of the differential between UK yields and those of other G7 countries.

Monetary indicators

The strong outlook for domestic spending is consistent with the recent monetary indicators.

The notes and coin component of M0 (which excludes bankers' balances at the Bank of England) grew by 0.8 per cent in June, above the average monthly growth rate of 0.5 per cent over the past year. This is consistent with buoyant retail sales growth

The 12-month growth rate of M4 has risen from around 4 per cent at the end of 1994 to 11.1 per cent this May. Strong growth of industrial and commercial companies' deposits, up by over 10 per cent in the year to the first quarter of 1997, points to higher investment spending this year. Strengthening personal sector deposits suggest that consumer spending is likely to remain robust.

Costs, earnings and inflation

Longer-term inflation performance

The UK's inflation performance since the early 1970s has been poor. RPI excluding mortgage interest payments (RPI ex MIPs) inflation has averaged 8.25 per cent since 1970, compared with 4 per cent over the previous 20 years. Over the last full international economic cycle (1982-93), the UK's inflation rate was higher than that in any other G7 country apart from Italy, and was above the European average. Despite an improvement in inflation performance in recent years, the UK's inflation rate is still above the G7 average. UK inflation has also been volatile, ranging from around 2 per cent to 27 per cent over the past 25 years, and this volatility has been greater than that in any other G7 economy.

Recent developments

RPI ex MIPs inflation remained between 2.75 and 3 per cent during 1995 and most of 1996. It rose temporarily to 3.3 per cent last autumn, but has fallen back to 2.5 per cent in April and May.

Earnings

After remaining at 3.75 to 4 per cent for most of last year, whole economy underlying average earnings growth has risen from 4 per cent in October to 4.5 per cent at present. This is close to what the economy in its present state could sustain in the medium term consistent with the inflation target. Most of the recent increase in earnings has occurred in the service sector, where earnings growth has risen from 3.5 per cent in the first half of last year to 4.75 per cent at present.

Input and output prices

The large appreciation of sterling since last summer has been feeding through to producer input prices, which in May were 7.7 per cent lower than a year earlier. However, the latest monthly figures suggest that the falls in input price inflation may now be coming to an end. Although Brent oil prices have fallen back sharply since the beginning of the year, non-oil commodity prices have been rising, even in sterling terms, since the end of 1996.

The 12-month rate of producer output price inflation has fallen from around 4.5 per cent at the end of 1995 to just 0.5 per cent in May. This decline has been smaller than the fall in producer input price inflation, mainly because unit labour costs (the other major component of manufacturers' costs) have continued to rise. It is also likely that producers have been taking advantage of strong demand to rebuild domestic margins.

With producer input price inflation now probably close to its trough, output price inflation probably has little further to fall. It is forecast to remain broadly flat for the rest of the year, before increasing to around 2.5 per cent by the end of 1998, as import prices level out.

Retail goods prices

Despite falling producer output price inflation and the falling prices of consumer imports, retail goods price inflation fell only a little through the course of last year. This is likely to have reflected both higher labour costs and some rebuilding of retail margins, following the squeeze on margins in the first half of the 1990s. The fall in retail goods price inflation from 2.7 per cent in December to 1.7 per cent in May suggests that the effects of the appreciation are feeding through to retail prices.

Retail services prices

Services prices, which make up around one third of the RPI, are less affected by falling input prices and less directly exposed to competitive pressures from the high exchange rate. A major factor behind the rise in retail services price inflation - from around 2 per cent in the middle of last year to 3.3 per cent at present - has been the increase in service sector earnings.

Inflation forecast

As the feed-through of lower input prices continues to exert downward pressure on retail price inflation, RPI ex MIPs inflation is forecast to remain at around 2.5 per cent during the second half of this year. But the effect from the exchange rate is by its nature temporary. With the output gap estimated to be close to zero at present and the economy growing at an above-trend rate, demand pressures are increasing. As the effects from lower input costs weaken, RPI ex-MIPs inflation is likely to begin to rise next year. It is forecast to rise to 2.75 per cent in the second quarter of 1998, and remain there in the second half of the year, before falling back to around 2.5 per cent by the middle of 1999 in response to slower output growth.

Table 6 Retail and producer output price inflation

Percentage changes on a year earlier

			Forecast		
	1996 Q4	1997 Q2	1997 Q4	1998 Q4	1998 Q2
RPI excluding MIPs	3.25	2.5	2.5	2.75	2.75
Producer output prices [1]	0.75	0.5	0	1	2.5

1 Excluding the food, beverages, tobacco and petroleum industries.

GDP deflator

As an index of the price of domestic output, the GDP deflator includes the prices of UK exports but nets off the prices of imports; so it tends to decline if the terms of trade fall (export prices rise more slowly than import prices). The GDP deflator increased by 2.75 per cent in 1996-97 (similar to the RPI ex MIPs), as a rise in the terms of trade was offset by low investment and public procurement prices. The GDP deflator is forecast to rise by 2.75 per cent in both 1997-98 and 1998-99.

Independent forecasts

Table 7 shows the average and range of around 30 independent forecasts for 1997 and 1998. The Treasury forecasts for GDP growth and underlying retail price inflation are the same as the independent averages for 1997. The Treasury forecast for growth in 1998 is a little lower than the independent average. This mainly reflects outside forecasters, on average, expecting net trade to make less of a negative contribution to GDP growth, which can be

Table 7 Budget and independent forecasts [1]

Percentage changes on a year earlier unless otherwise stated

	1997			1998		
		Independent			Independent	
	Budget	Average	Range	Budget	Average	Range
Gross domestic product	3.25	3.3	2.6 to 4.3	2.5	2.7	1.7 to 4.2
RPI excluding MIPs (Q4)	2.5	2.5	1.9 to 3.6	2.75	3.1	2.0 to 4.2
Current account (£ billion)	-6	-3.9	-10 to 1.2	-9	-8.6	-17 to 2.2

1 'Forecasts for the UK Economy: A Comparison of Independent Forecasts', June 1997.

largely attributed to the sizeable fall in the exchange rate that they typically assume. With slower growth in 1998, the Treasury forecast for inflation is correspondingly lower.

Margins of error

As an indication of the margins of error around the forecast, Table 9 shows average errors from Treasury forecasts made over the past ten years. Errors usually increase with the forecast horizon, while errors on any individual forecast may be larger or smaller than the historical averages.

The economy in the medium term

This section sets out the medium-term economic projections which underlie the fiscal projections.

Trend growth

With output now close to its trend level, the scope for output to grow without putting upward pressure on inflation depends on the economy's trend rate of growth.

The trend rate of growth can be broken down into three components:

- trends in the labour force;
- changes in the underlying unemployment rate; and
- the trend in productivity.

Quantitatively, the most important of these is likely to be productivity, which grew at around 1.75 to 2 per cent a year over the last economic cycle. With sufficient investment, such a rate of productivity growth should be sustainable, and might even be bettered, over the medium term.

The labour supply contracted during the early 1990s. This mainly reflected higher participation in further and higher education, early retirement, and more claimants of Incapacity Benefit. The population of working age was growing relatively modestly. But it is now growing almost twice as fast as in the early 1990s, and this is expected to continue. So with a resumption of past trends in participation, i.e. a small fall in male participation more than offset by a steady rise in female participation, the labour supply may be able to grow by as much as 0.5 per cent a year over the medium term

A fall in structural unemployment would also add to trend growth. Measures such as the Welfare to Work programme are designed to bring currently under-utilised labour into productive use. This adds to the economy's productive capacity without exerting upward pressure on inflation. A fall in long-term unemployment to its 1990 levels could add around 0.25 per cent a year to the rate of trend growth.

Considering each of the component parts on their merits, it is plausible that growth of between 2 and 2.75 per cent a year might be sustained over the medium term. However, to use an estimate towards the upper end of this range would be to take credit in advance for success in bringing the young and long-term unemployed back into the workforce. Accordingly, a more prudent estimate of the trend growth rate would be 2.25 per cent, which is also broadly in line with the post-War average and the average over the last full cycle (between the estimated on-trend points in early 1986 and early 1997).

Medium-term projections

This growth rate is used in projecting the path of the public finances in the medium term.

With output close to trend and assumed to grow at its trend rate in the medium term, RPI ex MIPs inflation is projected to remain stable at the target rate of 2.5 per cent. The GDP deflator is projected to move in line with the RPI ex MIPs, and money GDP is projected to grow by 4.75 per cent a year.

Table 8 Medium-term economic projections

Percentage changes on previous financial year

	1997 to 98	1998 to 99	1999 to 00	2000 to 01	2001 to 02
Output (GDP)	3.25	2.25	2.25	2.25	2.25
Prices					
RPI excluding MIPs	2.5	2.75	2.5	2.5	2.5
GDP deflator	2.75	2.75	2.5	2.5	2.5
Money GDP	6.0	5.0	4.75	4.75	4.75

1 Forecasts for 1997-98 and 1998-99 and assumptions thereafter.

Table 9 Summary of short-term economic prospects[1]

Percentage changes on a year earlier unless otherwise stated

	Forecast			Average errors from past forecasts [2]	
	1996	1997	1998	1997	1998
Output at constant prices[3]					
Gross domestic product (GDP)	2.5	3.25	2.5	0.75	1.5
Non-North Sea GDP	2.5	3.25	2.5	0.75	1.5
Manufacturing output	0.25	1.5	0.75	0.75	2.25
Expenditure components of GDP at constant prices [3]					
Domestic demand	2.75	3.75	3.25	1.0	1.75
Consumers' expenditure	3.5	4.5	4.0	1.0	1.5
General government consumption	2.5	-0.25	-1.0	1.0	1.0
Fixed investment	1.75	5.0	6.0	2.25	4.5
Change in stockbuilding [4]	-0.25	0	0	0.25	0.5
Exports of goods and services	7	6.25	5.0	1.5	2.0
Imports of goods and services	8.5	7.25	7.75	2.0	3.25
Balance of payments current account					
£ billion	-0.5	-6.0	-9.0	7.5	10.75
per cent of GDP	0	-0.75	-1.0	1.0	1.25
Inflation					
RPI excluding mortgage interest payments (Q4)	3.25	2.5	2.75	0.5	1.0
Producer output prices (Q4) [5]	0.75	0	2.5	0.5	1.5
GDP deflator at market prices (financial year)	2.75	2.75	2.75	1.0	1.25
Money GDP at market prices (financial year)					
£ billion	752.0	798.0	838.0	11.0	16.5
percentage change	5.5	6.0	5.0	1.25	2.0

1 Data in this table are consistent with the output, income and expenditure estimates and other series for the period to the first quarter of 1997 released by the Office for National Statistics on 27 June 1997.
2 Average absolute errors in summer forecasts over the past ten years. The average errors for the current account are calculated as a per cent of GDP. The £ billion figures are calculated by scaling the errors as a percent of GDP by money GDP.
3 Further detail on GDP and its components is given in Table 10.
4 Per cent of GDP.
5 Excluding the food, beverages, tobacco and petroleum industries.

Table 10 Gross domestic product and its components

	Consumers' expenditure consumption	General government investment	Total fixed investment	Stock -building	Domestic demand	Exports of goods and services	**Total final expenditure**	Less imports of goods and services	Less adjustment to factor cost	Plus statistical discrepancy
1996	376.6	122.4	104.1	2.6	605.8	179.8	**785.6**	184.7	77.2	0.8
1997	393.9	122.2	109.3	2.5	627.9	190.9	**818.8**	198.2	79.2	0.8
1998	409.2	121.1	115.9	2.5	648.7	200.4	**849.1**	213.5	80.7	0.8
1996 1st half	186.7	61.0	52.0	1.3	301.0	88.6	**389.6**	91.1	38.3	0.3
1996 2nd half	190.0	61.4	52.1	1.3	304.8	91.2	**396.0**	93.5	38.8	0.5
1997 1st half	194.2	61.3	53.7	1.3	310.5	94.4	**404.9**	96.9	39.5	0.4
1997 2nd half	199.7	60.9	55.6	1.2	317.4	96.5	**413.9**	101.3	39.7	0.4
1998 1st half	203.3	60.6	57.3	1.3	322.4	98.7	**421.1**	105.0	40.2	0.4
1998 2nd half	205.9	60.5	58.6	1.2	326.3	101.7	**428.0**	108.4	40.6	0.4
Percentage changes on a year earlier [2]										
1996	3.5	2.5	1.75	-0.25	2.75	7.0	**3.5**	8.5	1.5	0.25
1997	4.5	-0.25	5.0	0	3.75	6.25	**4.25**	7.25	2.5	0
1998	4.0	-1.0	6.0	0	3.25	5.0	**3.75**	7.75	2.0	0

1 *Expenditure adjustment.*

2 *For stockbuilding and the statistical discrepancy, changes are expressed as a percent of GDP.*

3 *References to producer prices exclude the food, beverages, tobacco and petroleum industries.*

Annex A

The World Economy

Summary

The world economy is growing solidly. Growth in the G7 overall was close to trend in 1996 and is forecast to pick up in 1997, led by above-trend growth in the US. Growth is expected to continue at a healthy pace in 1998, as the European and Japanese recoveries gain momentum and the US slows a little. The growth of world trade in manufactures slowed sharply in 1996, but it is expected to recover to more normal rates through 1997 and 1998. Despite recent increases in some non-oil prices, commodity prices overall seem unlikely to pose a threat to the subdued world inflation outlook.

Table A1 The world economy

Percentage changes on a year earlier

		Forecast	
	1996	1997	1998
Major seven countries (1)			
Real GDP	2.25	2.75	2.5
Consumer price inflation (2)	2.5	2.25	2.5
World trade in manufactures	6.5	8	8
UK export markets (3)	6.25	7.5	7.75

1 *G7: US, Japan, Germany, France, Italy, UK and Canada.*
2 *Final quarter of each period. For UK, RPI excluding mortgage interest payments.*
3 *Other countries' imports of manufactures weighted according to their importance in UK exports.*

Output

Following growth of just 1.5 per cent in 1996, activity in the European Union as a whole is forecast to strengthen in 1997. Low interest rates and a weaker exchange rate against the US dollar should contribute to a pick-up in growth to around 2.25 per cent in 1997. However, domestic demand growth is likely to remain weak, partly reflecting the short-term impact of fiscal consolidation. Recovery should become more firmly established in 1998, with growth above trend at 2.75 per cent. However, with unemployment high and consumer confidence relatively weak, some risks to sustained recovery remain.

Growth in the United States was close to trend in 1996, but it has accelerated recently - led by strong consumer demand. Although growth is expected to moderate later this year, it is likely to average above trend for 1997 as a whole. Unemployment has fallen to its lowest level for nearly 25 years, prompting fears of rising inflation. But there has been little evidence to date of upward pressure on prices, although these are uncharted waters. Growth in Japan was the strongest in the G7 in 1996, at 3.75 per cent. Continuing recovery in private demand is expected to be the main factor sustaining solid growth in 1997, despite this year's fiscal tightening. The yen's substantial fall over the past two years should also deliver a positive contribution from net exports

World trade

World trade in manufactures grew rapidly in 1994 and 1995, before slowing sharply to 6.5 per cent in 1996. This slowdown reflected slower growth in continental Europe and a sharp fall in Asian trade growth. With some recovery expected in these regions and healthy demand growth in the US, world trade growth is expected to pick up to 8 per cent in both 1997 and 1998. UK export market growth slowed more sharply than world trade in the first half of 1996, but recovery in Europe should mean that UK market growth picks up in 1997 and 1998.

Inflation and commodity prices

G7 consumer price inflation remained low in 1996, and is expected to edge up only slightly over the next 18 months - as US inflation rises a little. With some spare capacity in Europe and Japan and G7 growth expected to be only slightly above trend, global inflationary pressures are expected to remain subdued.

In the commodity markets, non-oil commodity prices have picked up sharply since the start of the year, but this mainly reflects special factors including fears over coffee harvests. By contrast, oil prices have fallen sharply since the start of the year. They averaged $18.25 per barrel (Brent) in the second quarter of 1997, compared to $23.75 per barrel in the fourth quarter of 1996. The strength of oil prices through 1996 and their subsequent fall are difficult to explain, and their recent volatility means that any assumption about oil prices is particularly uncertain. However, the forecast assumes that the price falls since the start of the year are sustained, and that prices average around $18.5 -19 per barrel for 1997 as a whole.

Interest rates

The Federal Reserve Board raised US short-term interest rates to 5.5 per cent in March - the first change since rates were cut at the end of 1995. With recovery not yet in full force and inflation remaining low, German rates have remained unchanged, while French rates have eased slightly further. Japanese short rates have been held at 0.5 per cent since September 1995. Long-term interest rates fell back slightly in the final quarter of last year amid diminishing fears of inflationary pressures in the US. US rates have edged up slightly since, while those in Japan and Germany have held steady.

Unemployment

Unemployment has continued to decline in the US, falling to 4.9 per cent in April (standardised ILO definition). Unemployment is much higher in Europe. It stood at 9.6 per cent in Germany and 12.5 per cent in France in April. Japanese unemployment has also been increasing, and although much lower than elsewhere - at 3.2 per cent in March - is currently close to historically high levels. the service sector, where earnings growth has risen from 3.5 per cent in the first half of last year to 4.75 per cent at present.