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Contents

	Page
Introduction	3
Symbols and definitions used	3
Latest developments in the economy	5
Table and charts	7
Selected monthly indicators	8
National accounts aggregates	10
Gross domestic product: by category of expenditure	12
Personal disposable income and consumption	12
Real consumers' expenditure - component categories	14
Retail sales, new registrations of cars and credit business	16
Gross domestic product and shares of income and expenditure	16
Income, product and spending per head	18
Gross domestic fixed capital formation	20
Indicators of fixed investment by manufacturing industry	20
CSO inquiry into investment intentions: manufacturing industry	22
Indicators of fixed investment in dwellings	24
Stock changes	24
Stock ratios	26
Inland energy consumption	28
Index of output of the production industries	30
Index numbers of output at constant factor cost	32
Engineering and construction: output and orders	34
Motor vehicle production and steel production and consumption	36
Output per person employed	38
National employment and unemployment	40
Regional unemployment rates	42
Average earnings	44
Prices	46
Visible trade	48
Measures of UK competitiveness in trade in manufactures	50
Balance of payments: current account	52
Sterling exchange rates and UK official reserves	54
Monetary aggregates	56
Counterparts to changes in M4	58
General government receipts and expenditure	58
Financial transactions of the public sector	60
Summary capital accounts and financial surplus or deficit	62
Appropriation account of industrial and commercial companies	64
Capital account and financial surplus/deficit of industrial and commercial companies	64
Financial transactions including net borrowing requirement of industrial and commercial companies	66
UK banks' lending to UK residents	66
UK banks' loans, advances and acceptances to UK residents	68
Interest rates, security prices and yields	71
Cyclical indicators for the UK economy	83
Measures of variability of selected economic series	83
Articles	84
International comparisons of taxes and social security contributions in 20 OECD countries 1978-1988	98
Regional accounts 1989 Part 1	111
Index of sources	111
Other	
Release dates of economic statistics to be published next month	<i>inside front cover</i>
Articles published in recent <i>Economic Trends</i>	<i>inside back cover</i>

INTERNATIONAL COMPARISONS OF TAXES AND SOCIAL SECURITY CONTRIBUTIONS IN 20 OECD COUNTRIES 1978 - 1988 ^{1,2}

Central Statistical Office

Limitations of the comparisons

The comparisons made in this article indicate only broadly the relative importance of taxation in different countries. There are various factors which should be kept in mind :-

- Total taxation, the form of taxation, and the composition of taxes reflect differences between countries in their economic and financial structures and in the degree of government involvement in providing services and financial support (for example, medical care and retirement pensions).
- Comparisons are also affected by the methods governments choose to achieve their aims, for example: government tax receipts may be reduced through a system of tax reliefs, or a gross system may be adopted under which money is collected in taxes and then handed back as cash grants.
- The extent to which governments finance their expenditure by borrowing or from taxation varies between countries, and over time, and has an effect on the ratios of taxes to the gross national product.
- Including or excluding social security contributions can have a marked effect on comparisons between countries.

The figures shown here relate to total tax yields in each country: they reveal nothing about the incidence of tax on different groups.

Overall comparisons³

This article compares twenty OECD countries on three criteria: **first**, the overall percentage of gross national product, GNP, at factor cost taken by taxes and social security contributions during 1978-1988 (together with preliminary estimates for 1989 of taxes and social security contributions as a percentage of gross domestic product, GDP, at market prices); **second**, the distribution of total taxation among various categories of tax; (figure 2 on page 139 gives a breakdown of United Kingdom total taxes and social security contributions for 1988) and **third**, the percentage of household income taken by direct taxes and social security contributions.

The comparisons are supplemented by "Technical notes" which discuss the sources of data, as well as differences between the United Kingdom system of national accounts and international definitions.

1978 to 1988: Taxes and social security contributions as a proportion of total economic activity.

In descending order, Denmark, Sweden and Norway have occupied the first three places, in differing order, in most years since 1978 when looking at the percentage of GNP taken by taxes and social security contributions, and 1988 saw Denmark at the head of the table with taxes and social security contributions equal to 65 per cent of the GNP. The United Kingdom lies ninth with 44 per cent, and the United States has the lowest figure, 31 per cent.

Twelve of the seventeen countries in appendix Table 1 show a fall in the amount of taxes and social security contributions as a percentage of GNP in 1988, compared with the previous year. Over the last five years, most countries show only a slight increase in the percentage with the main exceptions of Denmark and Sweden, which have had larger than average increases.

¹ Articles making comparisons of this nature have appeared regularly in *Economic Trends* since 1969, but the earlier articles contained less country detail. The latest article preceding this one was in the April 1990 issue. Detailed figures for each country from 1978 are given in the Appendix, but summary tables are confined to those countries for which the necessary data are available for the three periods shown. Except in Table C, the percentages are derived from data compiled according to standardised international definitions: further information on sources and methods is given in the "Technical notes".

² All calculations are based on returns made to the OECD (Organisation for Economic Co-operation and Development).

³ For more detailed figures, see Appendix Tables 1,2 and 3.

An assessment on taxes alone, that is excluding social security contributions, can yield marked differences in the rankings for some countries. This reflects the degree to which taxes are raised by such contributions. Australia shows the most marked difference between the two parts of Table A. In 1988, Australia was ranked fourteenth when including social security contributions and fifth when excluding them: this is because no separate social security contributions are collected there. Similarly, the United Kingdom ranked sixth instead of ninth. Conversely, those countries where social security contributions are a substantial part of total tax revenues ranked lower; France, for example, moves from fifth place to eleventh and the Netherlands from fourth to tenth.

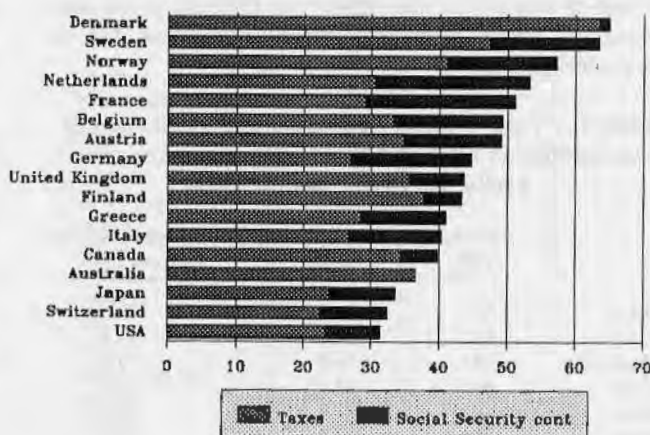
Appendix Table 2 shows the proportion of taxes alone as a percentage of GNP at factor cost, and figure 1, opposite, shows the relative positions of the seventeen available countries comparing both taxes and social security contributions together, in 1988.

Table A : Taxes and social security contributions as a percentage of GNP at factor cost by rank

	1978		1983		1988	
	Percentage and Rank		Percentage and Rank		Percentage and Rank	
Including social security contributions						
Denmark	52	3	57	2	65	1
Sweden	56	2	58	1	63	2
Norway	56	1	56	3	57	3
Netherlands	50	4	52	4	53	4
France	44	8	50	6	51	5
Belgium ¹	47	6	50	5	49	6
Austria	49	5	49	7	49	7
FR Germany	46	7	46	8	45	8
United Kingdom	38	10	44	9	44	9
Finland	39	9	38	10	43	10
Greece ¹	32	13	36	13	41	11
Italy	31	14	37	11	40	12
Canada	35	11	37	12	40	13
Australia	30	16	33	14	36	14
Japan	24	17	29	17	34	15
Switzerland ¹	32	12	31	15	32	16
USA	30	15	30	16	31	17
Excluding social security contributions						
Denmark	51	1	55	1	64	1
Sweden	41	3	42	3	47	2
Norway	41	2	43	2	41	3
Finland	33	6	33	8	38	4
Australia	30	10	33	7	36	5
United Kingdom	31	8	36	4	36	6
Austria	35	4	34	6	35	7
Canada	30	9	32	9	34	8
Belgium ¹	34	5	35	5	33	9
Netherlands	31	7	28	11	31	10
France	26	12	28	10	29	11
Greece ¹	23	14	24	13	29	12
FR Germany	29	11	28	12	27	13
Italy	19	16	24	14	27	14
Japan	17	17	21	17	24	15
USA	24	13	23	15	23	16
Switzerland ¹	22	15	22	16	22	17

¹ Former SNA - for details see Technical note

Figure 1: Taxes and social security contributions as a percentage of GNP at factor cost in 1988



In making percentage of GNP at factor cost the main basis of comparison, this article follows the convention adopted for international comparisons in previous articles in this series. For studies of the United Kingdom alone, GDP at market prices is often used as a denominator. On this basis, using published OECD figures for GDP at market prices as in Table B below, the United Kingdom still ranked ninth in 1988 out of the same list of countries; 37 per cent of its market price GDP was taken in taxes and social security contributions.

Table B : Taxes and social security contributions as a percentage of GDP at market prices by rank

	1978		1983		1988	
	Percentage and Rank		Percentage and Rank		Percentage and Rank	
Including social security contributions						
Sweden	50	1	51	1	55	1
Denmark	43	4	46	4	52	2
Norway	49	2	48	2	49	3
Netherlands	45	3	48	3	48	4
France	39	8	44	6	44	5
Belgium ¹	43	5	44	5	44	6
Austria	42	6	42	7	42	7
FR Germany	41	7	41	8	41	8
United Kingdom	34	10	38	9	37	9
Finland	35	9	34	11	37	10
Italy	29	13	35	10	37	11
Greece ¹	29	14	33	12	35	12
Canada	30	12	32	13	34	13
Switzerland ¹	31	11	31	14	32	14
Japan	23	17	27	17	31	15
Australia	27	16	29	15	31	16
USA	28	15	28	16	29	17

¹ Former SNA - for details see Technical note

Preliminary estimates for 1989

For some member countries of OECD, provisional data for 1989 are available from the latest edition of *OECD Revenue Statistics*. These figures are not on the same basis as those in the rest of this article, and figures for 1989 are preliminary estimates. Table C gives a comparison using these data for the available countries.

Table C : Total receipts from taxes and social security contributions as a percentage of GDP at market prices: preliminary estimates for 1989

	Percentages		Difference between 1988 and 1989
	1988	1989	
Sweden	54.7	56.8	2.1
Denmark	52.1	50.8	-1.3
Netherlands	48.1	46.1	-2.0
Norway	48.7	45.5	-3.2
France	44.3	43.9	-0.4
Austria	42.1	41.0	-1.1
Italy	36.9	38.4	1.5
Finland	37.0	38.3	1.3
FR Germany	40.5	38.1	-2.4
United Kingdom	37.4	36.5	-0.9
Canada	34.4	33.4	-1.0
Switzerland ¹	32.3	31.9	-0.4

¹ Former SNA - for details see Technical note

Countries contrast widely in the changes shown between 1988 and 1989 in the proportion of GDP taken by taxes and social security contributions. Three quarters of the countries in Table C show a decrease; for the United Kingdom there was a fall of 0.9 per cent.

These changes do not greatly alter the ranking of the countries. Although the corresponding set of estimates on a national accounts basis is not yet available, this is likely to give a similar picture.

Distribution over categories of tax²

Direct taxes on households as a share of total taxes and social security contributions

Over the ten year span, as shown in Table D, the United Kingdom and the Netherlands both record the largest reduction in direct taxes on households as a proportion of total taxes and social security contributions: the United Kingdom shows a fall of 6 per cent since 1978 to a 1988 level of 28 per cent. Reductions also occurred in Sweden, Norway, Switzerland, the Federal Republic of Germany, Belgium and France. In the United Kingdom, the pattern since 1978 has been downwards in the main: a large part of the fall was before 1981 (reflecting both changes in tax rates and a shift from direct to indirect taxes in the 1979 Budget). The level has now been around 28 percent for the last five years.

² Includes payments made by unincorporated businesses (except for the German Federal Republic and the Netherlands, but these exceptions do not materially affect the comparisons) and, for those countries which have adopted the SNA, motor vehicle license duties paid by households.

Table D : Percentage of total taxes and social security contributions derived from direct taxes on households

	Percentages		
	1978	1983	1988
Denmark	56	57	60
Australia	44	45	46
Finland	40	42	42
Sweden	43	39	40
Switzerland ¹	41	41	39
Canada	35	37	39
USA	36	37	36
Belgium ¹	36	36	33
Norway	29	23	28
Austria	27	27	28
United Kingdom	34	29	28
FR Germany	27	25	25
Japan	21	25	23
Netherlands	28	23	22
France	15	15	14
Greece ¹	12	14	12

¹ Former SNA - for details see Technical note

Direct taxes on corporate income as a share of total taxes and social security contributions

Direct taxes on corporate income remained fairly stable over the ten year period as a proportion of total taxation for most of the countries shown, Table E and appendix Table 4 summarise this. The main point of interest in Table 4 is Norway, showing a steep rise, peaking at 19 per cent in 1985, followed by a sharp fall, giving only some 6 per cent in 1988: the overall effect from 1978 to 1988 was a near 2 per cent fall.

The United Kingdom shows a similar but less dramatic pattern to Norway's: a fairly steady increase in the share from the mid-1970's until 1985 (due mainly to the increasing importance of taxes on North Sea oil profits) followed by a 2 per cent drop in 1986 (reflecting a sharp fall in receipts from petroleum revenue tax) to a level of 11 per cent where it has remained for the last three years. In most of the fifteen countries for which the comparison is possible, a slight rise is discernible over the most recent year or two in the share derived from taxes on corporate income.

Table E : Percentage of taxes and social security contributions derived from direct taxes on corporate income

	Percentages		
	1978	1983	1988
Japan	19	17	20
United Kingdom	7	11	11
Australia	11	9	11
USA	13	8	10
Canada	12	10	9
Netherlands	6	6	7
Belgium ¹	6	6	7
France	5	5	7
Norway	7	17	6
Switzerland ¹	5	5	5
Sweden	2	4	5
FR Germany	5	4	5
Greece ¹	4	3	4
Austria	4	4	4
Finland	5	5	3

¹ Former SNA - for details see Technical note

Indirect taxes as a share of total taxes and social security contributions

The share of total revenue obtained from indirect taxation fell in the majority of the countries listed in Table F. The exceptions to this were Finland, Sweden, Norway, the United States and the United Kingdom. The Scandinavian countries all saw rises of less than 2 per cent and the United Kingdom a rise of 3 per cent since 1978, the United States was unchanged. Of the countries which have experienced a fall, the largest was in Denmark where indirect taxes as a percentage of total taxes and social security contributions has fallen by 5 percentage points since 1978, to a 1988 level of 37 per cent.

In the United Kingdom, a rise from 40 per cent in 1978 to 44 per cent in 1981 was followed by a slight but steady fall to 41 per cent in 1985. The level has now remained around 43 per cent for the past three years.

Table F : Percentage of taxes and social security contributions derived from indirect taxes

	Percentages		
	1978	1983	1988
Greece ¹	53	49	52
Australia	44	46	43
United Kingdom	40	42	43
Finland	40	40	41
Austria	39	39	38
Norway	37	36	38
Canada	40	39	38
Denmark	42	38	37
France	38	36	35
FR Germany	31	31	30
Sweden	28	30	30
Italy	32	28	30
USA	28	30	28
Netherlands	28	25	27
Japan	30	27	27
Belgium ¹	28	27	26
Switzerland ¹	23	22	22

¹ Former SNA - for details see Technical note

Social security contributions as a share of total revenue

Social security contributions increased as a percentage of total revenue in some two-thirds of the countries for which estimates are available. This is shown by Table G. The Netherlands and the United States both show the largest rise since 1978 (both up 5 percentage points), followed by Belgium (up 4 percentage points). Decreases were recorded in Italy, Finland, Japan, and Sweden, with Italy showing the largest fall (4 per cent), followed by Finland (3 per cent).

Table G : Percentage of social security contributions derived from total taxes and social security contributions

	Percentages		
	1978	1983	1988
France	42	43	43
Netherlands	38	46	43
FR Germany	37	39	40
Italy	38	36	34
Belgium ¹	29	30	33
Switzerland ¹	30	30	31
Greece ¹	29	33	30
Austria	29	29	29
Japan	30	30	29
Norway	27	24	28
USA	21	24	26
Sweden	27	27	25
United Kingdom	18	18	18
Canada	12	13	14
Finland	16	13	13
Denmark	1	4	2

¹ Former SNA - for details see Technical note

In the United Kingdom, the share has remained steady around 18 per cent for the last six years.

Value added tax

Value added tax varies widely in those countries which apply it. The highest level of contributions to total tax and social security contributions can be found in Austria with a figure of 21 per cent for 1988 and the lowest in Sweden with value added tax amounting to 13 per cent. The United Kingdom shows a figure of 16 per cent in 1988, similar to that seen over the previous few years.

Taxes on capital

Receipts from taxes on capital have remained virtually static in the majority of the countries shown throughout the last ten years, as demonstrated in the country by country comparison available in appendix Table 4. Most countries show that less than 1 per cent of total taxes and social security contributions is taken by taxes on capital. The exceptions are Greece, Japan and Switzerland which show respective levels of 1, 2 and 3 per cent in the latest year.

The United Kingdom has consistently shown a level of around half a per cent for the last ten years.

Direct taxes on households and social security contributions as a percentage of total personal income in 1978, 1983 and 1988

The proportion of household income taken by direct taxes and social security contributions ranges from 15 per cent in Greece up to 36 per cent in Sweden, as shown in Table H. These percentages are influenced by the numerous factors noted at the outset as "limitations of the comparisons".

The treatment of employers' social security contributions also affects these comparisons. In the national accounts, both employers' and employees' social security contributions are considered to form part of personal income. The impact of taxes and contributions, as perceived by the taxpayer, may be better reflected by an alternative approach: that is, to include only employees' contributions to social security schemes in the calculations (excluding employers' contributions from both numerator and denominator). Table H summarises figures on both bases.

Table H : Percentage of total personal income taken by direct taxes on households and social security contributions

	Percentages		
	1978	1983	1988
Including employers' contributions			
Sweden	35	34	36
Norway	31	29	30
Netherlands	29	30	30
Belgium ¹	27	27	28
FR Germany	27	27	27
Austria	26	25	25
France	22	25	25
Switzerland ¹	24	23	24
Finland	22	21	24
Canada	18	19	22
United Kingdom	21	20	20
Japan	12	16	17
Australia	14	15	17
Greece ¹	13	16	15
Excluding employers' contributions			
Sweden	25	24	26
Austria	26	25	25
Norway	23	22	23
Netherlands	22	24	23
Switzerland ¹	21	21	21
FR Germany	21	21	21
Belgium ¹	21	21	21
Canada	15	17	19
United Kingdom	17	17	16
France	12	15	15
Australia	14	14	15
Greece ¹	13	16	15
Japan	9	12	13

The proportion of personal income taken by direct taxes along with total employers' and employees' social security contributions, was higher in 1988 than in 1978 for two-thirds of the countries for which the data are available. The largest increases were in Japan and Canada, up by 5 and 4 percentage points respectively. For the United Kingdom, the share in 1988 was 1 per cent lower than in 1978 and unchanged compared with 1983. Four countries saw slight falls in their percentage of total personal income taken by direct taxes on households and social security contributions.

Excluding employers' social security contributions, tends to reduce the size of the percentage take. These reductions are especially large for Sweden and for France, both showing reductions of 10 per cent when comparing the figures including and excluding employers' contributions.

¹ Former SNA - for details see Technical note

TECHNICAL NOTES

1. Sources

The figures in the tables for direct taxes, indirect taxes and social security contributions are based on returns supplied to the OECD by national statistical offices and summarised in *OECD National Accounts 1976 - 1988, Volume Two, Detailed Tables*. These returns are made on the accounting conventions of the international organisations, which differ from those established in the United Kingdom; consequently the estimates made are not in all cases identical to those given in the CSO's own publications. Taxes on capital - which in the OECD national accounts presentation are included indistinguishably in capital transfers - have been derived from *Revenue Statistics of OECD Member Countries 1965 - 1989*. Figures for value added tax have also been obtained from this publication.

In this article, national accounts data have been used as the prime source, because the figures will be the more consistent with other statistics which are frequently derived from the national accounts publication.

2. Differences between OECD national accounts statistics and OECD Revenue Statistics

There are a few minor differences between the definitions of taxes and social security contributions used in Revenue Statistics and those used in the national accounts returns.

The main differences are in the time of recording the transactions. In Revenue Statistics these are recorded at the time the public authority receives the money, but in the national accounts they are entered when due to be paid. The relative positions of the countries are little affected.

Table J shows rankings in descending order of the percentages scored both on an OECD National Accounts basis and on a Revenue Statistics basis. The United Kingdom fell tenth on both bases in 1978, and ninth on both bases in 1988. There are small consistent ranking discrepancies in a number of the countries shown, the largest in the Federal Republic of Germany where eighth place in the OECD National Accounts becomes eleventh place when looking at Revenue Statistics.

3. Differences between the United Kingdom system of national accounts, the Former SNA and the Present SNA.

The national accounts returns to OECD are based as far as possible on the System of National Accounts introduced by the United Nations in 1968 (the "Present SNA"). However, three countries - Belgium, Greece and Switzerland - still provide figures on the basis of the previous system (the "Former SNA"). The figures on one basis are not strictly comparable with those on the other but the difference in definitions has little effect on the comparisons made in this article.

The main differences between the United Kingdom system and the international systems are summarised in Table K. United Kingdom figures in this article on a "national accounts" basis have been converted to the Present SNA.

Table J : Total taxes and social security contributions: percentage of GNP and ranking

	1978				1983				1988			
	National Accounts		Revenue Statistics		National Accounts		Revenue Statistics		National Accounts		Revenue Statistics	
	Per Cent	Rank	Per Cent	Rank	Per Cent	Rank	Per Cent	Rank	Per Cent	Rank	Per Cent	Rank
Denmark	52.0	3	51.9	3	56.8	2	56.8	2	65.0	1	65.0	1
Sweden	56.0	2	56.2	1	57.8	1	57.4	1	63.5	2	64.2	2
Norway	56.2	1	53.8	2	56.4	3	54.4	3	57.2	3	56.2	3
Netherlands	50.4	4	49.7	4	52.1	4	51.2	5	53.3	4	53.3	4
France	43.7	8	44.0	7	50.0	6	50.0	6	51.1	5	51.2	5
Belgium	47.5	6	48.9	5	50.2	5	51.5	4	49.3	6	50.7	6
Austria	49.0	5	48.3	6	48.5	7	47.9	7	49.1	7	48.8	7
FR Germany	46.2	7	42.2	8	45.8	8	41.7	9	44.7	8	41.3	11
United Kingdom	37.7	10	37.1	10	44.0	9	43.3	8	43.6	9	43.5	9
Finland	39.4	9	40.3	9	38.2	10	38.8	11	43.3	10	44.4	8
Greece	31.9	13	30.9	13	36.4	13	37.8	13	41.0	11	41.9	10
Italy	30.8	14	29.2	16	37.3	11	38.5	12	40.3	12	40.6	12
Canada	34.5	11	36.7	11	37.0	12	39.4	10	39.8	13	40.5	13
Australia	30.2	16	30.8	14	33.4	14	33.5	14	36.5	14	36.6	15
Japan	24.4	18	26.0	17	29.3	18	29.4	18	33.6	15	34.2	16
Switzerland	31.9	12	32.2	12	31.5	16	31.8	15	32.4	16	32.7	17
USA	30.3	15	29.9	15	30.2	17	29.6	17	31.4	17	31.4	18
Spain	24.6	17	24.1	18	31.5	15	30.2	16	NA	18	36.6	14

Table K : Definitions; UK system of national accounts, former SNA and present SNA.

	UK system	Former SNA	Present SNA
Definition of gross national product at factor cost			
i. Net property income from abroad			
a. Unremitted profits	Included	Excluded	Excluded
b. Profits remitted abroad	Measured after deduction of tax	Measured before deduction of tax	Measured before deduction of tax
ii. Rent income of public authorities (other than from dwellings)	Includes only capital consumption in place of imputed rents	Includes imputed rents before deducting interest and depreciation	Includes only capital consumption in place of imputed rents
Definition of taxes			
Direct taxes are taxes on income and indirect taxes are taxes on expenditure.			
There are the following differences in treatment:-			
Motor vehicle licence duties paid by households	Indirect	Indirect	Direct
Taxes on capital gains ¹	Capital	Capital	Direct
Compulsory fees, fines and penalties	Non-tax	Indirect	Non-tax ²

¹ For the United Kingdom, the betterment levy (introduced in 1967) and the development land tax (introduced in 1977) both representing a charge on the development value of land - are classified and treated in the same way as taxes on capital gains.

² Only compulsory fees paid by households are excluded; similar payments by business are treated as indirect taxes.

1 Taxes and social security contributions as a percentage of gross national product at factor cost

	Percentages										
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Australia ¹	30.2	31.3	32.4	33.8	34.3	33.4	35.6	35.4	36.5	36.9	36.5
Austria	49.0	48.6	48.8	50.0	48.7	48.5	50.2	51.0	50.6	50.0	49.1
Belgium ²	47.5	48.3	47.5	48.2	50.3	50.2	50.9	51.1	50.1	50.8	49.3
Canada	34.5	33.8	33.9	37.2	38.0	37.0	36.7	36.8	39.0	39.2	39.8
Denmark	52.0	54.1	55.4	55.7	54.5	56.8	58.8	61.0	64.1	65.2	65.0
Finland	39.4	36.9	36.9	38.9	38.3	38.2	40.4	41.9	43.6	41.0	43.3
France	43.7	45.8	47.5	47.6	49.0	50.0	51.4	51.3	50.5	51.4	51.1
German Federal Republic	46.2	46.0	46.3	46.3	46.3	45.8	45.8	45.9	45.1	45.1	44.7
Greece ²	31.9	32.0	30.6	29.6	34.3	36.4	37.8	37.6	41.1	42.5	41.0
Irish Republic	37.5	37.1	41.9	44.3	48.0	50.9	52.6	51.8	52.8	52.7	..
Italy	30.8	30.1	32.2	33.4	35.6	37.3	37.0	37.1	38.0	39.2	40.3
Japan	24.4	26.2	27.2	28.8	29.0	29.3	30.0	30.8	30.8	32.7	33.6
Luxembourg	44.9	41.4	41.5	39.9	36.6	38.6	38.2	38.9	39.5	..	..
Netherlands	50.4	50.5	51.5	50.8	50.7	52.1	50.1	49.9	50.8	53.5	53.3
Norway	56.2	56.3	58.7	56.6	56.5	56.4	56.0	58.4	56.9	57.9	57.2
Spain	24.6	25.8	27.1	28.8	28.9	31.5	32.1	33.2	34.8	..	..
Sweden	56.0	54.4	54.8	56.6	55.8	57.8	58.1	58.1	60.3	65.7	63.5
Switzerland ²	31.9	31.2	30.9	30.5	31.0	31.5	32.0	31.6	32.6	32.2	32.4
United Kingdom	37.7	38.6	41.1	43.9	44.7	44.0	43.9	43.9	44.2	43.7	43.6
United States	30.3	30.4	30.5	31.3	30.6	30.2	30.3	30.9	31.0	31.7	31.4

1 Fiscal years beginning on 1 July of year indicated.

2 Former SNA.

Source: Central Statistical Office

2 Taxes as a percentage of gross national product at factor cost

	Percentages										
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Australia ¹	30.2	31.3	32.4	33.8	34.3	33.4	35.6	35.4	36.5	36.9	36.5
Austria	34.7	34.3	34.2	35.3	34.4	34.4	35.9	36.4	36.1	35.5	34.8
Belgium ²	33.7	34.4	33.6	33.9	35.9	35.2	35.1	34.8	33.8	34.0	33.2
Canada	30.3	29.8	30.0	32.8	33.3	32.0	31.9	31.7	33.6	33.7	34.3
Denmark	51.2	53.3	54.3	54.4	52.9	54.6	56.5	58.7	62.1	62.7	63.5
Finland	33.2	31.4	31.5	33.7	33.2	33.3	34.8	35.7	37.6	35.3	37.7
France	25.5	26.4	27.3	27.4	28.1	28.3	29.3	29.1	28.8	29.3	29.1
German Federal Republic	29.1	28.9	28.9	28.2	27.8	27.8	27.9	27.9	27.2	27.2	26.9
Greece ²	22.5	22.7	20.9	19.8	23.2	24.3	25.2	24.8	28.5	29.3	28.5
Irish Republic	30.7	30.0	33.8	36.0	38.7	41.1	42.9	42.2	43.3	43.3	..
Italy	19.1	18.2	20.1	21.2	22.5	23.9	24.2	24.3	24.7	25.7	26.7
Japan	17.1	18.5	19.5	20.5	20.5	20.6	21.3	21.9	21.8	23.4	23.9
Luxembourg	32.4	29.4	29.3	28.1	26.2	28.8	28.3	29.2	29.4	..	..
Netherlands	31.1	30.8	31.4	30.0	29.1	28.1	27.4	27.4	29.0	30.6	30.6
Norway	41.2	41.7	44.8	42.9	42.5	42.6	42.9	45.0	41.3	41.1	41.1
Spain	12.4	13.1	14.5	15.8	15.8	18.0	19.1	20.1	21.7	..	..
Sweden	40.8	39.6	39.1	39.9	40.2	42.4	43.0	43.6	45.0	50.0	47.4
Switzerland ²	22.5	21.7	21.6	21.3	21.7	21.9	22.1	21.8	22.7	22.3	22.4
United Kingdom	30.9	32.0	34.2	36.6	37.1	36.1	36.0	36.0	36.2	35.8	35.6
United States	24.0	23.8	23.9	24.4	23.5	23.0	22.9	23.2	23.3	24.0	23.3

1 Fiscal years beginning on 1 July of year indicated.

2 Former SNA.

Source: Central Statistical Office

3 Taxes and social security contributions as a percentage of gross national product at factor cost¹

Percentages

	Direct taxes						Indirect taxes					
	Households ²			Corporations			Total			of which: VAT		
	1978	1983	1988	1978	1983	1988	1978	1983	1988	1978	1983	1988
Australia ³	13.4	14.9	16.8	3.3	3.0	3.8	13.2	15.5	15.8	-	-	-
Austria	13.3	13.3	13.9	2.0	1.9	2.0	19.3	19.1	18.8	9.6	10.0	10.1
Belgium ⁴	17.2	18.0	16.3	3.0	3.1	3.5	13.2	13.8	13.0	8.3	8.6	8.2
Canada	12.1	13.6	15.6	4.2	3.8	3.5	13.8	14.4	15.0	-	-	-
Denmark	29.2	32.6	39.0	-	-	-	21.8	21.8	24.2	10.9	12.0	11.8
Finland	15.6	15.9	18.3	1.8	1.9	1.4	15.6	15.4	17.8	-	-	-
France	6.4	7.7	7.1	2.4	2.6	3.4	16.6	17.8	18.1	9.4	10.2	9.9
German Federal Republic	12.3	11.3	11.2	2.2	2.0	2.1	14.5	14.3	13.4	6.4	7.1	6.4
Greece ⁴	3.7	5.0	4.9	1.3	1.1	1.8	17.0	17.7	21.4	-	-	-
Irish Republic	12.0	17.4	-	-	-	-	18.5	23.6	23.8	6.9	10.1	11.1
Italy	7.7	11.2	-	1.7	2.1	-	9.7	10.5	11.9	4.3	5.5	6.2
Japan	5.1	7.4	7.7	4.6	5.0	6.6	7.2	7.8	9.1	-	-	-
Luxembourg	-	-	-	19.5	15.4	-	12.8	13.3	14.8	4.7	4.6	5.8
Netherlands	13.9	11.8	11.9	3.1	3.1	3.9	13.9	13.0	14.5	8.0	7.6	8.8
Norway	16.4	12.8	16.3	4.2	9.5	3.2	20.6	20.3	21.6	11.0	9.9	11.3
Spain	3.5	6.4	-	2.3	2.1	-	6.5	9.2	11.8	-	-	6.0
Sweden	24.1	22.8	25.3	1.2	2.0	3.0	15.5	17.4	19.0	7.4	7.8	8.5
Switzerland ⁴	13.1	12.9	12.7	1.6	1.5	1.7	7.2	7.0	7.2	0.1	0.1	0.1
United Kingdom	13.0	12.7	12.1	2.8	4.7	4.7	14.9	18.5	18.6	3.5	6.1	7.2
United States	11.0	11.3	11.2	4.0	2.5	3.1	8.6	9.0	8.8	-	-	-

	Taxes on capital			Social security contributions					
				Total			of which: Paid by employers		
	1978	1983	1988	1978	1983	1988	1978	1983	1988
Australia ³	0.3	-	-	-	-	-	-	-	-
Austria	0.1	0.1	0.1	14.3	14.1	14.2	-	-	-
Belgium ⁴	0.4	0.3	0.3	13.7	15.0	16.2	9.2	9.0	10.4
Canada	0.2	0.2	0.2	4.3	4.9	5.5	2.5	2.9	3.3
Denmark	0.2	0.2	0.4	0.7	2.2	1.5	-	-	-
Finland	0.1	0.1	0.2	6.2	5.0	5.6	-	-	-
France	0.2	0.3	0.4	18.2	21.7	22.1	12.7	14.1	13.8
German Federal Republic	0.1	0.1	0.1	17.1	18.0	17.8	8.1	8.5	8.4
Greece ⁴	0.5	0.5	0.5	9.4	12.1	12.4	-	-	-
Irish Republic	0.2	0.1	0.2	6.9	9.7	-	-	-	-
Italy	0.1	0.1	0.1	11.7	13.4	13.6	9.6	9.5	-
Japan	0.2	0.3	0.5	7.2	8.7	9.6	3.8	4.4	4.8
Luxembourg	0.1	0.1	0.1	12.5	9.8	-	-	-	-
Netherlands	0.2	0.2	0.3	19.3	24.0	22.7	9.9	10.2	10.0
Norway	0.1	0.1	0.1	15.1	13.7	16.0	9.8	8.4	9.8
Spain	0.1	0.2	0.4	12.2	13.6	-	-	13.0	-
Sweden	0.1	0.1	0.1	15.1	15.4	16.0	14.4	14.7	15.4
Switzerland ⁴	0.5	0.6	0.8	9.5	9.6	10.0	3.4	3.3	3.3
United Kingdom	0.2	0.2	0.3	6.8	7.9	8.0	4.1	4.0	4.2
United States	0.3	0.3	0.2	6.3	7.2	8.1	3.4	3.8	4.1

¹ For Italy no household account has been published on the OECD publication since 1984, therefore comparisons for Italy using Direct taxation on households or Social security contributions paid by employers have not been made.

² Households includes unincorporated businesses, except for the German Federal Republic and the Netherlands.

³ Fiscal years beginning on 1 July of year indicated.

⁴ Former SNA.

Source: Central Statistical Office

4 Taxes and social security contributions by category as a percentage of total taxes¹ and social security contributions

Percentages

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
AUSTRALIA ²											
Direct taxes:											
Paid by households	44.3	44.6	44.1	45.9	45.4	44.6	45.2	45.5	46.9	45.4	46.1
Paid by corporations	10.9	10.5	12.2	11.4	10.1	8.9	9.3	9.4	9.1	10.3	10.5
Total	55.3	55.1	56.4	57.3	55.5	53.5	54.6	54.9	56.0	55.7	56.7
Indirect taxes	43.7	44.2	43.2	42.4	44.4	46.4	45.4	45.1	44.0	44.3	43.3
Taxes on capital	1.0	0.7	0.4	0.3	0.1	0.1	-	-	-	-	-
Social security contributions	-	-	-	-	-	-	-	-	-	-	-
AUSTRIA											
Direct taxes:											
Paid by households ³	27.2	26.6	26.6	27.5	27.5	27.4	27.7	28.5	28.8	28.0	28.3
Paid by corporations	4.1	4.3	4.2	4.4	4.0	4.0	4.1	4.4	4.3	4.1	4.1
Total	31.3	30.9	30.8	31.9	31.5	31.3	31.8	32.9	33.1	32.1	32.4
Indirect taxes	39.4	39.6	39.1	38.5	38.9	39.4	39.6	38.4	38.1	38.7	38.3
of which: VAT	19.5	20.1	19.8	20.0	19.8	20.5	21.5	20.7	20.5	20.7	20.5
Taxes on capital	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2
Social security contributions	29.1	29.4	29.9	29.5	29.4	29.1	28.5	28.5	28.6	29.0	29.0
BELGIUM ⁴											
Direct taxes:											
Paid by households	36.1	36.5	36.3	36.1	37.1	35.8	35.8	35.3	34.7	33.8	33.0
Paid by corporations	6.3	6.5	6.0	5.6	6.4	6.2	6.5	6.8	6.9	6.9	7.2
Total	42.4	43.0	42.3	41.7	43.5	42.0	42.2	42.1	41.5	40.6	40.2
Indirect taxes	27.9	27.4	27.6	27.9	27.1	27.5	26.1	25.5	25.3	25.7	26.4
of which: VAT	17.6	17.1	17.3	17.9	17.0	17.0	16.4	16.1	15.8	16.1	16.6
Taxes on capital	0.8	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.7
Social security contributions	28.9	28.7	29.3	29.6	28.6	29.9	31.0	31.8	32.6	33.0	32.8
of which: paid by employers	19.4	19.3	19.7	19.1	17.3	17.8	18.7	19.6	20.2	20.7	21.0
CANADA											
Direct taxes:											
Paid by households ³	34.9	34.9	35.6	35.1	36.8	36.8	35.9	36.3	37.9	38.7	39.3
Paid by corporations	12.2	13.3	14.1	12.2	10.6	10.4	11.4	10.7	9.6	8.8	8.9
Total	47.1	48.2	49.7	47.3	47.4	47.1	47.3	47.0	47.5	47.5	48.2
Indirect taxes	40.0	39.6	38.4	40.4	39.7	39.0	39.0	38.7	38.3	38.2	37.6
Taxes on capital	0.6	0.5	0.4	0.3	0.5	0.6	0.6	0.6	0.5	0.5	0.4
Social security contributions	12.4	11.8	11.5	12.0	12.3	13.3	13.2	13.7	13.7	13.8	13.8
of which: paid by employers	7.2	6.9	6.9	7.2	7.1	7.9	8.0	8.3	8.3	8.3	8.3
DENMARK											
Direct taxes:											
Paid by households ³	56.2	55.5	56.7	56.8	57.0	57.3	57.6	58.2	57.7	57.9	60.0
Paid by corporations	-	-	-	-	-	-	-	-	-	-	-
Total	56.2	55.5	56.7	56.8	57.0	57.3	57.6	58.2	57.7	57.9	60.0
Indirect taxes	42.0	42.5	41.0	40.8	39.6	38.4	38.0	37.4	38.7	37.7	37.2
of which: VAT	21.0	22.1	22.2	22.8	22.3	21.1	20.6	20.0	19.4	18.9	18.2
Taxes on capital	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6
Social security contributions	1.4	1.6	1.9	2.2	2.9	3.9	4.0	3.9	3.1	3.8	2.3
FINLAND											
Direct taxes:											
Paid by households	39.7	39.1	40.5	41.9	41.5	41.7	41.4	41.8	42.7	41.0	42.2
Paid by corporations	4.5	4.6	3.7	4.6	4.7	4.9	4.3	3.9	4.1	3.0	3.3
Total	44.2	43.7	44.3	46.5	46.2	46.6	45.7	45.7	46.8	44.0	45.5
Indirect taxes	39.7	41.1	41.1	39.9	40.3	40.2	40.3	39.2	39.0	41.6	41.1
Taxes on capital	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4
Social security contributions	15.8	15.0	14.4	13.4	13.3	13.0	13.7	14.8	13.9	14.0	13.0

4 Taxes and social security contributions by category as a percentage of total taxes¹ and social security contributions

continued

Percentages

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
FRANCE											
Direct taxes:											
Paid by households ³	14.6	14.0	14.5	14.8	14.7	15.4	15.4	14.9	14.9	14.6	13.9
Paid by corporations	5.4	5.4	5.7	5.8	5.9	5.2	5.5	5.6	6.2	6.5	6.7
Total	20.0	19.4	20.2	20.6	20.6	20.6	21.0	20.5	21.1	21.0	20.6
Indirect taxes	37.9	37.7	36.6	36.2	36.0	35.5	35.4	35.5	35.3	35.2	35.4
of which: VAT	21.4	21.4	20.9	20.9	21.0	20.3	19.6	19.7	19.2	19.2	19.4
Taxes on capital	0.5	0.6	0.6	0.8	0.6	0.6	0.6	0.6	0.7	0.8	0.9
Social security contributions	41.6	42.3	42.7	42.4	42.7	43.3	43.1	43.3	42.9	43.0	43.2
of which: paid by employers	29.1	28.5	28.3	28.3	28.2	28.3	27.6	27.8	27.3	26.9	27.0
GERMAN FEDERAL REPUBLIC											
Direct taxes:											
Paid by households ⁴	26.6	25.7	26.3	25.5	25.2	24.8	24.6	25.0	24.9	25.6	25.1
Paid by corporations	4.8	5.0	4.3	4.0	4.1	4.5	4.8	5.2	5.2	4.5	4.8
Total	31.4	30.6	30.7	29.6	29.3	29.2	29.4	30.3	30.1	30.0	29.9
Indirect taxes	31.4	32.0	31.6	31.2	30.6	31.3	31.3	30.4	30.0	30.0	30.0
of which: VAT	13.8	14.7	15.3	15.4	14.8	15.4	15.3	14.5	14.1	14.5	14.4
Taxes on capital	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
Social security contributions	36.9	37.2	37.6	39.1	40.0	39.3	39.1	39.2	39.7	39.8	39.8
of which: paid by employers	17.5	17.6	17.9	18.4	18.8	18.6	18.4	18.5	18.8	18.8	18.8
GREECE⁵											
Direct taxes:											
Paid by households ³	11.6	12.8	15.2	13.3	14.6	13.7	14.4	13.5	12.9	12.1	12.0
Paid by corporations	4.1	3.8	4.3	3.7	4.0	3.0	3.4	3.3	4.2	4.4	4.3
Total	15.6	16.6	19.6	16.9	18.6	16.7	17.8	16.8	17.1	16.5	16.3
Indirect taxes	53.3	52.6	47.3	48.7	47.4	48.7	47.8	48.3	51.1	51.4	52.2
Taxes on capital	1.7	1.6	1.4	1.4	1.7	1.4	1.1	1.0	1.1	1.0	1.1
Social security contributions	29.4	29.2	31.8	32.9	32.3	33.2	33.3	33.9	30.7	31.1	30.4
IRISH REPUBLIC											
Direct taxes:											
Paid by households ³	32.0	33.8	34.5	34.6	34.0	34.1	35.5	35.7	37.0	38.0	..
Paid by corporations	-	-	-	-	-	-	-	-	-	-	..
Total	32.0	33.8	34.5	34.6	34.0	34.1	35.5	35.7	37.0	38.0	..
Indirect taxes	49.2	46.7	45.9	46.4	46.3	46.5	45.8	45.5	44.6	43.9	..
of which: VAT	18.3	16.0	13.8	14.5	18.2	19.9	20.1	19.4	19.6	19.0	..
Taxes on capital	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	..
Social security contributions	18.3	19.2	19.2	18.8	19.4	19.1	18.4	18.6	18.1	17.8	..
ITALY⁶											
Direct taxes:											
Paid by households ³	24.9	24.8	27.5	30.2	30.7	30.0	30.7	31.1	29.5	28.6	..
Paid by corporations	5.5	5.1	4.1	4.7	4.7	5.6	5.7	6.4	7.0	8.3	..
Total	30.4	29.9	31.6	34.9	35.4	35.6	36.4	37.6	36.5	36.9	..
Indirect taxes	31.6	30.4	30.4	28.4	27.5	28.2	28.7	27.6	28.1	28.5	29.6
of which: VAT	13.9	14.1	15.5	15.0	14.4	14.8	15.2	14.4	15.0	14.7	15.3
Taxes on capital	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2
Social security contributions	37.9	39.5	37.7	36.5	36.9	36.0	34.6	34.6	35.2	34.4	33.7
of which: paid by employers	31.1	30.0	27.7	26.9	26.0	25.5	25.2	-	-	-	..
JAPAN											
Direct taxes:											
Paid by households ³	21.0	22.9	24.2	24.5	24.6	25.3	24.4	23.4	24.2	23.9	22.9
Paid by corporations	18.9	17.2	17.8	17.5	17.2	17.1	18.0	19.0	18.6	18.8	19.6
Total	39.8	40.1	42.1	42.0	41.9	42.4	42.3	42.5	42.8	42.7	42.5
Indirect taxes	29.7	29.7	28.8	28.2	27.7	26.8	27.5	27.5	26.5	27.2	27.2
Taxes on capital	0.9	0.8	0.7	0.8	0.9	1.0	1.1	1.2	1.5	1.7	1.6
Social security contributions	29.6	29.4	28.5	29.0	29.5	29.8	29.1	28.9	29.2	28.4	28.7
of which: paid by employers	15.6	14.6	14.5	14.8	15.1	15.1	14.8	14.8	15.4	14.7	14.4

4 Taxes and social security contributions by category as a percentage of total taxes¹ and social security contributions

continued

Percentages

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
LUXEMBOURG											
Direct taxes:											
Paid by households ³	-	-	-	-	-	-	-	-	-	..	..
Paid by corporations	43.4	41.1	39.2	39.0	38.8	39.9	39.1	40.5	39.0	..	..
Total	43.4	41.1	39.2	39.0	38.8	39.9	39.1	40.5	39.0	..	..
Indirect taxes	28.6	29.5	31.1	31.2	32.4	34.3	34.6	34.3	35.2	..	..
of which: VAT	10.4	10.6	10.7	11.7	12.2	12.0	13.2	12.9	13.4	..	..
Taxes on capital	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	..	..
Social security contributions	27.8	29.1	29.4	29.6	28.4	25.4	26.0	25.0	25.5	..	..
NETHERLANDS											
Direct taxes:											
Paid by households ⁴	27.7	27.9	27.7	26.0	25.2	22.7	22.3	20.9	21.9	21.5	22.3
Paid by corporations	6.2	5.7	6.5	6.9	6.7	6.0	5.6	6.9	7.3	7.7	7.3
Total	33.8	33.7	34.2	32.9	31.9	28.7	27.9	27.8	29.2	29.1	29.6
Indirect taxes	27.5	26.8	26.3	25.8	25.1	24.9	26.3	26.6	27.3	27.5	27.3
of which: VAT	15.8	15.5	15.6	15.4	14.7	14.6	15.5	16.0	16.4	16.4	16.5
Taxes on capital	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5
Social security contributions	38.2	39.1	39.1	40.8	42.6	46.0	45.4	45.2	43.0	42.8	42.6
of which: paid by employers	19.7	20.3	20.0	19.9	19.5	19.5	19.4	19.5	19.6	19.2	18.7
NORWAY											
Direct taxes:											
Paid by households ³	29.2	28.2	26.0	24.7	24.2	22.8	22.5	21.2	23.9	25.1	28.5
Paid by corporations	7.4	10.2	16.3	16.3	15.9	16.8	18.0	19.2	8.2	6.9	5.6
Total	36.5	38.3	42.4	41.0	40.1	39.6	40.5	40.4	32.1	31.9	34.0
Indirect taxes	36.6	35.6	33.9	34.8	35.1	36.0	36.1	36.5	40.5	39.0	37.7
of which: VAT	19.6	18.3	16.8	17.5	17.7	17.6	16.8	17.4	20.4	20.2	19.8
Taxes on capital	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Social security contributions	26.8	25.9	23.7	24.2	24.7	24.3	23.3	23.0	27.3	28.9	28.1
of which: paid by employers	17.4	16.3	14.7	15.1	15.4	14.9	14.4	13.7	15.8	16.2	17.2
SPAIN											
Direct taxes:											
Paid by households ³	14.3	15.5	20.5	20.3	18.6	20.3	21.6	21.4	19.4	..	..
Paid by corporations	9.2	9.2	6.7	6.5	6.7	6.7	6.5	6.5	6.8	..	..
Total	23.6	24.7	27.2	26.7	25.3	27.0	28.1	28.0	26.2	..	..
Indirect taxes	26.4	25.6	25.9	27.2	28.9	29.3	30.6	31.6	34.9	..	..
of which: VAT	-	-	-	-	-	-	-	-	14.5	..	..
Taxes on capital	0.5	0.5	0.4	0.7	0.6	0.7	0.9	1.1	1.1	..	..
Social security contributions	49.5	49.2	46.5	45.3	45.2	43.0	40.5	39.3	37.8	..	..
of which: paid by employers	..	..	45.4	44.5	44.1	41.2	37.7	37.2	36.2	..	..
SWEDEN											
Direct taxes:											
Paid by households	43.1	43.3	41.3	39.8	40.9	39.5	38.8	38.7	38.6	37.6	39.8
Paid by corporations	2.1	2.2	2.4	2.1	2.7	3.5	3.6	3.1	3.3	4.7	4.8
Total	45.1	45.5	43.7	41.9	43.6	43.0	42.3	41.9	42.0	42.4	44.6
Indirect taxes	27.6	27.1	27.4	28.4	28.5	30.1	31.5	32.9	32.4	30.7	29.9
of which: VAT	13.3	13.3	13.3	13.6	13.2	13.4	13.3	14.0	13.6	13.2	13.4
Taxes on capital	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	3.0	0.2
Social security contributions	27.0	27.3	28.6	29.5	27.7	26.6	26.0	25.0	25.4	23.9	25.2
of which: paid by employers	25.8	26.0	27.5	28.4	26.6	25.5	24.8	23.8	24.3	22.9	24.3
SWITZERLAND⁵											
Direct taxes:											
Paid by households ³	41.0	40.9	40.9	41.2	41.4	40.9	41.0	40.5	40.4	39.4	39.3
Paid by corporations	5.0	4.1	4.2	4.4	4.7	4.7	4.4	4.5	5.0	4.9	5.1
Total	46.0	45.0	45.1	45.6	46.1	45.6	45.4	45.0	45.4	44.3	44.4
Indirect taxes	22.7	22.8	23.0	22.7	22.1	22.2	21.8	22.0	22.1	22.6	22.2
Taxes on capital	1.7	1.8	1.9	1.8	1.9	1.8	2.0	1.9	2.1	2.2	2.6
Social security contributions	29.7	30.4	30.0	29.9	30.0	30.4	30.9	31.1	30.4	30.9	30.8
of which: paid by employers	10.7	11.0	10.7	10.6	10.5	10.4	10.4	10.3	10.1	10.2	10.2

4 Taxes and social security contributions by category as a percentage of total taxes¹ and social security contributions

continued

Percentages

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
UNITED KINGDOM											
Direct taxes:											
Paid by households ³	34.5	31.4	30.9	30.1	29.5	28.8	28.0	27.8	28.1	27.6	27.6
Paid by corporations	7.4	7.7	8.3	9.2	10.2	10.7	11.8	12.6	10.5	10.5	10.8
Total	41.9	39.1	39.2	39.3	39.7	39.5	39.7	40.4	38.6	38.1	38.5
Indirect taxes	39.5	43.2	43.3	43.5	42.8	41.9	41.6	41.0	42.6	43.1	42.6
of which: VAT	9.3	13.0	14.3	12.1	13.7	13.8	14.7	15.7	15.7	15.9	16.4
Taxes on capital	0.7	0.6	0.6	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.6
Social security contributions	17.9	17.1	16.9	16.6	17.0	18.0	18.1	18.0	18.1	18.1	18.3
of which: paid by employers	10.8	10.2	9.9	9.2	8.8	9.1	9.1	9.1	9.3	9.3	9.6
UNITED STATES											
Direct taxes:											
Paid by households ³	36.5	38.1	38.8	39.2	39.6	37.3	36.1	36.8	36.5	37.5	35.8
Paid by corporations	13.2	12.4	11.0	9.2	7.0	8.1	8.9	8.4	8.8	9.5	9.8
Total	49.7	50.5	49.8	48.3	46.7	45.5	45.0	45.3	45.2	46.9	45.6
Indirect taxes	28.2	26.8	27.6	28.4	28.9	29.8	29.8	29.2	28.9	27.9	28.0
Taxes on capital	1.1	1.0	1.1	1.0	1.2	0.9	0.8	0.8	0.8	0.8	0.8
Social security contributions	20.9	21.7	21.6	22.2	23.3	23.8	24.5	24.7	25.1	24.4	25.7
of which: paid by employers	11.3	11.7	11.5	11.7	12.2	12.6	13.2	12.9	13.0	12.5	13.0

1 All minor discrepancies in total direct taxes are due to rounding.

2 Fiscal years beginning on 1 July of year indicated.

3 Households include unincorporated businesses.

4 Unincorporated businesses are included with corporations not households.

5 Former SNA.

6 As Social security contributions paid by employers are not available in the household account of the OECD publication, comparisons for Italy have not been made.

Source: Central Statistical Office

5 Direct taxes on households¹ and social security contributions as a percentage of total personal income in 1978, 1983 and 1988

Percentages

	Direct taxes			Social security contributions			Total		
	1978	1983	1988	1978	1983	1988	1978	1983	1988
a. Including employers' contributions									
Australia ²	13.9	14.9	16.8	-	-	-	13.9	14.9	16.8
Austria	12.4	12.2	12.6	13.2	13.0	12.9	25.6	25.2	25.4
Belgium ³	15.0	14.8	14.1	12.0	12.4	14.0	27.1	27.2	28.0
Canada	13.0	14.0	16.1	4.6	5.1	5.6	17.7	19.0	21.7
Finland	15.7	16.0	18.2	6.3	5.0	5.6	22.0	21.0	23.8
France	5.7	6.5	6.1	16.2	18.2	19.1	21.9	24.7	25.2
German Federal Republic ¹	11.3	10.3	10.6	15.7	16.4	16.8	27.1	26.7	27.3
Greece	3.6	4.6	4.2	9.0	11.1	10.6	12.6	15.7	14.8
Italy	7.4	9.5	..	11.3	11.4	..	18.7	20.9	..
Japan	5.2	7.2	7.7	7.3	8.5	9.7	12.5	15.7	17.4
Netherlands ¹	12.1	10.1	10.3	16.8	20.4	19.6	28.9	30.5	29.9
Norway	16.0	13.9	15.3	14.7	14.8	15.1	30.7	28.7	30.5
Spain	3.4	5.9	..	11.9	12.6	..	15.3	18.6	..
Sweden	21.4	20.4	22.2	13.4	13.8	14.1	34.8	34.1	36.3
Switzerland ³	13.7	13.5	13.5	9.9	10.0	10.6	23.6	23.5	24.1
United Kingdom	13.5	12.6	12.0	7.1	7.9	7.9	20.7	20.4	19.9
United States	11.7	11.4	11.3	6.7	7.3	8.1	18.5	18.7	19.4
b. Excluding employers' contributions									
Australia ²	13.9	14.9	16.8	-	-	-	13.9	14.9	16.8
Belgium ³	16.4	16.0	15.5	4.3	5.4	5.5	20.6	21.4	21.0
Canada	13.4	14.4	16.8	2.0	2.1	2.3	15.4	16.5	19.0
France	6.4	7.3	7.0	5.5	7.2	8.1	11.9	14.5	15.1
German Federal Republic ¹	12.3	11.2	11.5	8.9	9.4	9.6	21.2	20.5	21.1
Italy	8.2	10.3	..	2.2	3.6	..	10.4	13.9	..
Japan	5.4	7.6	8.1	3.6	4.4	5.0	9.0	11.9	13.2
Netherlands ¹	13.3	11.0	11.3	8.9	12.9	12.1	22.2	23.9	23.3
Norway	17.7	15.3	16.9	5.7	6.3	6.5	23.4	21.6	23.4
Spain	..	6.8	..	..	0.6	..	..	7.4	..
Sweden	24.5	23.5	25.7	0.7	0.7	0.6	25.2	24.1	26.3
Switzerland ³	14.2	13.9	14.0	6.6	6.8	7.3	20.8	20.8	21.3
United Kingdom	14.2	13.1	12.5	2.9	4.0	4.0	17.1	17.1	16.5
United States	12.2	11.9	11.8	3.2	3.6	4.2	15.4	15.5	15.9

1 Households include unincorporated businesses, except for the German Federal Republic and the Netherlands.

2 Fiscal years beginning on 1 July of year indicated.

3 Former SNA.

Source: Central Statistical Office

Family Expenditure Survey 1989



The Family Expenditure Survey is based on a representative sample of about 11,500 private households in the UK and has been in continuous operation since 1957. It represents a unique and reliable source of household data on expenditure, income and other aspects of household finances, and provides a perspective of the changes and developments in spending on items as diverse as food, clothes, fuel and alcohol over more than a quarter of a century.

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Regional Accounts 1989 Part 1

Introduction

This article is the latest in an annual series, which has appeared in *Economic Trends* since November 1975. It presents the first assessments of the reliability of the regional accounts. It also presents provisional estimates of gross domestic product (GDP) by region for 1989 and of gross domestic fixed capital formation (GDFCF) by selected industries for 1988. The tables give total regional GDP from 1979 to 1989 and GDFCF for 1985 to 1988. Data for earlier years are available on request for these series. The article also gives estimates for GDFCF by function of government for 1987 and 1988 by county.

Personal income, personal disposable income, household income and consumers' expenditure estimates for 1989 consistent with these GDP estimates will be given in the article *Regional Accounts 1989 part 2* in the April 1991 issue of *Economic Trends*. Estimates for 1988 were published in the April 1990 issue.

Scotland, Wales, Northern Ireland and the regions of England are all different in size, character, industrial structure and economic performance. Table A shows some of the differences in size of the regions. Scotland has the largest area, but has a small population relative to its size; the North West has the smallest area, but the second largest population. The South East like the North West is very densely populated; as it is also large in area its population at 17 million is nearly three times as large as any other region. Northern Ireland at the other extreme has a population of only 1½ million. Table A also shows that the differences in regional population are reflected in the size of regional GDP, which varied in 1989 from £9 billion in Northern Ireland to £158 billion in the South East. The Continental Shelf, which is treated

as a separate region in the accounts contributed £6½ billion (see technical note 13).

The wide variation in the sizes of the regions makes it difficult to use regional accounts aggregates such as total GDP to compare regional economic performance; thus regional comparisons are usually expressed as amounts per head of the population. However, it is important to note that the growth in total GDP may be quite different to the growth in GDP per head. This will be the case particularly in regions where the population has increased or decreased. Furthermore the level of GDP per head is determined both by the earnings of the working population and the proportion of dependents. Northern Ireland households for example have a high proportion of children (25 per cent of the population was aged 14 or under in 1988 compared with 16 to 20 per cent in most counties). This will tend to depress GDP per head and the age structure of the population should be taken into account when comparing GDP per head. It should also be noted that regional comparisons of GDP per head exclude the Continental Shelf region and that UK GDP excluding the Continental Shelf region shows rather different growth over time compared to growth in the whole economy.

All the items are measured in current prices which means that increases over time reflect inflation as well as real growth. Comparisons of trends in either GDP or GDP per head can be based either on the difference between the current price increases or on movements in the amount relative to the UK average. Both approaches could be misleading if the rate of inflation in any region were different from the national average.

Basic Regional Statistics

TABLE A

Region	Area		Population 1989		GDP 1989 ¹	
	000 sq km	per cent	million	per cent	£ million	per cent of UK ²
United Kingdom ³	242.5	100.0	57.2	100.0	438,774	
North	15.4	6.4	3.1	5.4	20,120	4.7
Yorkshire & Humberside	15.4	6.4	4.9	8.6	32,798	7.6
East Midlands	15.6	6.4	4.0	7.0	28,613	6.6
East Anglia	12.6	5.2	2.0	3.6	15,292	3.5
South East	27.2	11.2	17.4	30.4	157,984	36.6
South West	23.8	9.8	4.7	8.1	33,523	7.8
West Midlands	13.0	5.4	5.2	9.1	36,040	8.4
North West	7.3	3.0	6.4	11.1	43,953	10.2
England	130.4	53.8	47.7	83.3	368,324	85.4
Wales	20.8	8.6	2.9	5.0	18,094	4.2
Scotland	77.2	31.8	5.1	8.9	35,706	8.3
Northern Ireland	14.1	5.8	1.6	2.8	9,074	2.1
Continental Shelf	-	-	-	-	6,545	-
Statistical discrepancy (income adjustment)	-	-	-	-	1,032	-

1 Provisional.

2 Excluding the Continental Shelf region.

3 The regional estimates of GDP are income-based and are linked to the average estimate of United Kingdom GDP by a statistical discrepancy.

Gross Domestic Product by region

There are wide variations between the UK regions in GDP per head of population. The highest levels are in the South East, with Greater London significantly higher than the Rest of the South East (provisionally estimated at £9,800 and £8,700 respectively in 1989). This differential is despite the fact that employment income is recorded on a residence basis, so that income of commuters is included in the region where they live, not where they work. Outside the South East, the highest GDP per head was in East Anglia (£7,500) and the South West and East Midlands (both £7,200). The lowest was in Northern Ireland (£5,700), and Wales (£6,300).

Many of the regional differences in the level of GDP per head are long-standing, with relatively small year to year changes. The provisional estimates for 1989 thus show only small changes over 1988. The figures do suggest however that regional growth in GDP per head has been strongest in the South West. It also

GDP & GDP per head (UK=100)

TABLE B Percentages

Region	GDP (UK=100)		GDP per head (UK=100)	
	1979	1989 ²	1979	1989 ²
United Kingdom	100.0	100.0	100.0	100.0
North	5.1	4.7	91.1	86.9
Yorkshire & Humberside	8.1	7.6	93.0	88.1
East Midlands	6.5	6.6	96.1	95.0
East Anglia	3.1	3.5	94.0	99.3
South East	35.0	36.6	116.1	120.6
Greater London	15.8	15.3	128.9	129.6
Rest of South East	19.2	21.3	107.4	114.9
South West	7.0	7.8	90.9	95.6
West Midlands	8.8	8.4	96.0	91.7
North West	1.1	10.2	96.5	91.5
England	84.8	85.4	102.2	102.5
Wales	4.2	4.2	84.8	83.6
Scotland	8.8	8.3	95.1	93.1
Northern Ireland	2.1	2.1	78.1	76.1

1 Excluding the Continental Shelf region

2 Provisional

appears that Rest of South East, East Anglia, Northern Ireland and Greater London have also performed better than average. The poorest economic performance was in Yorkshire and Humberside. However, undue reliance should not be placed on individual years' data, particularly the provisional estimates for 1989: these may be revised substantially as better information becomes available (see technical note 6).

Comparing growth in regions' GDP over a longer period shows more clearly the differences between regions in growth in GDP and GDP per head (see Table B). Between 1979 and 1989 East Anglia, the Rest of the South East and the South West each increased their shares of GDP by over 10%. Conversely, the GDP shares of the North West, North, Yorkshire and Humberside, Scotland and the West Midlands have fallen over 5%. The other regions' contribution to GDP has changed relatively little. The changes in GDP per head display broadly the same regional pattern as changes in GDP, however comparing the two measures reveals that regions' GDP growth rates diverged more than their

growth in GDP per head. That is to say, the changes in GDP shares are to some extent matched by changes in population growth. The relative gains in share of GDP per head in East Anglia and the South West, are around half their gains in share of GDP. Similarly, the relative decline in shares of GDP per head in the North and North West has been much less than the decline in shares of GDP in each case.

Although the above remarks are based on changes in regional GDP and GDP per head between 1979 and 1989, it should be clear from table 1 that this only partially describes the changes in regions' performances over the period. In Greater London, for example the shares of GDP and GDP per head declined in the early part of the period following a longer term trend but this now appears to have reversed. The West Midlands' shares were declining sharply in the early part of the period, again continuing a longer term trend, but since 1981 GDP and GDP per head seem to have moved broadly in line with national trends. Part of the explanation for the wide variation in regional GDP per head and changes therein lies in the marked differences in the industrial structures of the regions. Very significant but short term factors, such as the fall in the sterling price of oil may affect industries, and therefore regions very differentially. An industrial analysis of GDP is given in Table 3 and was discussed in Economic Trends, November 1988.

Quality indicators for the regional accounts

The reliability of major series in the national accounts is assessed in "United Kingdom National Accounts - Sources and Methods". The results are presented using four categories of error:

A + or - less than 3 per cent

B + or - 3 per cent to 10 per cent

C + or - 10 per cent to 20 per cent

D + or - more than 20 per cent

The reliability of the regional accounts has now been assessed in the same way and the same scale is used to present the results.

The assessment of reliability is not a simple calculation based on sampling error. Non-sampling errors are equally important and it has been necessary to formulate assumptions about the size of these errors to calculate overall reliability. Where possible national accounts estimates of non-sampling error have been used, but in some cases the regional accounts section uses different sources and methods and in these cases the assessment of likely error is extremely difficult.

The likely reliability of each of the regional accounts is variable is examined below and an overall quality indicator is presented in table C.

Regional gross domestic product

The first conclusion of the research is that the regional GDP estimates are all of good quality (category A). Within this range there are variations in the quality of the various figures. As might be expected estimates for the more populous regions are of higher quality than those for the least populous regions and the estimates for the provisional year are of lower quality than those for earlier years. For non-provisional years the errors in GDP per head relative to the UK average are thought to range from under 1½ per cent for the Rest of the South East to over 2 per cent for Northern Ireland, Wales and East Anglia. The provisional year errors are

slightly greater at 2½ per cent or more in the least populous regions. On more pessimistic assumptions about non-sampling error about ½ per cent is added to these errors and on more optimistic assumptions about ½ per cent can be deducted for most regions.

The estimates of GDP per head relative to the UK average are of slightly higher quality than those for the absolute level of GDP. The error levels for GDP range from 1½ to 2½ per cent apart from the provisional year estimates. Errors in those figures are higher, but by under ½ a percentage point for each region. On more pessimistic assumptions about non-sampling error the likely errors in GDP increase by ½ to 1 percentage point and on more optimistic assumptions they decrease by about ½ a percentage point or less.

Reliability of regional accounts

TABLE C

Variable	absolute level	% share	per head	per head (UK=100)
Gross domestic product by region	A	A	A	A
Gross domestic product by county		A/B		A/B
Household income by region	A/B	A	A/B	A
Household disposable income by region	B	A/B	B	A/B
Household income by county		A/B		A/B
Household disposable income by county		B		B
Consumers' expenditure total	A/B	A/B	A/B	A/B
food drink and tobacco	B	B	B	B
housing	A/B	A/B	A/B	A/B
other	A/B	A/B	A/B	A/B

These levels of error imply that differences of less than 5 per cent in relative GDP per head should be treated with caution as they may not be significant.

The second conclusion is that the likely error in year to year changes in relative GDP per head is about 1 per cent. The error is relatively low because there is a degree of correlation between the years. This arises partly from the data itself and partly from the deliberate use of smoothing to reduce year to year fluctuations arising from sampling error.

Estimates of the likely errors in each of the factor incomes underlie the assessment of the quality of overall GDP. Data on sampling error is combined with estimates of non-sampling error to produce the overall estimate. The key assumptions about non-sampling error are for non-manufacturing profits and self-employment income. Alternative assumptions have been used to reflect the high degree of uncertainty about the estimates and their likely errors.

No assessment of the industry estimates of GDP has been undertaken, but their quality will clearly be lower than that of the overall total, particularly the absolute level of estimates for the provisional year when the national accounts are also subject to a higher degree of error.

Gross domestic product by county

As might be expected the quality of the county estimates is poorer than the quality of the regional figures because of the higher level of sampling error. However the quality of the estimates for the most populous counties is actually better than that of the least populous regions. The effect of sampling error is reduced by smoothing over time and the assessments of reliability for counties depend heavily on the assumption that non-sampling error affects all regions and counties equally. On this basis the margin of error in county GDP per head relative to the UK average ranges from about 2 per cent for some of the most populous counties to over 4½ per cent for the Isle of Wight. On more pessimistic assumptions about non-sampling error these estimates increase by about ½ per cent for each county. On more optimistic assumptions they decrease, but by under ½ per cent.

Household income by region

The quality of regional household income per head estimates is also good (category A), with the exception of East Anglia in the provisional year which is less good (category B). On more pessimistic assumptions about non-sampling error the reliability of estimates for Northern Ireland would also be category B. The likely errors are generally slightly higher than those for GDP, but demonstrate the same patterns. The quality of the absolute regional estimates of household income is also good (category A) on a medium set of assumptions, except for East Anglia and Northern Ireland. However using a more pessimistic set of assumptions the quality of the provisional year estimates is weaker and errors range from around 3 per cent to just over 4 per cent (category B for most regions).

Household disposable income by region

The quality of household disposable income is slightly poorer than that of household income, reflecting the additional uncertainty surrounding the regional estimates of tax and National Insurance. For relative income per head the errors still fall into category A with the exception of East Anglia and Northern Ireland in the provisional year (category B). On a pessimistic set of assumptions about non-sampling error all data for these two regions and all data for the provisional year is in category B. All estimates of the absolute level of household disposable income fall into category B, except for the most populous regions on the most optimistic assumptions.

Household income and household disposable income by county

As might be expected the quality of the county estimates is poorer than the quality of the regional figures because of the higher level of sampling error. However the quality of the estimates for the most populous counties is actually better than that of the least populous regions. The effect of sampling error is reduced by smoothing over time and the assessments of reliability for counties depend heavily on the assumption that non-sampling error affects all counties equally. On this basis the margin of error in household income per head relative to the UK average ranges from about 1½ per cent for some of the most populous counties to 4½ to 6 per cent for the least populous counties.

The errors in the absolute level of household income are greater by up to 1 percentage point and range from just over 2 per cent for the most populous regions to 4½ to 6½ per cent in the least populous counties.

The quality of these estimates is thought to be fair (category B), with the possible exception of estimates for the most populous regions which fall into category A. As with other variables the quality of county shares and income per head relative to the UK average is slightly better than that of the absolute levels. The error ranges are from 2 to 7½ per cent for income per head relative to the UK average on medium assumptions and 3 to 8 per cent of the absolute level.

These assessments of reliability suggest that there is a fairly large margin of uncertainty about the absolute level of incomes in the counties with the smallest populations such as Powys, the Isle of Wight, the Highlands and Islands. However income per head varies considerably between counties and the estimates, even those for a small county, are sufficiently accurate to permit a broad assessment of its relative ranking.

Consumers' expenditure

The regional estimates of consumers' expenditure are based on the smoothed results of the Family Expenditure Survey and non-sampling error is likely to be less than for other variables. As with other variables errors greater for regions with smaller populations and are greater for absolute estimates than for regional shares. Errors in the overall shares of consumers' expenditure range from 1½ per cent in the South East to over 3 per cent in East Anglia. The errors for expenditure by broad function are greater. Expenditure on food, drink and tobacco is thought to have errors ranging from about 2½ per cent in the South East to nearly 6 per cent in East Anglia. On more pessimistic assumptions about non-sampling error, the error on food drink and tobacco could be over 8 per cent for East Anglia. Estimates for housing and other expenditure are slightly more reliable than those for food, drink and tobacco.

Personal Income

No assessment has been made of the quality of regional estimates of personal income and personal disposable income. However these variable are closely related to household income and household disposable income and their quality is therefore likely to be very similar or slightly better.

Gross domestic fixed capital formation

No assessment has been made of the reliability of these estimates, but it is possible to make a qualitative statement about their quality.

Examining the estimates for selected industries first, the overall quality of the estimates is good. Quality is also thought to be good for agriculture, forestry and fishing, for energy and water supply and for manufacturing. The estimates of GDFCF in dwellings are fairly good and the estimates for transport and communications are weakest.

Turning to the analysis of government GDFCF, the overall quality is again thought to be good. The local authority data is of high quality. The central government estimates are weak in places and an overall assessment is difficult, however reliability is probably at least fair.

The research

The assessment of the reliability of the regional account is based on data on sampling error and assumptions about non-sampling error. However the research necessarily began with a review of sources and methods used in the accounts and theoretical research into the interrelationships of the estimates. The theoretical work yielded three conclusions which underpin the results. These are discussed below followed by further information on sampling and non-sampling errors.

The first theoretical conclusion concerns uncertainty about the UK totals. This contributes to the errors in the absolute regional figures, but has less effect on regional shares and regional relativities per head. In fact the effect of errors in the UK totals is negligible compared with the effect of errors in the regional shares themselves.

This leads to the second conclusion that the quality of the estimates of regional shares and estimates per head relative to the UK average is better than the quality of the absolute estimates. This is true provided that the errors in the values are independent.

The third conclusion is that smoothing reduces errors significantly provided that the series is stationary and the errors in the values are independent.

The most significant sources of sampling error in GDP and household income are in wages and salaries, where they range from 1½ to 3 per cent, in self-employment from 2½ to 9 per cent and in manufacturing profits where they are under 1 per cent. In a number of places in the regional accounts series with high sampling errors are smoothed over time. This is particularly true of data for self-employment income from the Survey of Personal Incomes. This increases the reliability of the estimates for any given year. As is discussed earlier correlation between the years reduces the error associated with year to year movements (by a factor of 0.75 for GDP). There is correlation in the data on income from employment, where essentially the same sample of persons is taken every year.

Turning to non-sampling error, the level of likely error is very difficult to assess and a range of values has been tested. For non-manufacturing profits for example there is no data on regional profits and we assume that profit varies directly with employment in each industry. The error on total non-manufacturing profit arising from this assumption may be quite high and in the quality indicators presented here a central error of 20 per cent has been assumed. The optimistic assumption was 10 per cent and the pessimistic assumption was 30 per cent. For self-employment estimates of evasion are included in the national total. We have assumed a higher degree of error in the regional estimates than is assumed nationally and in view of the uncertainty we have also used a range of assumptions about regional errors: 2, 4 and 8 per cent. These assumptions about the level of non-sampling error in the regions have been applied to all regions and counties. Thus it has been assumed throughout that non-sampling error does not vary with the size of region. Should this assumption be incorrect, the margin of error for smaller regions and counties will be greater than suggested here and the quality of estimates for more populous areas will be better. Further investigation of this aspect of the quality indicators is necessary.

Technical notes

General

1. The regional accounts presented in this article are consistent with the national accounts published in the United Kingdom National Accounts 1990 edition, which also defines the terms used. The methodology employed in producing the regional accounts was fully described in Regional Accounts (Studies in Official Statistics No 31) published in 1978 and more recently in the publication Methods used to compile regional accounts (Eurostat, 1984).

Gross domestic product

2. GDP for the United Kingdom is defined as the total sum of all incomes earned from productive activity in the UK. The definitions of regional and county GDP should thus be the sum of incomes earned from productive activity in the region and county respectively. Thus the income of commuters should be included in the region and county where they work. The county GDP estimates are compiled on this basis as far as possible; however, the regional estimates of GDP are not. Regional GDP includes estimates of income from employment on a residence basis, because this is the basis of the most reliable data source (the 1 per cent sample of Department of Social Security (DSS) records). This has a significant effect on the estimates for Greater London and the Rest of the South East as may be seen by comparing the regional estimates of GDP in Table 1 with the county GDP estimates in Table 4, but is not thought to introduce any significant distortion for the other regions.

3. In this article GDP is measured as the total of all incomes earned from the production of goods and services at factor cost. Insufficient information is available to estimate GDP using either the production or expenditure approaches.

4. Estimates of GDP by region and county are at factor cost. They measure the income of factors of production and exclude the value of taxes on expenditure such as VAT, but include subsidies. Thus the effect of the 1984 miners' strike on regional and county GDP is restricted to the effect on miners' income from employment; the value of government subsidy to the coal industry is included in profits and thus in GDP.

5. Company profits and trading surpluses of public enterprises can contribute a substantial proportion of a counties' GDP, particularly where one or two large establishments are sited in a small county. The level of profits can vary from year to year and this can lead to significant year to year variations in GDP. One well known case is the sensitivity of the GDP of Dyfed to the level of profits at the several oil refineries in the county.

Provisional estimates of GDP

6. The estimates of GDP for 1989 given in this article are based on a less complete set of data than estimates for the earlier years and projections are employed where necessary. These provisional estimates are particularly subject to revision when more data for 1989 becomes available e.g. from the one per cent sample of pay records by DSS and from the Annual Census of Production.

Accuracy

7. As with the national accounts the estimates, although calculated as reliably as possible, cannot be regarded as accurate to the last digit shown.

8. The regional and county GDP estimates are based partly on sample surveys and the quality of the results therefore varies according to sample size. This means that the results for areas with smaller populations such as the Isle of Wight and the Borders region of Scotland are subject to a greater degree of uncertainty than those for larger areas. The reliability of the regional accounts series are discussed more fully in the section Quality Indicators for the Regional Accounts in the main article.

9. Comparison of the income from employment component of county GDP, which is based on employment and earnings statistics, with estimates from the Newcastle National Income Statistics reveal a broad degree of agreement between the two sets of data. Differences between the two can mainly be explained in terms of conceptual differences. However there are two substantial residual differences between the estimates for the Highlands and Islands and the Grampian region of Scotland. The Newcastle data suggests that the GDP estimates are too high for these areas. While the Newcastle estimates may understate income in these areas because of the very mobile oil-related population, this cannot completely explain the difference particularly for the Highlands and Islands. Further development of the county GDP estimates is needed to establish the true level of Highlands and Islands GDP.

Revisions

10. All items in the regional accounts are subject to revision when better information becomes available, either from the national accounts for the UK, from regional data sources, or from improvements to regional accounts methodology. Revisions to one year frequently suggest the need for revisions to other years and all regional series apart from the GDFCF series are maintained back to 1971. No comparable data for earlier years are available.

11. A new source of information has been used to estimate self-employment income for the latest years: Inland Revenue data on trends in traders profits are now used to project these years from the earlier years' data from the Survey of Personal Income.

12. The adjustment for financial services is estimated pro-rata employment in banking, finance and insurance only. An alternative treatment of the adjustment for financial services would attempt to allocate the interest payments to the region paying the interest rather than the region receiving it. This approach is now preferred by the Statistical Office of the European Communities and is used in the CSO estimates of Gross Value Added prepared according to the European System of Accounts. The effect on regional GDP is to increase the level of GDP in the South East and reduce that of other regions.

Continental Shelf

13. Gross domestic product for the Continental Shelf region consists only of profits and surpluses less stock appreciation, which cannot be allocated to standard regions. It does not include income from employment, which is allocated to the region of residence of the employee; there is no resident population in the

Continental Shelf region. Since GDP per head cannot be calculated for the Continental Shelf region, it is excluded from the United Kingdom total in the calculation of the national average. Continental Shelf GDP incorporates profits of both UK and foreign contractors.

Personal Income, Household Income and Consumers' expenditure

14. Estimates of personal income, personal disposable income, household income and consumers' expenditure in 1989 are not yet available and will be published in Regional Accounts part 2 in April 1991. Estimates of household income by county and consumers' expenditure by region for 1988 were published in Economic Trends, April 1990.

15. There are three main differences between the two concepts at county level. Firstly county GDP includes commuters' incomes in the county where the commuters work rather than in their county of residence. Secondly household income includes pensions and social security benefits and company profits, which do not contribute to GDP. Thirdly county GDP includes profits of companies active in the county, whereas household income included interest, rent and dividends paid to households. Estimates of household income were published in the July 1989 issue of Economic Trends. This article included a fuller explanation of the differences between household income and GDP.

GDFCF by industry

16. There have been a number of revisions to the time series which will be provided to users on request.

GDFCF by function of government

17. There are two components of gross domestic fixed capital formation by government: GDFCF by local authorities and GDFCF by central government. Public corporations are not included. The exclusion of public corporations means that the figures for Scotland and Northern Ireland in Table are not

completely comparable with those for England and Wales. The most significant differences are in housing where the boundary between local authority and public corporation responsibility varies greatly. Public corporations such as the Northern Ireland Housing Executive, which has responsibility for all public sector housing in the province, the Scottish Special Housing Association and all new towns are excluded. Another difference is water and sewerage, which is included for Scotland and Northern Ireland, but excluded for England and Wales, where it is the responsibility of public corporations. In Northern Ireland some functions are performed by central government which are the responsibility of local authorities in Great Britain, so that the coverage of the two components is not identical. This does not affect the combined figures in table 5.

18. Local authority GDFCF can be measured directly from local authority returns and the regional analysis in table 5 uses data from these financial year returns in addition to the calendar year analysis produced as part of the national accounts. Similar data on central government GDFCF does not exist and the regional analysis in table 5 is estimated using different sources for each component.

19. Data for Northern Ireland has been supplied by the Northern Ireland Department of Finance and Personnel: this covers most elements of GDFCF but excludes defence and other central government expenditure not under the direct responsibility of the Secretary of State for Northern Ireland.

Regional Trends

20. A range of information on the regions of the United Kingdom can be found in Regional Trends 1990, (HMSO) price £21.50 net, together with selected statistics at county level and on urban areas. The range of topics covered in Regional Trends includes population, health, housing, education, employment and agriculture.

Central Statistical Office

1 Gross domestic product

Factor cost: current prices

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 ¹
£ million											
United Kingdom	173,235	201,097	218,838	238,318	261,217	280,227	306,849	326,433	358,270	400,029	438,774
North	8,429	9,837	10,677	11,444	12,414	12,919	14,204	15,103	16,764	18,529	20,120
Yorkshire & Humberside	13,532	15,612	16,601	18,135	19,752	20,644	23,113	25,625	27,691	30,717	32,798
East Midlands	10,849	12,689	13,666	14,980	16,248	17,413	19,320	21,231	23,286	26,019	28,613
East Anglia	5,177	6,171	6,684	7,488	8,171	9,186	10,058	11,272	12,321	13,819	15,292
South East	58,191	67,261	72,937	78,289	86,787	92,154	102,233	113,925	125,342	143,296	157,984
Greater London	26,242	29,600	31,828	33,641	36,777	38,398	42,871	47,818	52,800	60,038	65,985
Rest of South East	31,949	37,661	41,109	44,648	50,010	53,756	59,362	66,107	72,543	83,258	91,999
South West	11,644	13,765	14,971	16,644	18,313	19,539	21,587	24,047	26,660	30,113	33,523
West Midlands	14,694	16,397	17,195	18,657	20,357	21,764	24,376	26,525	29,087	33,069	36,040
North West	18,532	21,249	22,354	24,290	26,191	27,669	30,317	33,439	35,918	40,475	43,953
England	141,047	162,982	175,086	189,926	208,234	221,288	245,208	271,216	297,070	336,038	368,324
Wales	7,045	8,053	8,622	9,529	10,403	10,779	11,898	13,168	14,642	16,618	18,094
Scotland	14,625	16,716	18,358	20,077	21,893	22,798	24,970	27,310	29,430	33,035	35,706
Northern Ireland	3,528	4,056	4,440	4,809	5,262	5,633	6,190	6,896	7,429	8,243	9,074
United Kingdom less Continental Shelf	166,245	191,807	206,507	224,341	245,792	260,498	288,266	318,590	348,571	393,933	431,197
Continental Shelf ²	5,471	8,516	11,589	13,465	15,792	19,110	18,457	8,373	9,457	6,845	6,545
Statistical discrepancy (income adjustment)	1,519	774	742	512	-367	619	126	-530	242	-749	1,032
United Kingdom less Continental Shelf³ = 100%											
United Kingdom	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
North	5.1	5.1	5.2	5.1	5.1	5.0	4.9	4.7	4.8	4.7	4.7
Yorkshire & Humberside	8.1	8.1	8.0	8.1	8.0	7.9	8.0	8.0	7.9	7.8	7.6
East Midlands	6.5	6.6	6.6	6.7	6.6	6.7	6.7	6.7	6.7	6.6	6.6
East Anglia	3.1	3.2	3.2	3.3	3.3	3.5	3.5	3.5	3.5	3.5	3.5
South East	35.0	35.1	35.3	34.9	35.3	35.4	35.5	35.8	36.0	36.4	36.6
Greater London	15.8	15.4	15.4	15.0	15.0	14.7	14.9	15.0	15.1	15.2	15.3
Rest of South East	19.2	19.6	19.9	19.9	20.3	20.6	20.6	20.7	20.8	21.1	21.3
South West	7.0	7.2	7.2	7.4	7.5	7.5	7.5	7.5	7.6	7.6	7.8
West Midlands	8.8	8.5	8.3	8.3	8.3	8.4	8.5	8.3	8.3	8.4	8.4
North West	11.1	11.1	10.8	10.8	10.7	10.6	10.5	10.5	10.3	10.3	10.2
England	84.8	85.0	84.8	84.7	84.7	84.9	85.1	85.1	85.2	85.3	85.4
Wales	4.2	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.2	4.2	4.2
Scotland	8.8	8.7	8.9	8.9	8.9	8.8	8.7	8.6	8.4	8.4	8.3
Northern Ireland	2.1	2.1	2.2	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.1
Per head, £⁴											
United Kingdom	3,080	3,570	3,883	4,233	4,636	4,963	5,420	5,751	6,293	7,010	7,666
United Kingdom less Continental shelf ³	2,956	3,405	3,665	3,984	4,362	4,614	5,091	5,613	6,123	6,903	7,534
North	2,693	3,145	3,425	3,683	4,004	4,177	4,603	4,903	5,449	6,034	6,547
Yorkshire & Humberside	2,750	3,171	3,375	3,693	4,023	4,209	4,715	5,230	5,651	6,252	6,639
East Midlands	2,842	3,306	3,547	3,889	4,210	4,495	4,957	5,416	5,907	6,554	7,155
East Anglia	2,777	3,279	3,528	3,917	4,245	4,736	5,119	5,660	6,118	6,793	7,479
South East	3,433	3,958	4,288	4,604	5,093	5,385	5,947	6,599	7,238	8,262	9,088
Greater London	3,810	4,321	4,677	4,971	5,445	5,684	6,335	7,058	7,799	8,914	9,766
Rest of South East	3,175	3,713	4,028	4,361	4,862	5,190	5,695	6,302	6,878	7,848	8,656
South West	2,686	3,156	3,417	3,785	4,140	4,380	4,796	5,293	5,810	6,498	7,206
West Midlands	2,837	3,162	3,315	3,602	3,933	4,205	4,703	5,119	5,596	6,351	6,910
North West	2,852	3,281	3,461	3,777	4,086	4,326	4,747	5,254	5,639	6,360	6,890
England	3,020	3,483	3,739	4,059	4,445	4,713	5,205	5,739	6,266	7,069	7,723
Wales	2,507	2,860	3,065	3,395	3,705	3,840	4,232	4,668	5,163	5,816	6,298
Scotland	2,811	3,218	3,544	3,886	4,251	4,431	4,861	5,333	5,757	6,485	7,014
Northern Ireland	2,309	2,646	2,888	3,127	3,410	3,633	3,973	4,401	4,717	5,223	5,732
Per head, United Kingdom less Continental Shelf³ = 100											
United Kingdom	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
North	91.1	92.4	93.5	92.4	91.8	90.5	90.4	87.4	89.0	87.4	86.9
Yorkshire & Humberside	93.0	93.1	92.1	92.7	92.2	91.2	92.6	93.2	92.3	90.6	88.1
East Midlands	96.1	97.1	96.8	97.6	96.5	97.4	97.4	96.5	96.5	94.9	95.0
East Anglia	94.0	96.3	96.3	98.3	97.3	102.6	100.6	100.8	99.9	98.4	99.3
South East	116.1	116.2	117.0	115.5	116.7	116.7	116.8	117.6	118.2	119.7	120.6
Greater London	128.9	126.9	127.6	124.8	124.8	123.2	124.4	125.7	127.4	129.1	129.6
Rest of South East	107.4	109.1	109.9	109.4	111.5	112.5	111.9	112.3	112.3	113.7	114.9
South West	90.9	92.7	93.2	95.0	94.9	94.9	94.2	94.3	94.9	94.1	95.6
West Midlands	96.0	92.9	90.5	90.4	90.2	91.1	92.4	91.2	91.4	92.0	91.7
North West	96.5	96.3	94.4	94.8	93.7	93.8	93.2	93.6	92.1	92.1	91.5
England	102.2	102.3	102.0	101.9	101.9	102.1	102.2	102.3	102.3	102.4	102.5
Wales	84.8	84.0	83.6	85.2	84.9	83.2	83.1	83.2	84.3	84.3	83.6
Scotland	95.1	94.5	96.7	97.5	97.4	96.0	95.5	95.0	94.0	93.9	93.1
Northern Ireland	78.1	77.7	78.8	78.5	78.2	78.7	78.0	78.4	77.0	75.7	76.1

1 Provisional.

2 Gross domestic product for the Continental Shelf region does not include income from employment, which is allocated to the region of residence of the employee.

3 The regional estimates of GDP are income-based and are linked to the

average estimate of United Kingdom GDP by a statistical discrepancy. This discrepancy is excluded from the figures for the United Kingdom less Continental Shelf. Estimates of gross domestic product per head cannot be calculated for the Continental Shelf region as there is no resident population in this region.

2 Factor incomes in the gross domestic product

Factor cost: current prices

£ million

	Income from employment	Income from self- employment	Gross trading profits and surpluses	Less stock appreciation	Rent ¹	Gross domestic product
1986						
United Kingdom	212,017	34,224	55,629	1,755	26,848	326,433 ²
North	10,429	1,284	2,356	120	1,155	15,103
Yorkshire & Humberside	17,051	2,579	4,294	112	1,812	25,625
East Midlands	14,244	2,226	3,394	165	1,532	21,231
East Anglia	6,934	1,778	1,692	75	944	11,272
South East	76,171	12,509	15,133	694	10,805	113,925
Greater London	32,189	4,015	6,679	323	5,258	47,818
Rest of South East	43,983	8,494	8,454	371	5,547	66,107
South West	15,802	3,330	3,013	212	2,113	24,047
West Midlands	17,547	2,539	4,455	265	2,249	26,525
North West	22,024	2,949	5,880	82	2,717	33,489
England	180,203	29,194	40,217	1,724	23,326	271,216
Wales	8,514	1,380	2,353	76	997	13,168
Scotland	18,646	2,768	4,041	117	1,972	27,310
Northern Ireland	4,654	882	864	57	553	6,896
Continental Shelf ³	—	—	8,154	-219	—	8,373
Statistical discrepancy (income adjustment)	—	—	—	—	—	-530
1987						
United Kingdom	229,779	39,168	65,062	4,728	28,747	358,270 ²
North	11,298	1,425	3,035	272	1,278	16,764
Yorkshire & Humberside	18,363	2,948	4,865	410	1,925	27,691
East Midlands	15,432	2,602	3,963	349	1,639	23,286
East Anglia	7,545	2,068	1,883	167	992	12,321
South East	82,768	14,462	18,032	1,445	11,525	125,342
Greater London	35,039	4,589	8,193	551	5,530	52,800
Rest of South East	47,729	9,873	9,839	894	5,995	72,543
South West	17,201	3,920	3,591	360	2,307	26,660
West Midlands	19,268	2,835	5,066	474	2,392	29,087
North West	23,823	3,272	6,412	533	2,945	35,918
England	195,697	33,534	46,847	4,011	25,003	297,070
Wales	9,252	1,547	2,986	204	1,061	14,842
Scotland	19,891	3,028	4,821	408	2,098	29,430
Northern Ireland	4,939	1,060	934	89	585	7,429
Continental Shelf ³	—	—	9,473	16	—	9,457
Statistical discrepancy (income adjustment)	—	—	—	—	—	242
1988						
United Kingdom	255,880	45,403	73,447	6,209	32,257	400,029 ²
North	12,190	1,691	3,598	354	1,404	18,529
Yorkshire & Humberside	20,035	3,369	5,765	539	2,086	30,717
East Midlands	16,957	2,943	4,706	460	1,874	26,019
East Anglia	8,600	2,085	2,258	227	1,103	13,819
South East	93,462	16,671	21,914	1,876	13,125	143,296
Greater London	39,094	5,318	9,999	725	6,353	60,038
Rest of South East	54,369	11,352	11,915	1,151	6,773	83,258
South West	19,201	4,495	4,351	494	2,560	30,113
West Midlands	21,644	3,420	5,964	640	2,682	33,069
North West	26,227	4,022	7,730	690	3,186	40,475
England	218,316	38,695	56,287	5,280	28,020	336,038
Wales	10,240	1,826	3,592	294	1,254	16,618
Scotland	21,899	3,642	5,722	555	2,326	33,035
Northern Ireland	5,425	1,240	1,056	135	657	8,243
Continental Shelf ³	—	—	6,790	-55	—	6,845
Statistical discrepancy (income adjustment)	—	—	—	—	—	-749
1989⁴						
United Kingdom	284,399	53,126	72,407	7,598	35,408	438,774 ²
North	13,261	1,970	3,773	409	1,525	20,120
Yorkshire & Humberside	21,647	3,980	5,576	661	2,256	32,798
East Midlands	18,889	3,440	4,694	524	2,114	28,613
East Anglia	9,625	2,499	2,228	259	1,199	15,292
South East	105,033	19,649	21,220	2,324	14,407	157,984
Greater London	44,194	6,326	9,432	892	6,925	65,985
Rest of South East	60,839	13,323	11,788	1,432	7,482	91,999
South West	21,735	5,318	4,264	565	2,771	33,523
West Midlands	23,799	3,907	6,074	730	2,989	36,040
North West	28,965	4,639	7,705	838	3,483	43,953
England	242,953	45,402	55,534	6,310	30,744	368,324
Wales	11,451	2,057	3,591	373	1,368	18,094
Scotland	24,044	4,212	5,559	687	2,577	35,706
Northern Ireland	5,951	1,454	1,112	162	719	9,074
Continental Shelf ³	—	—	6,611	66	—	6,545
Statistical discrepancy (income adjustment)	—	—	—	—	—	1,032

¹ Including imputed charges for consumption of non-trading capital.

² See footnote 3 to Table 1.

³ See footnote 2 to Table 1.

⁴ Provisional.

3 Gross domestic product by industry groups¹ Factor cost: current prices

£ million

	1986	1987	1988	1989	1986	1987	1988	1989 ²
	North				Yorkshire & Humberside			
Agriculture, forestry and fishing	281	282	292	322	544	555	516	570
Energy and water supply	1,126	1,087	1,141	1,365	2,146	1,958	2,017	1,874
Manufacturing	4,173	4,743	5,238	5,590	6,856	7,426	8,089	8,636
Minerals, metals and chemicals ³	1,420	1,646	1,926	..	1,848	1,939	2,142	..
Metal goods, engineering, vehicles	1,425	1,571	1,653	..	2,120	2,293	2,578	..
Other manufacturing industries	1,329	1,525	1,658	..	2,888	3,194	3,369	..
Construction	970	1,094	1,292	1,440	1,510	1,761	1,995	2,227
Distribution, hotels and catering; repairs	1,923	2,121	2,386	2,603	3,743	4,031	4,710	5,103
Transport and communication	995	1,031	1,118	1,178	1,704	1,850	1,982	2,154
Financial & business services, etc ⁴	1,621	1,902	2,148	2,485	3,080	3,309	3,806	4,305
Ownership of dwellings	827	910	991	1,094	1,316	1,406	1,497	1,621
Public administration and defence ⁵	975	1,052	1,166	1,192	1,574	1,688	1,913	2,034
Education and health services	1,706	1,933	2,134	2,411	2,686	3,009	3,408	3,766
Other services	998	1,123	1,198	1,207	1,483	1,691	1,869	1,916
Adjustment for financial services	-493	-514	-576	-767	-1,017	-993	-1,085	-1,408
Total	15,103	16,764	18,529	20,120	25,625	27,691	30,717	32,798
	East Midlands				East Anglia			
Agriculture, forestry and fishing	616	670	581	644	758	696	615	679
Energy and water supply	1,736	1,683	1,741	1,861	287	306	326	388
Manufacturing	6,492	7,157	7,844	8,501	2,754	2,845	3,230	3,423
Minerals, metals and chemicals ³	1,030	1,170	1,378	..	446	411	461	..
Metal goods, engineering, vehicles	2,355	2,567	2,837	..	960	993	1,190	..
Other manufacturing industries	3,107	3,420	3,629	..	1,348	1,441	1,580	..
Construction	1,248	1,493	1,739	1,955	829	1,000	1,107	1,280
Distribution, hotels and catering; repairs	2,885	3,173	3,656	4,097	1,584	1,773	2,088	2,305
Transport and communication	1,206	1,292	1,451	1,539	947	988	1,089	1,150
Financial & business services, etc ⁴	2,208	2,462	2,963	3,416	1,488	1,722	2,063	2,541
Ownership of dwellings	1,139	1,231	1,409	1,609	703	748	823	895
Public administration and defence ⁵	1,498	1,677	1,780	1,949	793	850	920	998
Education and health services	1,843	2,008	2,402	2,707	984	1,124	1,351	1,539
Other services	1,049	1,145	1,237	1,394	629	778	811	966
Adjustment for financial services	-689	-703	-783	-1,060	-486	-509	-605	-872
Total	21,231	23,286	26,019	28,613	11,272	12,321	13,819	15,292
	South East				Greater London			
Agriculture, forestry and fishing	960	937	876	964	54	46	39	45
Energy and water supply	3,413	3,385	3,490	3,633	1,355	1,342	1,314	1,398
Manufacturing	21,973	22,526	24,527	25,855	7,313	7,512	7,828	8,238
Minerals, metals and chemicals ³	3,575	3,580	3,994	..	984	920	1,054	..
Metal goods, engineering, vehicles	10,105	10,192	11,137	..	2,722	2,922	2,908	..
Other manufacturing industries	8,293	8,754	9,396	..	3,607	3,670	3,866	..
Construction	7,116	8,201	9,541	11,067	2,174	2,484	2,774	3,222
Distribution, hotels and catering; repairs	16,302	17,913	20,819	23,051	6,963	7,550	8,565	9,386
Transport and communication	9,708	10,513	11,642	12,886	4,787	5,220	5,736	6,286
Financial & business services, etc ⁴	28,218	32,830	40,146	46,653	14,993	17,408	21,341	24,735
Ownership of dwellings	7,927	8,513	9,515	10,305	3,561	3,732	4,181	4,427
Public administration and defence ⁵	7,993	8,470	9,346	10,137	3,007	3,123	3,447	3,771
Education and health services	9,571	10,539	11,697	13,043	4,420	4,856	5,295	5,892
Other services	8,537	9,550	10,943	12,597	4,347	4,762	5,465	6,316
Adjustment for financial services	-7,793	-8,034	-9,245	-12,206	-5,156	-5,234	-5,946	-7,730
Total	113,926	125,342	143,296	157,984	47,818	52,800	60,038	65,985
	Rest of South East				South West			
Agriculture, forestry and fishing	906	891	836	919	671	653	716	787
Energy and water supply	2,058	2,044	2,176	2,235	852	929	962	1,117
Manufacturing	14,659	15,014	16,699	17,617	5,377	5,728	6,319	6,934
Minerals, metals and chemicals ³	2,591	2,660	2,941	..	691	781	854	..
Metal goods, engineering, vehicles	7,383	7,270	8,228	..	2,580	2,660	3,070	..
Other manufacturing industries	4,686	5,084	5,530	..	2,106	2,288	2,395	..
Construction	4,942	5,717	6,766	7,845	1,801	2,067	2,463	2,776
Distribution, hotels and catering; repairs	9,339	10,363	12,254	13,664	3,740	4,178	4,800	5,398
Transport and communication	4,921	5,293	5,906	6,600	1,402	1,557	1,806	1,892
Financial & business services, etc ⁴	13,226	15,422	18,806	21,918	3,778	4,423	5,247	6,332
Ownership of dwellings	4,367	4,781	5,334	5,878	1,570	1,753	1,930	2,082
Public administration and defence ⁵	4,986	5,347	5,899	6,367	2,345	2,544	2,765	3,019
Education and health services	5,150	5,682	6,403	7,151	2,270	2,502	2,867	3,291
Other services	4,190	4,788	5,478	6,281	1,556	1,707	1,874	2,179
Adjustment for financial services	-2,636	-2,799	-3,299	-4,476	-1,315	-1,382	-1,636	-2,284
Total	66,108	72,543	83,258	91,999	24,047	26,660	30,113	33,523

See footnotes on next page

3 Gross domestic product by industry groups¹

Factor cost: current prices

(Cont'd)

£ million

	1986	1987	1988	1989	1986	1987	1988	1989
	West Midlands				North West			
Agriculture, forestry and fishing	472	465	462	511	285	288	298	329
Energy and water supply	1,111	1,135	1,196	1,260	1,860	1,529	1,574	1,693
Manufacturing	9,003	9,543	10,565	11,240	10,204	10,672	12,020	12,692
Minerals, metals and chemicals ³	1,495	1,597	1,859	..	2,269	2,439	2,778	..
Metal goods, engineering, vehicles	5,249	5,464	5,983	..	3,929	4,067	4,732	..
Other manufacturing industries	2,260	2,482	2,724	..	4,006	4,166	4,510	..
Construction	1,569	1,781	2,278	2,464	1,924	2,128	2,511	2,741
Distribution, hotels and catering; repairs	3,583	3,911	4,610	5,068	4,669	5,048	5,683	6,132
Transport and communication	1,435	1,597	1,851	2,048	2,409	2,528	2,815	3,039
Financial & business services, etc ⁴	3,405	3,928	4,544	5,357	4,520	5,030	5,874	6,954
Ownership of dwellings	1,748	1,868	2,071	2,318	2,074	2,267	2,404	2,634
Public administration and defence ⁵	1,488	1,630	1,738	1,875	2,031	2,315	2,534	2,749
Education and health services	2,344	2,638	3,051	3,431	3,178	3,457	3,941	4,465
Other services	1,391	1,633	1,868	2,019	1,938	2,203	2,541	2,814
Adjustment for financial services	-1,024	-1,040	-1,167	-1,551	-1,604	-1,548	-1,721	-2,288
Total	26,525	29,087	33,069	36,040	33,489	35,918	40,475	43,953
	England				Wales			
Agriculture, forestry and fishing	4,587	4,545	4,357	4,805	356	368	393	411
Energy and water supply	12,531	12,013	12,446	13,192	1,036	1,198	1,132	974
Manufacturing	66,832	70,639	77,832	82,871	3,555	3,957	4,729	5,175
Minerals, metals and chemicals ³	12,773	13,562	15,391	..	1,341	1,523	1,836	..
Metal goods, engineering, vehicles	28,723	29,808	33,179	..	1,210	1,265	1,562	..
Other manufacturing industries	25,337	27,269	29,261	..	1,004	1,168	1,332	..
Construction	16,968	19,524	22,926	25,950	747	872	964	1,071
Distribution, hotels and catering; repairs	38,429	42,148	48,753	53,757	1,704	1,849	2,138	2,351
Transport and communication	19,807	21,356	23,755	25,886	781	824	928	1,021
Financial & business services, etc ⁴	48,318	55,607	66,792	78,043	1,382	1,558	1,773	1,978
Ownership of dwellings	17,303	18,695	20,640	22,558	701	740	886	982
Public administration and defence ⁵	18,698	20,226	22,162	23,953	1,141	1,223	1,413	1,476
Education and health services	24,582	27,210	30,852	34,653	1,437	1,625	1,803	2,139
Other services	17,582	19,830	22,342	25,091	771	861	930	1,117
Adjustment for financial services	-14,421	-14,723	-16,820	-22,435	-444	-433	-473	-600
Total	271,217	297,070	336,038	368,324	13,168	14,642	16,618	18,094
	Scotland				Northern Ireland			
Agriculture, forestry and fishing	826	897	892	1,001	257	313	342	344
Energy and water supply	1,725	1,461	1,682	1,600	281	285	289	308
Manufacturing	6,147	6,658	7,245	7,781	1,297	1,325	1,390	1,553
Minerals, metals and chemicals ³	964	1,157	1,313	..	180	182	208	..
Metal goods, engineering, vehicles	2,347	2,454	2,634	..	362	327	374	..
Other manufacturing industries	2,837	3,048	3,298	..	754	816	808	..
Construction	1,993	2,149	2,499	2,620	419	506	564	633
Distribution, hotels and catering; repairs	3,746	3,945	4,564	4,801	948	995	1,106	1,223
Transport and communication	2,087	2,273	2,518	2,720	349	377	413	448
Financial & business services, etc ⁴	3,746	4,228	4,835	5,472	763	846	977	1,136
Ownership of dwellings	1,220	1,288	1,363	1,491	358	382	421	451
Public administration and defence ⁵	2,176	2,408	2,711	2,855	1,004	1,077	1,218	1,287
Education and health services	2,989	3,335	3,773	4,438	989	1,067	1,178	1,316
Other services	1,930	2,075	2,365	2,821	465	484	588	666
Adjustment for financial services	-1,275	-1,286	-1,433	-1,894	-234	-229	-243	-313
Total	27,309	29,430	33,035	35,706	6,896	7,429	8,243	9,074
	United Kingdom							
Agriculture, forestry and fishing	6,026	6,123	5,984	6,561				
Energy and water supply	15,572	14,958	15,549	16,074				
Continental shelf	8,373	9,457	6,845	6,545				
Manufacturing	77,831	82,579	91,196	97,380				
Minerals, metals and chemicals ³	15,258	16,424	18,748	..				
Metal goods, engineering, vehicles	32,642	33,854	37,749	..				
Other manufacturing industries	29,931	32,301	34,699	..				
Construction	20,127	23,051	26,953	30,274				
Distribution, hotels and catering; repairs	44,827	48,937	56,561	62,133				
Transport and communication	23,025	24,830	27,614	30,074				
Financial & business services, etc ⁴	54,209	62,239	74,378	86,628				
Ownership of dwellings	19,583	21,104	23,331	25,482				
Public administration and defence ⁵	23,019	24,934	27,504	29,571				
Education and health services	29,996	33,237	37,606	42,547				
Other services	20,748	23,250	26,226	29,715				
Adjustment for financial services	-16,373	-16,671	-18,969	-25,242				
Statistical discrepancy (income adjustment)	-530	242	-749	1,032				
United Kingdom	326,443	358,270	400,029	438,774				

¹ Gross domestic product is shown for each industry after deducting stock appreciation.

² Provisional.

³ Extraction of minerals and ores other than fuels, manufacture of metals, mineral products.

⁴ Banking, finance, insurance, business services and leasing.

⁵ Public administration, national defence and compulsory social security.

4 Gross domestic fixed capital formation by selected industry groups

£ million

	Total of industries shown	Agriculture forestry and fishing	Energy and water supply	Manufacturing	Transport and com- munication ¹	Dwellings
1985						
United Kingdom	32,655	986	6,744	8,735	4,336	11,854
North	1,957	45	494	654	147	616
Yorkshire & Humberside	2,448	60	519	674	281	914
East Midlands	1,982	72	251	678	245	737
East Anglia	1,133	67	148	306	152	460
South East	8,875	99	722	2,239	1,807	4,007
South West	2,242	85	200	610	328	1,020
West Midlands	2,494	49	241	869	332	1,003
North West	3,387	29	681	1,104	356	1,217
England	24,518	507	3,256	7,134	3,647	9,973
Wales	1,438	100	185	548	137	468
Scotland	3,130	238	618	862	415	997
Northern Ireland	938	141	48	198	137	415
Continental Shelf	2,638	—	2,638	—	—	—
1986						
United Kingdom	34,818	932	6,757	8,829	4,777	13,523
North	2,020	46	608	588	167	611
Yorkshire & Humberside	2,762	57	496	866	326	1,016
East Midlands	2,152	68	270	686	260	868
East Anglia	1,268	60	146	308	150	603
South East	10,018	93	679	2,397	2,066	4,782
South West	2,439	82	229	619	366	1,145
West Midlands	2,575	46	250	868	353	1,058
North West	3,575	29	761	1,024	421	1,341
England	26,810	481	3,440	7,356	4,110	11,422
Wales	1,495	102	194	514	142	543
Scotland	3,079	219	555	789	393	1,124
Northern Ireland	946	130	75	176	132	434
Continental Shelf	2,495	—	2,495	—	—	—
1987						
United Kingdom	38,082	996	6,227	9,949	5,401	15,509
North	2,191	61	642	616	185	688
Yorkshire & Humberside	3,281	81	555	1,100	383	1,162
East Midlands	2,459	60	305	767	325	1,002
East Anglia	1,489	48	243	334	134	729
South East	11,445	83	724	2,587	2,413	5,639
South West	2,755	99	279	630	400	1,347
West Midlands	2,984	55	270	1,082	375	1,202
North West	3,757	36	630	1,217	455	1,420
England	30,363	523	3,648	8,332	4,669	13,190
Wales	1,750	108	159	652	184	646
Scotland	3,034	221	452	738	405	1,217
Northern Ireland	1,058	143	89	229	142	455
Continental Shelf	1,880	—	1,880	—	—	—
1988						
United Kingdom	44,644	1,015	6,613	11,404	7,489	18,123
North	2,478	52	718	694	233	780
Yorkshire & Humberside	3,752	83	580	1,217	499	1,373
East Midlands	2,906	65	360	820	418	1,243
East Anglia	1,740	62	131	424	200	924
South East	13,828	90	987	2,882	3,485	6,385
South West	3,548	122	347	783	573	1,723
West Midlands	3,557	71	329	1,182	535	1,441
North West	4,169	36	481	1,402	581	1,669
England	35,978	582	3,932	9,404	6,523	15,537
Wales	2,107	83	195	809	235	785
Scotland	3,573	225	513	951	552	1,333
Northern Ireland	1,094	126	81	240	179	468
Continental Shelf	1,892	—	1,892	—	—	—

¹ Excluding sea and air transport.

£ million

1987	Total	General administration and defence	Education	Health and social services	Housing and community development	Economic services
United Kingdom ¹	7,124	1,168	742	1,206	1,900	2,108
Cleveland	70	11	7	12	29	11
Cumbria	48	6	4	11	12	15
Durham	54	9	2	5	25	13
Northumberland	33	4	2	6	7	14
Tyne and Wear	196	16	19	34	73	55
North	400	45	34	67	147	109
Humberside	111	14	16	24	29	28
North Yorkshire	85	25	7	7	14	32
South Yorkshire	160	17	12	25	57	49
West Yorkshire	248	19	39	44	70	76
Yorkshire and Humberside	604	76	74	100	169	186
Derbyshire	85	9	13	13	20	29
Leicestershire	78	5	12	14	13	34
Lincolnshire	56	10	7	11	6	21
Northamptonshire	37	11	4	6	-17	32
Nottinghamshire	74	1	6	17	31	19
East Midlands	330	37	43	61	52	136
Cambridgeshire	69	23	12	14	1	18
Norfolk	58	9	8	11	9	21
Suffolk	49	9	11	8	4	17
East Anglia	175	41	30	33	14	57
Bedfordshire	21	7	5	4	-5	10
Berkshire	93	40	7	8	6	31
Buckinghamshire	25	-5	6	14	0	10
East Sussex	60	4	9	19	14	13
Essex	96	25	23	18	3	28
Greater London	984	117	110	179	324	254
Hampshire	202	105	21	28	15	33
Hertfordshire	65	27	5	9	-15	39
Isle of Wight	18	2	3	8	2	2
Kent	125	26	5	29	-2	68
Oxfordshire	66	38	6	10	0	11
Surrey	93	24	12	24	2	31
West Sussex	44	0	8	14	5	18
South East	1,892	410	220	362	349	548
Avon	83	25	8	26	11	13
Cornwall	62	22	8	4	7	20
Devon	122	16	11	16	11	69
Dorset	75	18	6	16	7	27
Gloucestershire	59	12	10	16	7	14
Somerset	49	8	5	9	3	24
Wiltshire	58	22	4	8	3	20
South West	507	123	51	96	49	187
Hereford and Worcestershire	82	11	5	10	8	50
Shropshire	52	10	5	14	11	12
Staffordshire	93	17	10	23	15	27
Warwickshire	67	6	3	10	5	43
West Midlands	313	27	39	57	125	66
West Midlands	607	72	62	114	163	198
Cheshire	89	12	13	19	24	22
Greater Manchester	381	22	33	61	165	101
Lancashire	145	32	13	29	39	32
Merseyside	161	12	12	40	78	20
North West	776	78	71	149	306	176
Clwyd	102	11	3	8	19	61
Dyfed	63	7	10	8	13	25
Gwent	41	4	4	9	16	8
Gwynned	91	4	14	7	7	59
Mid Glamorgan	68	5	-1	9	31	23
Powys	19	2	0	1	11	5
South Glamorgan	52	14	9	8	6	14
West Glamorgan	94	7	23	16	27	22
Wales	530	55	62	66	130	217
Borders	22	1	1	6	8	7
Central	55	6	4	11	26	8
Dumfries	43	2	1	3	14	22
Fife	61	16	3	5	29	9
Grampian	108	10	6	10	51	32
Highlands	72	5	4	7	26	29
Lothian	144	21	16	21	62	25
Strathclyde	443	78	26	49	205	85
Tayside	76	7	5	7	32	26
Islands	33	4	8	2	8	12
Scotland	1,058	150	74	119	461	254
Northern Ireland ²	201	46	20	39	54	42

¹ The UK figures include expenditure on embassies, etc. overseas.

² See Technical Notes.

(cont.)

£ million

1988	Total	General administration and defence	Education	Health and social services	Housing and community development	Economic services
United Kingdom ¹	6,158	1,459	601	1,249	602	2,254
Cleveland	55	13	8	12	21	2
Cumbria	39	8	6	9	6	10
Durham	49	15	6	6	20	2
Northumberland	24	7	2	5	5	5
Tyne and Wear	168	22	29	36	56	25
North	335	64	51	68	107	44
Humberside	65	11	12	20	14	9
North Yorkshire	63	34	9	9	2	9
South Yorkshire	196	22	32	25	78	39
West Yorkshire	225	30	51	41	60	42
Yorkshire and Humberside	550	97	104	95	155	99
Derbyshire	49	6	11	13	-2	21
Leicestershire	64	11	12	22	-1	20
Lincolnshire	32	12	1	11	-10	19
Northamptonshire	-11	-20	-2	7	-13	17
Nottinghamshire	53	17	5	17	1	13
East Midlands	187	26	26	71	-25	89
Cambridgeshire	62	27	12	17	-12	18
Norfolk	31	11	9	12	-11	11
Suffolk	32	12	7	8	-27	31
East Anglia	125	50	28	36	-49	60
Bedfordshire	24	15	6	8	-18	13
Berkshire	82	41	5	10	-1	26
Buckinghamshire	15	0	-15	20	-15	25
East Sussex	58	6	14	20	25	-7
Essex	59	42	25	27	-43	8
Greater London	1,151	279	-7	206	-196	869
Hampshire	206	124	21	25	0	36
Hertfordshire	86	30	7	33	-29	45
Isle of Wight	9	4	3	7	-2	-2
Kent	-25	36	5	30	-98	2
Oxfordshire	75	40	11	13	-20	32
Surrey	52	33	-7	25	-27	29
West Sussex	32	-9	12	18	10	2
South East	1,826	642	80	443	-416	1,077
Avon	74	27	10	23	-1	14
Cornwall	39	21	7	8	-6	9
Devon	68	17	7	19	-31	55
Dorset	-8	21	-4	13	-15	-22
Gloucestershire	54	18	7	9	-15	34
Somerset	32	9	3	11	-8	18
Wiltshire	26	27	-9	8	-20	20
South West	285	141	22	91	-97	129
Hereford and Worcestershire	79	15	-2	9	-29	87
Shropshire	30	13	6	7	-2	7
Staffordshire	51	21	11	15	-4	8
Warwickshire	43	11	-8	8	-14	46
West Midlands	212	35	36	50	86	6
West Midlands	415	94	41	89	37	153
Cheshire	90	11	27	20	16	16
Greater Manchester	306	32	42	50	125	57
Lancashire	116	40	15	26	31	4
Merseyside	158	13	22	36	86	1
North West	671	96	106	133	258	78
Clwyd	61	7	6	9	7	32
Dyfed	64	7	11	9	11	25
Gwent	64	8	9	8	25	14
Gwynedd	83	5	4	3	8	63
Mid Glamorgan	108	7	13	9	57	21
Powys	15	3	3	3	0	6
South Glamorgan	64	19	3	8	23	10
West Glamorgan	71	11	8	13	17	22
Wales	529	66	57	63	149	194
Borders	20	1	1	3	7	7
Central	55	6	4	11	25	9
Dumfries	50	4	2	3	18	23
Fife	64	15	6	5	24	14
Grampian	111	13	4	12	52	30
Highlands	79	4	4	5	33	32
Lothian	103	16	7	20	33	27
Strathclyde	442	63	29	54	193	102
Tayside	74	7	4	9	27	28
Islands	43	2	5	3	18	15
Scotland	1,040	132	66	126	429	288
Northern Ireland ²	196	52	20	34	46	43

¹ The UK figures include expenditure on embassies, etc. overseas.² See Technical Notes.