

**CONTROLLING GOVERNMENT SPENDING AND DEFICITS:  
TRENDS IN THE 1980s  
AND PROSPECTS FOR THE 1990s**

**Howard Oxley and John P. Martin**

**CONTENTS**

Introduction.....	146
I. The evolution of general government net borrowing/lending in the 1980s. .	147
II. Revenue trends in the 1980s .....	153
III. General government expenditures in the 1980s .....	154
A. Total expenditures .....	154
B. The changing structure of government expenditure .....	157
C. Government salaries and employment .....	161
D. Merit goods and social transfer spending .....	168
E. Summary of main findings .....	173
IV. Challenges for the 1990s .....	175
A. Expenditure pressures in the 1990s. ....	175
B. Policy issues for the 1990s .....	178
Annex 7: Method underlying Table 3 .....	183
Bibliography .....	188

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## INTRODUCTION

The **1980s** witnessed a sharp shift in policy priorities with respect to the public sector away from the objectives espoused in the previous two decades. In the **1960s**, fast growth of public spending relative to GDP was predicated on the view that the supply of “public” goods was below its optimal size. A redistribution of the fruits of growth through expanded income support as well as increased access to health, education and housing services was considered desirable. Public expenditures and taxes were regarded as key policy instruments in counter-cyclical demand management. This consensus disintegrated in the **1970s**. Despite a significant rise in government expenditures and widening fiscal deficits, it proved impossible to counter the rise in unemployment and inflation rose. At the same time, policy makers found their capacity to respond to new social needs increasingly constrained. On the one hand, social expenditures and public debt interest payments increased while, on the other, there was growing resistance to higher taxes.

After the second oil price shock in **1979**, expansionary fiscal policy was generally eschewed and most OECD countries embarked on medium-term strategies to reduce their budget deficits. Concern over the effects of a continuing expansion of the public sector on private sector performance and a greater appreciation of the social costs of higher taxation produced broad agreement that the brunt of this strategy should be borne by reductions in expenditure rather than tax increases. This was to be accompanied, at the microeconomic policy level, by a reduction of government intervention, particularly where it distorted price signals or impeded market forces.

The purpose of this paper is twofold. First, it describes how governments achieved better budgetary control in the **1980s**, building on previous OECD work (e.g. Saunders and Klau, **1985**; OECD, **1989c**). The entire focus is on the trends in net financial balances, revenues and expenditure of **general government**, which accounts for most of public sector activity in OECD countries and is the best documented. Trends in regulatory activity and in public enterprises are ignored; these latter aspects of public sector activity are reviewed in Oxley *et al.* (**1990**) and in Pera (**1989**). Second, it assesses the main spending pressures which governments are likely to face over the coming decade and suggests some possible policy responses.

The structure of the paper is as follows. The first two parts examine the process of budgetary consolidation in the **1980s**, beginning with net financial balances and debt (Section I) before considering developments on the revenue side (Section II). Section III describes expenditure trends, focusing in detail on how governments actually sought to control spending. The final section discusses some of the factors likely to affect public expenditures in the **1990s** and draws out some policy issues.

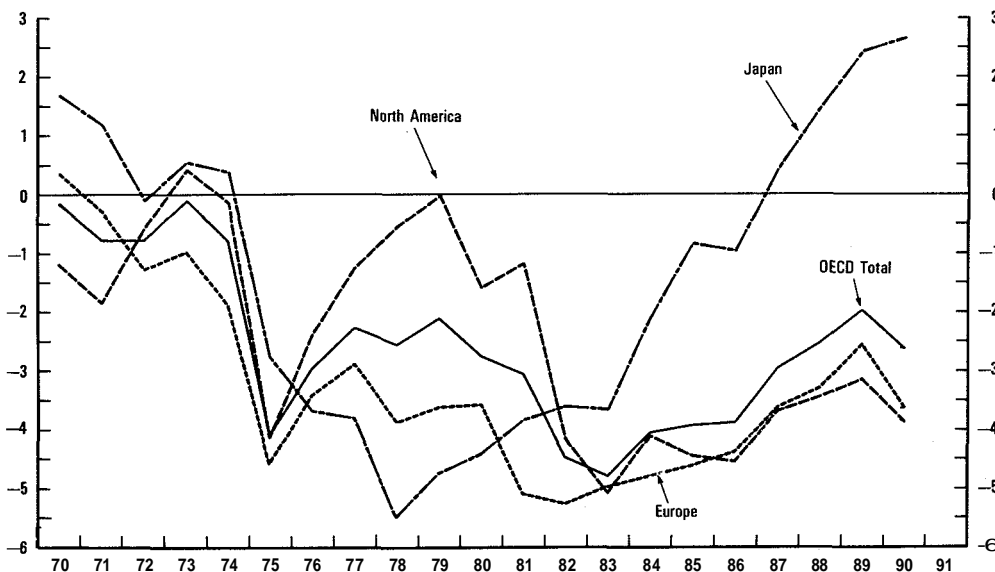
## I. THE EVOLUTION OF GENERAL GOVERNMENT NET BORROWING/LENDING IN THE 1980s

General government covers the largest part of public sector activity; it is also the sector where data availability is the best for the purposes of cross-country comparisons. As in previous OECD studies, the data used here are largely drawn from the standardised System of National Accounts (SNA), disaggregated by function and "economic" classification. These data comprise the consolidated expenditure and revenue accounts of central government, state, regional and local authorities and the social security systems<sup>1</sup>.

In the SNA, the net call on resources of general government from the rest of the economy is defined as net lending. This is equal to total revenues (including net capital transfers received) less current and capital expenditure. However, as most governments have been in deficit over the period, it is also referred to in the text as general government net borrowing or government deficit<sup>2</sup>.

In the 1980s, most governments sought to reduce their net borrowing as their first priority. In 1979, the general government net borrowing (national accounts basis) for the OECD area was 2 per cent of GDP (Chart 1 and Table A1). Only five countries were in surplus. The position of the United States with a small surplus contrasted with large deficits in Europe, averaging over 3½ per cent. The sharp decline in economic activity in 1981-82 led to a deterioration in the OECD average deficit to 4 per cent of GDP in 1984. The widening in the deficit was particularly marked in the United States and

**Chart 1. General government net lending**  
Per cent of GDP/GNP



Source: OECD, see Table A1

Canada. By dint of more restrictive policies, most countries managed to wind back their deficits over the rest of the decade. By **1989**, the average deficit for the OECD area as a whole was down to around 2 per cent, its lowest level since **1974**. It rose back to almost 2½ per cent in **1990**, mostly for cyclical reasons.

The profile of government net borrowing over the decade was affected by debt and interest rate developments. Widening deficits in the early part of the decade led to a faster build-up in net government debt as a share of GDP (Table 1). Associated debt interest payments rose even faster during this period reflecting the world-wide rise in real interest rates, putting greater pressure on deficits. The cumulative impact of rising debt and higher interest rates on debt interest payments was reversed as the decade progressed: smaller deficits reduced debt accumulation, real interest rates fell from their peaks and the growth of debt interest payments slowed sharply.

A clearer view of the stance of fiscal policy is given by general government borrowing net of debt interest payments (the so-called "primary deficit"). Chart 2 breaks down the change in the primary deficit into its cyclical component (horizontal axis) and a residual (total deficit less the cyclical component) called the "discretionary" component (vertical axis); it also splits the period **1979-90** in two in order to highlight the role

Table 1. Net government debt<sup>1</sup>  
Per cent of GNP/GDP

	1979	1984	1990
United States <sup>2</sup>	19.2	25.3	31.2
Japan <sup>3</sup>	14.9	27.0	10.9
Germany <sup>3,4</sup>	11.5	21.7	22.6
France <sup>3</sup>	13.8	21.1	25.0
Italy	55.6	74.4	98.2
United Kingdom	47.9	47.4	28.9
Canada	12.0	26.1	40.3
Australia	27.7	25.1	13.2
Austria	36.0	47.9	55.4
Belgium	62.0	108.7	120.6
Denmark	1.8	37.2	23.5
Finland <sup>3</sup>	-6.8	0.7	-4.1
Greece	27.7	50.1	86.7
Ireland	76.2	113.4	112.7
Netherlands <sup>3</sup>	21.8	39.9	59.4
Norway <sup>3</sup>	9.8	-12.5	-26.8
Spain	5.9	23.2	30.7
Sweden	-19.9	12.6	-3.7

1. Refers to net general government debt. Definitions are not consistent across countries and caution should be exercised in making international comparisons.

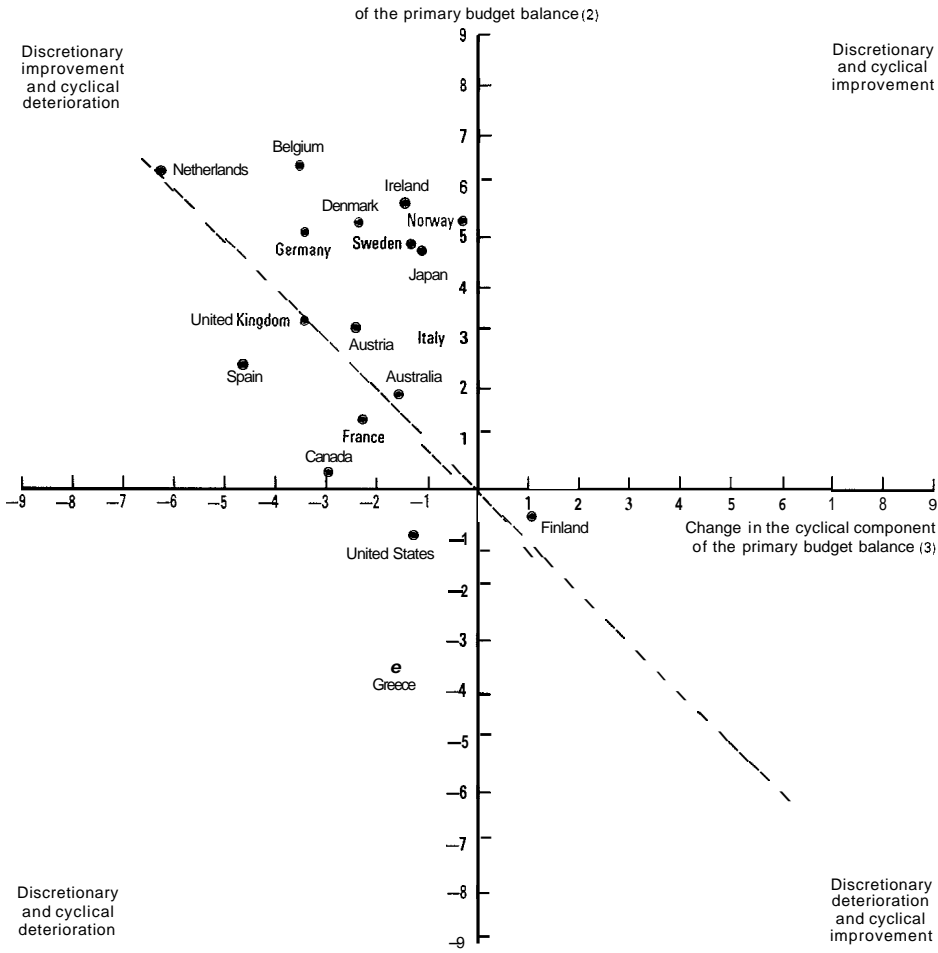
2. Excludes capital outlays of the Resolution Trust Corporation.

3. Financial assets exclude corporate shares.

4. Western Germany only.

Source: OECD *Economic Outlook* 49, July 1991.

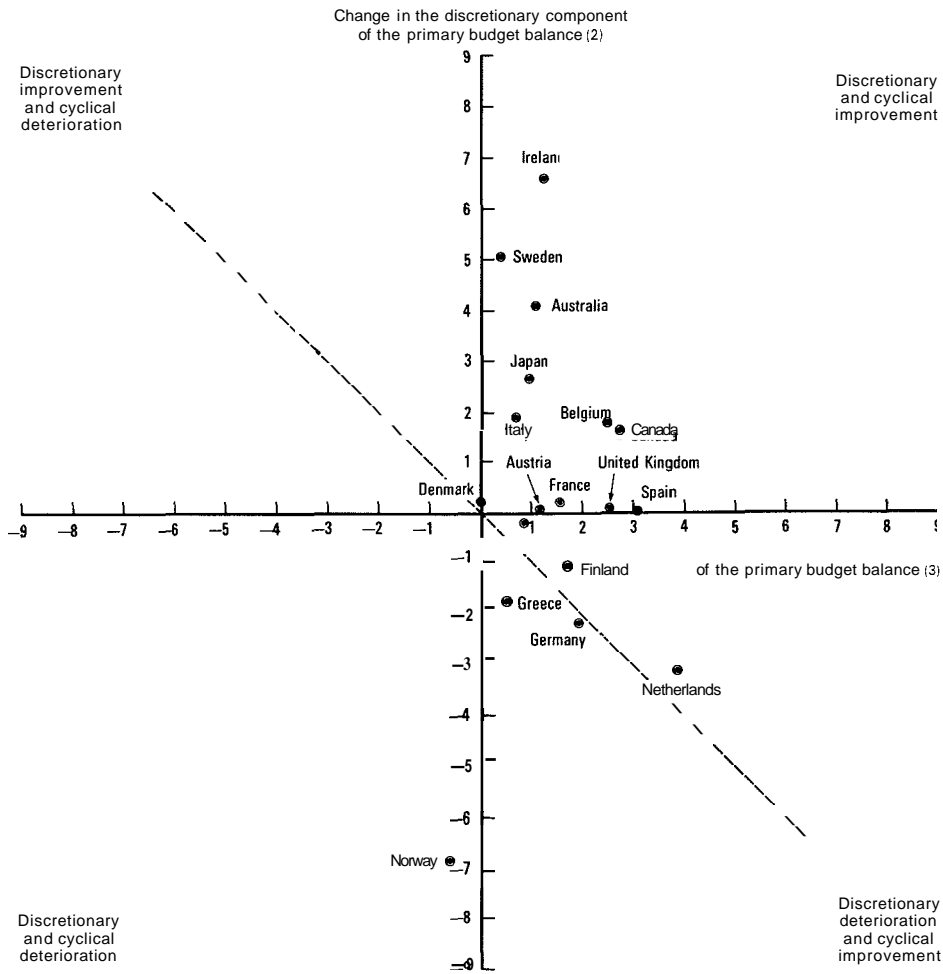
**Chart 2. The fiscal stance over the period 1979-1984 (1)**  
**Changes in general government budget balances as a percentage of GNP/GDP**



1. Interest payments are excluded from the budget balance. Data refer to the cumulative change from 1978 to 1984.  
 2. Refers to the change in the cyclically-adjusted general government budget balance.

3. Refers to the difference between the change in the overall budget balance and the cyclically-adjusted budget balance.

**Chart 2. (cont.). The fiscal stance over the period 1984-1990 (1)**  
 Changes in general government budget balances as a percentage of GNP/GDP



1. Interest payments are excluded from the budget balance. Data refer to the cumulative change from 1983 to 1990.  
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of the cycle<sup>3</sup>. Countries to the left (right) of the vertical axis experienced a cyclically-related increase (decrease) in the deficit over the two periods. Countries above (below) the horizontal axis took “discretionary” measures to reduce (increase) the deficit. For countries lying on the 45-degree line, the discretionary component just offsets the cyclical component.

While the decomposition is sensitive to the method of cyclical adjustment, the approach used in this study suggests that all countries except Finland experienced a cyclically-related widening in their primary deficits over the period 1979 to 1984 in response to the economic downturn (i.e. countries to the left of the vertical axis). This cyclical deterioration in the deficit appears to have been offset, however, as all countries except the United States, Finland and Greece introduced more restrictive policies to get public borrowing under control (i.e. countries lying above the horizontal axis). In countries lying near or above the 45-degree line in the top left-hand quadrant (i.e. excluding the three countries just mentioned and France, Canada and Spain), restrictive policies offset or more than offset the impact of the cycle on primary deficits. Discretionary fiscal tightening was most notable in Japan, Germany, Belgium, Denmark, Ireland, the Netherlands, Norway and Sweden where the positive change in the “discretionary” component of the deficit exceeded 4½ percentage points of GDP.

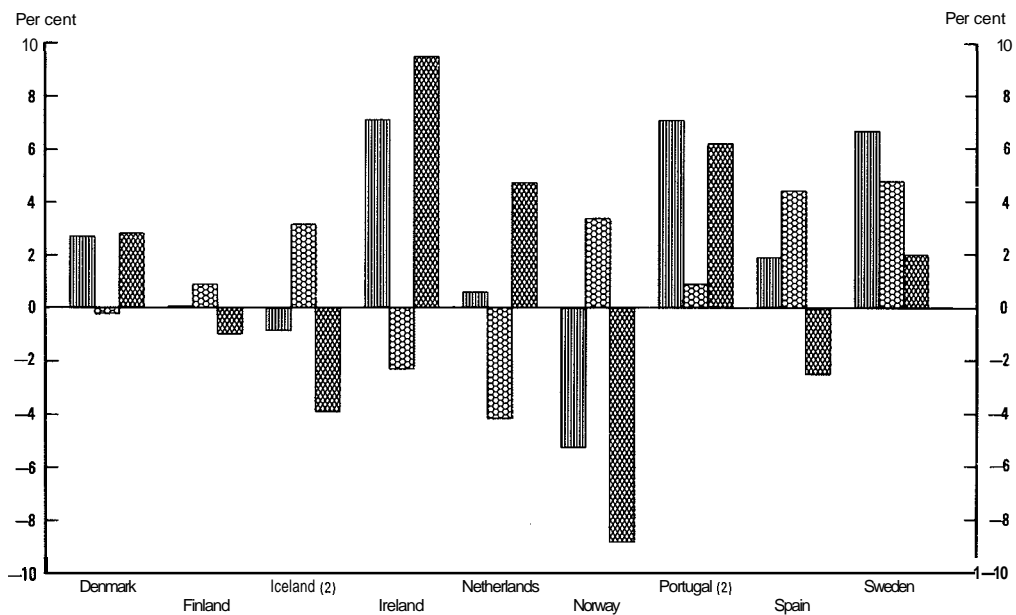
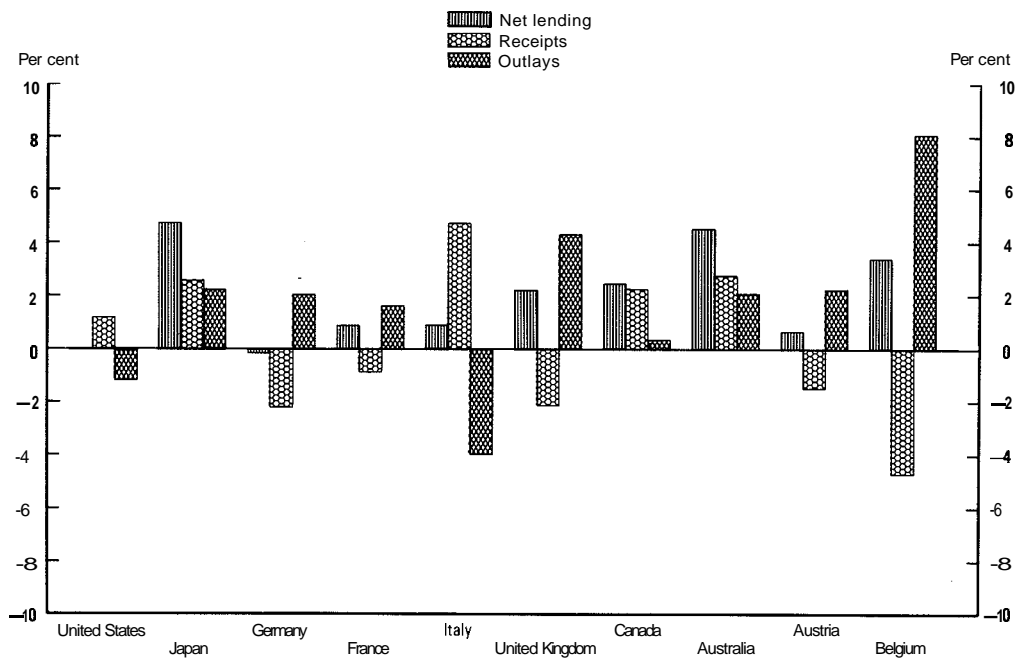
Over the period 1984 to 1990, primary deficits fell almost everywhere as a consequence of the sustained upswing. In Germany, Finland, Greece and the Netherlands, discretionary fiscal loosening broadly offset the improvement due to the cycle. In Norway, a large increase in the discretionary component reinforced a small increase in the cyclical component. The cyclical component accounted for all of the reduction in the primary deficit in the United States, France, the United Kingdom, Austria and Spain. Non-cyclical reductions in the primary deficit were particularly large for Australia, Ireland and Sweden.

By 1990 five countries – Japan, Australia, Finland, Norway and Sweden – had total government borrowing in near balance or in surplus. The largest improvements in the ratio of net lending to GDP between the two peak years of cyclical activity in the OECD area of 1979 and 1990 were recorded in Ireland (+7.7 percentage points), followed by Japan (+7.4 points) and Sweden (+6.6 points).

But not all OECD countries were able to make headway in cutting public sector deficits in the second half of the 1980s. The principal exceptions to the process of budgetary consolidation and debt stabilisation are Italy, the Netherlands and, particularly, Greece where net government debt as a share of GDP continues to rise rapidly. In Norway, government revenues and net lending have been affected by increased oil output and sharp changes in world oil prices: the surplus increased by over 6 percentage points of GDP from 1979 to 1984, but this improvement had been virtually unwound by 1990.

What were the respective roles of tax increases and spending cuts in this process of fiscal adjustment? As noted above, OECD governments broadly agreed that this should largely occur through expenditure restraint. Focusing on the period 1984-90 when most the deficit reduction occurred, Chart 3 shows the separate contributions of taxes and spending to the **change** in the ratio of government net borrowing or lending to GDP. The change in net lending as a share of GDP – which is positive in all countries except Germany, Iceland and Norway – is decomposed into the change of receipts and expenditures. The signs of these changes show their impact on the deficit: expenditure

**Chart 3. Contribution to budget consolidation (1)**  
**Changes in the GDP ratio between 1984 and 1990**



1. See text Part I and endnote 4 for a description of the method used to construct this chart.  
 2. Change between 1984 and 1989.  
 Source: OECD (see Tables A1-A3).



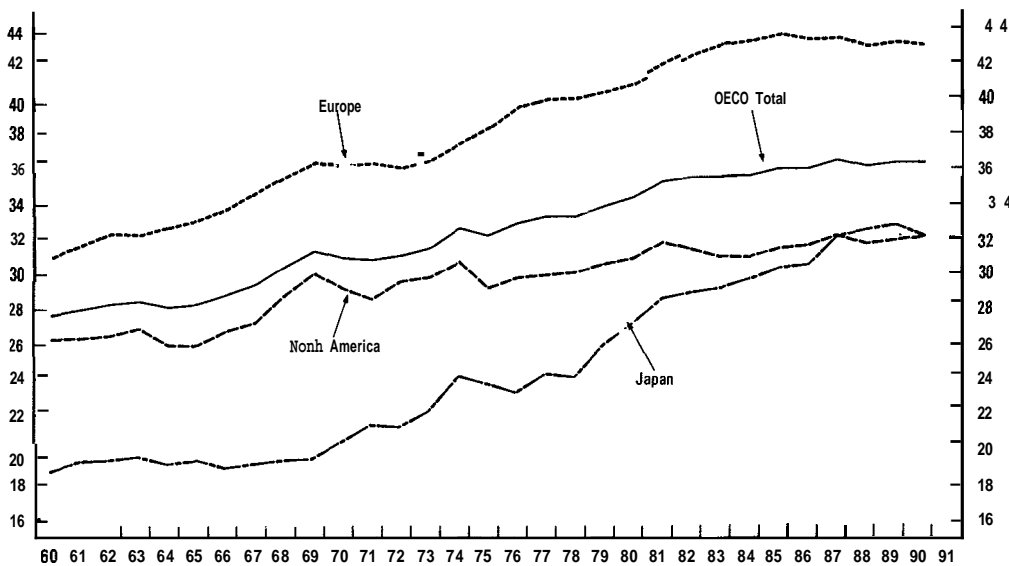
**cuts** and revenue **increases** are both shown as having positive effects on reducing the deficit, while expenditure increases and revenue declines have negative impacts<sup>4</sup>. Of the 1.4 percentage point fall in the OECD average deficit/GDP ratio over the 1984-90 period, revenues accounted for 0.9 percentage points and expenditures only 0.5 points.

However, as Chart 3 demonstrates, there was considerable variety among countries. For Germany, France, the United Kingdom, Austria, Belgium, Denmark, Ireland and the Netherlands, primary deficits were reined in entirely through cuts in expenditures – reductions in the revenue share in GDP in those countries would, in themselves, have led to a widening in the deficit. In contrast, rising tax revenues alone accounted for the reduction in deficits in the United States, Italy, Finland, Iceland and Spain. The remaining countries relied upon a mix of tax increases and expenditure cuts, with higher tax shares out-weighing the impact of lower spending only in Sweden.

## II. REVENUE TRENDS IN THE 1980s

Government revenues as a share of total OECD GDP rose rapidly in the 1970s to reach over 34 per cent in 1979 (Chart 4 and Table A2). The OECD-average share rose more slowly in the 1980s but by 1990 it was still  $2\frac{3}{4}$  percentage points higher than in 1979. Most of this rise occurred in the period 1979-84 when the ratio rose by  $1\frac{1}{4}$  percentage points. But as the OECD average was strongly influenced by the small

Chart 4. General government receipts  
Per cent of GDP/GNP



increase in the United States and Germany, the rise was more than this in 16 countries and over 4 percentage points in six of them.

The rate of increase in the revenue share slowed sharply thereafter, rising by only a percentage point for the OECD area over the period 1984 to 1990. Again the weight of the larger countries affected the average: increases were less than the area-wide average in ten countries and falls in the ratio were experienced in nine of them.

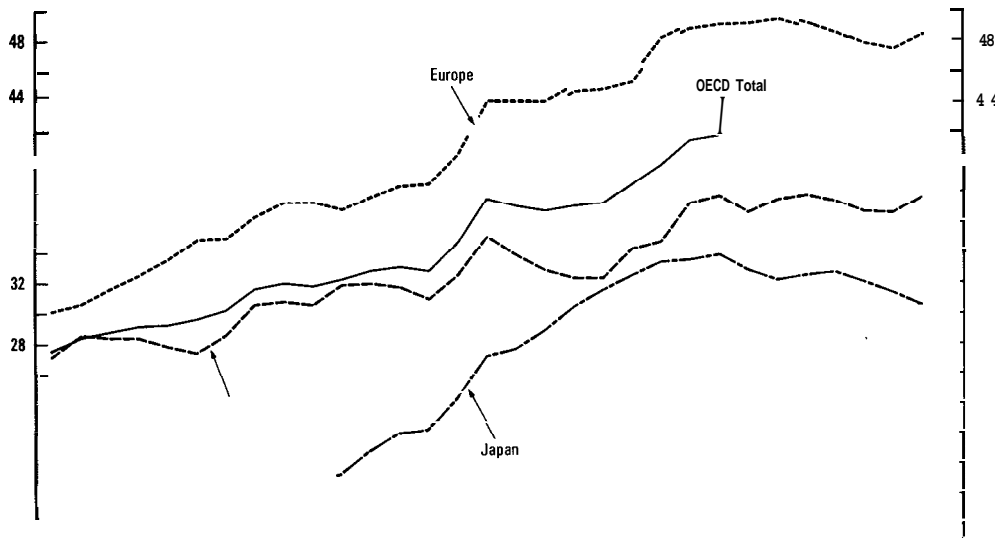
The slower growth in the revenue share in the second half of the 1980s coincided with the widespread movement towards tax reform (see OECD, 1989c and Hagemann et al., 1988, for country detail). Although most tax reforms aimed at being broadly revenue neutral, some fall in average tax rates probably took place in practice since political acceptance of the changes was more likely if the number of taxpayers receiving tax reductions outweighed those having increases.

### III. GENERAL GOVERNMENT EXPENDITURES IN THE 1980s

#### A. Total expenditure

Total general government outlays or expenditures include current disbursements – comprising government consumption, subsidies, social security and other transfer

Chart 5. General government expenditure  
Per cent of GDP/GNP



payments and debt interest – and capital outlays – made up of general government investment and net capital transfers. The share of total expenditures in OECD GDP rose by  $3\frac{1}{4}$  percentage points from 1979 to 1990, considerably less than the 5 points rise in the previous decade (Chart 5 and Table A3). There was an initial increase of 4 percentage points in the share between 1979 and 1982. It then fell back by  $1\frac{1}{2}$  percentage points between 1982 and 1989, before rising again in 1990 by  $\frac{3}{4}$  a percentage point. The declines in the ratio appear to have been particularly marked in Japan and in Europe. In a few countries (Japan, Germany, Austria, Belgium and Ireland), spending ratios in 1990 were even below their 1979 values.

The profile of expenditures over the period was strongly influenced by the recession and subsequent recovery in activity (Chart 6). After adjusting expenditures for cyclical movements in transfer payments and using trend GDP as the denominator, the break in the upward trend in the spending/GDP ratio around mid-decade and the increase in 1990, while confirmed, become less marked.

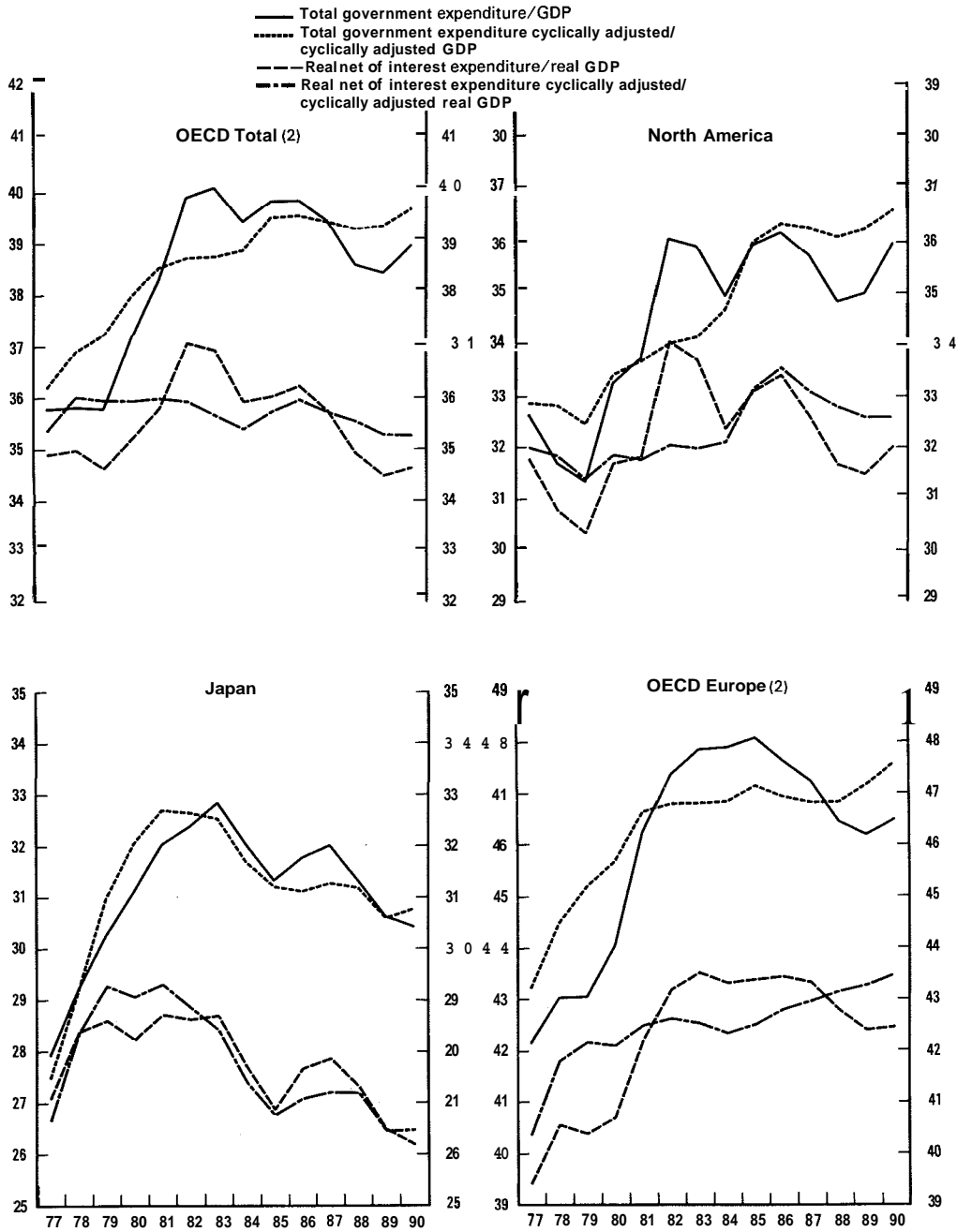
Chart 6 also shows the ratio of real “discretionary” expenditure to real GDP, i.e. after netting off government debt interest payments and adjusting for differential movements in public sector price deflators relative to private sector prices (see box for a description of this “relative price” effect)<sup>5</sup>. The share of real spending fell more

#### THE “RELATIVE PRICE” EFFECT

The “relative price” effect refers to the tendency for the deflator for public consumption to rise more rapidly than the GDP deflator, leading – real spending held constant – to a rise in the share of public consumption in GDP in nominal terms. In contrast to much of the business sector, the public consumption deflator is conventionally estimated on the basis of the price of inputs (largely wages and salaries) and, with few exceptions, no allowance is made for productivity growth. The public consumption deflator will tend to rise more rapidly than the GDP deflator where, *inter alia*, wages grow more rapidly in the government sector than in the business sector and where positive productivity growth leads to slower growth in business-sector output prices.

This “relative price” effect had a strong influence on the development of the size of the public sector share in GDP in nominal terms during the 1970s (Chart 7). Over the 15 years to the mid-1970s, the relative price effect increased on average in the OECD area by about  $1\frac{1}{2}$  per cent per annum (1.7 per cent per annum from 1970 to 1974). It decelerated sharply in the second half of the 1970s to  $\frac{1}{2}$  per cent (annual rate) and, after a pick up in the early 1980s (which explained part of the rise in the spending share in GDP in the period 1979-84), the effect became virtually neutral at the OECD level in the second half of the decade. These trends partly reflected the decline in productivity growth in the private sector during this period and greater government resistance to pressures for public sector wage increases. There was, however, a rise in the relative deflator in 1989 and 1990, possibly reflecting some catch-up.

**Chart 6. Spending adjusted for cyclical factors and relative price movements (1)**



1. For a description of the cyclical adjustment, see endnote 3 in the main text.  
 2. Excluding Belgium, Iceland, Ireland, Portugal, Sweden and Turkey.

In order to get a better grasp of how expenditure restraint operated in the 1980s, it is helpful to decompose total government expenditure in nominal terms by economic category and by function or programme. Taking the former first, Table 2 shows the contributions to the change in the expenditure/GDP ratio between 1979 and 1990 of: public consumption, subsidies, social security and other current transfers, debt interest payments, public investment and capital transfers.

Despite considerable diversity across countries, some common patterns emerge. Debt interest payments put upward pressure on the expenditure ratio in all countries other than the United Kingdom and Switzerland. There was also a widespread and

**B. The changing structure of government expenditure**

strongly after 1982 than nominal data would suggest, particularly in North America and Japan. Once again, this fall is less marked when cyclically-adjusted series are used. Indeed, for the area as a whole, the real cyclically-adjusted "discretionary" expenditure ratio has been on a slight downward trend over virtually all of the decade. On this basis, underlying restraint appears to have been sharpest in Japan. In North America, there was an increase in the share of discretionary real spending around mid-decade, falling back thereafter. Underlying real restraint appears to have been strongest in the period 1983-84 in Europe, followed by a steady upward creep over the rest of the decade.

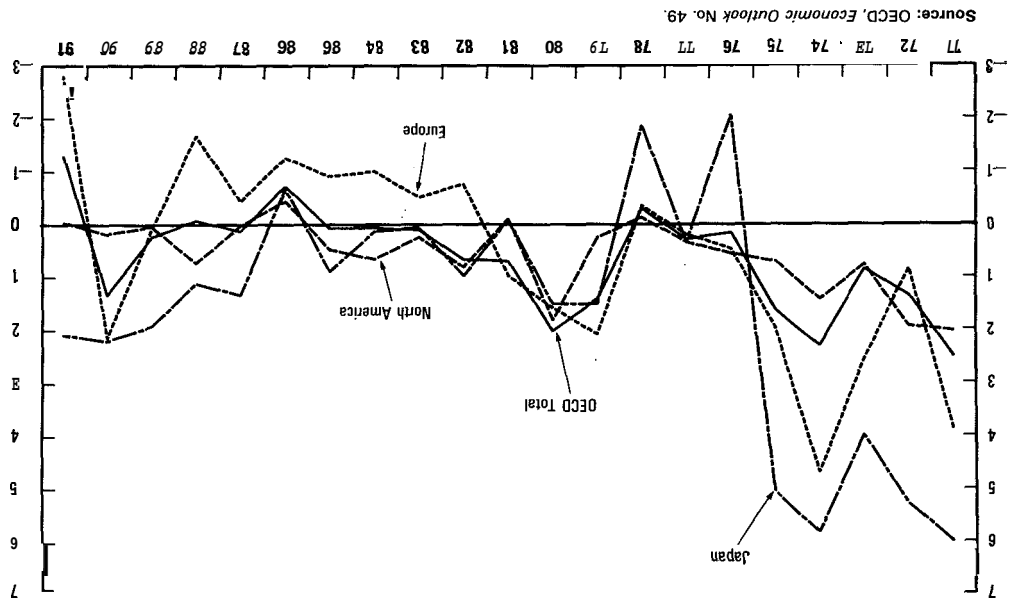


Chart 7. Growth in the deflator of government expenditure on goods and services relative to GDP deflator

Source: OECD, *Economic Outlook* No. 49.

**Table 2. Structure of government outlays by economic category<sup>1</sup>**

Per cent of GDP

	United States			Japan			Germany			France			Italy		
	1979	1990	Change	1979	1990	Change	1979	1990	Change	1979	1990	Change	1980	1990	Change
Total current disbursements	30.4	35.2	4.8	23.9	24.7	0.8	42.4	42.3	0.0	41.4	46.6	5.2	37.7	48.3	10.6
Government consumption	17.0	18.3	1.2	9.7	9.0	-0.7	19.6	18.5	-1.1	17.6	18.3	0.7	14.7	17.4	2.7
Subsidies	0.4	0.2	-0.2	1.3	0.7	-0.6	2.2	1.9	-0.3	2.0	1.6	-0.3	2.9	2.2	-0.6
Social security and other transfers <sup>2</sup>	10.2	11.5	1.3	10.3	11.2	1.0	18.9	19.3	0.4	20.4	23.5	3.1	14.8	18.9	4.1
Debt interest payments <sup>3</sup>	2.8	5.2	2.4	2.6	3.8	1.1	1.7	2.6	1.0	1.4	3.1	1.7	5.3	9.7	4.4
Government investment <sup>4</sup>	1.7	1.6	-0.1	6.3	5.0	-1.3	3.2	2.3	-1.0	3.1	3.3	0.2	3.2	3.5	0.4
Capital transfers <sup>5</sup>	-0.4	-0.2	0.1	0.5	0.0	-0.4	1.8	1.1	-0.6	0.4	0.2	-0.2	0.9	1.3	0.4
Other transfers <sup>6</sup>	-0.1	0.4	0.5	0.9	1.0	0.1	0.2	0.1	-0.1	0.1	0.1	0.0	0.0	0.1	0.1
Total	31.7	37.0	5.2	31.6	30.7	-0.9	47.6	45.8	-1.8	45.0	50.2	5.2	41.7	53.2	11.5
	United Kingdom			Canada			Australia <sup>7</sup>			Austria			Belgium		
	1979	1990	Change	1979	1990	Change	1979	1990	Change	1979	1990	Change	1979	1990	Change
Total current disbursements	39.2	38.1	-1.1	36.0	43.6	7.6	30.4	33.5	3.0	42.9	44.0	1.1	53.3	52.6	-0.6
Government consumption	19.7	20.0	0.3	19.0	19.7	0.6	17.4	17.3	-0.1	18.1	17.6	-0.5	17.6	14.2	-3.4
Subsidies	2.4	1.1	-1.3	2.0	1.7	-0.3	1.5	0.9	-0.6	2.9	2.6	-0.3	4.5	2.9	-1.6
Social security and other transfers <sup>2</sup>	12.8	13.7	0.9	9.9	12.8	2.9	9.5	10.9	1.4	19.6	19.8	0.2	25.9	24.8	-1.1
Debt interest payments <sup>3</sup>	4.4	3.4	-1.0	5.0	9.4	4.4	2.1	4.4	2.3	2.3	4.0	1.7	5.3	10.7	5.5
Government investment <sup>4</sup>	2.6	2.1	-0.5	2.7	2.5	-0.2	2.9	2.6	-0.4	4.4	3.1	-1.2	3.6	1.3	-2.3
Capital transfers <sup>5</sup>	0.7	-2.9	-3.6	0.3	0.3	0.0	0.1	0.4	0.3	1.3	1.4	0.1	0.8	0.6	-0.2
Other transfers <sup>6</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	-0.3	0.4	0.1	-0.3
Total	42.5	42.9	0.3	39.0	46.4	7.5	33.5	36.4	2.9	48.9	48.6	-0.3	58.1	54.7	-3.4

Table 2 (continued)

	Denmark			Finland			Greece			Iceland			Ireland		
	1979	1990	Change	1979	1990	Change	1979	1990	Change	1979	1990	Change	1979	1990	Change
Total current disbursements	48.9	55.3	6.5	33.0	37.2	4.2	29.7	51.0	21.1	26.6	32.1	5.5	41.6	43.5	1.8
Government consumption	25.0	24.7	-0.3	17.9	21.0	3.1	16.3	21.9	5.5	17.0	19.3	2.2	18.1	14.6	-3.5
Subsidies	3.2	3.0	-0.3	3.5	2.8	-0.7	2.3	1.8	-0.5	3.9	3.1	-0.8	3.8	4.4	0.6
Social security and other transfers <sup>2</sup>	17.1	20.5	3.3	10.6	12.1	1.4	8.9	16.1	7.2	4.6	6.0	1.4	14.0	16.4	2.4
Debt interest payments <sup>3</sup>	3.5	7.2	3.7	0.9	1.3	0.4	2.2	11.2	9.0	1.1	3.8	2.7	5.8	8.0	2.2
Government investment <sup>4</sup>	3.8	2.0	-1.8	3.3	3.4	0.1	3.2	2.9	-0.3	3.4	4.0	0.5	4.2	1.3	-2.9
Capital transfers <sup>5</sup>	0.7	0.6	-0.1	0.2	0.2	0.0	0.0	0.0	0.0	2.8	3.3	0.6	1.1	0.0	-1.0
Other transfers <sup>6</sup>	-0.1	-0.3	-0.2	0.2	-0.1	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	53.2	57.6	4.4	36.7	40.8	4.0	32.9	53.9	21.0	32.8	39.3	6.5	46.8	44.5	-2.3

	Netherlands			Norway			Portugal			Spain		
	1979	1990	Change	1979	1990	Change	1979	1990	Change	1980	1990	Change
Total current disbursements	51.3	52.3	1.0	46.1	51.8	5.8	31.2	40.2	9.1	29.3	35.5	6.1
Government consumption	18.1	14.9	-3.2	19.5	21.1	1.6	13.9	19.7	5.9	12.5	14.2	1.6
Subsidies	1.3	1.6	0.3	7.0	6.0	-1.0	4.5	1.5	3.0	2.0	1.6	-0.5
Social security and other transfers <sup>2</sup>	27.6	29.1	1.5	16.3	20.7	4.4	10.0	10.5	0.5	14.0	16.1	2.1
Debt interest payments <sup>3</sup>	4.2	6.7	2.5	3.2	3.9	0.7	2.9	8.6	5.8	0.7	3.6	2.9
Government investment <sup>4</sup>	3.1	2.3	-0.8	4.3	3.3	-1.1	3.8	3.4	-0.4	1.8	4.7	2.9
Capital transfers <sup>5</sup>	1.5	1.8	0.3	0.0	0.0	0.0	1.1	0.2	-1.0	1.3	1.2	-0.1
Other transfers <sup>6</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-1.2	-1.3	0.1	0.1	0.0
Total	55.8	56.3	0.4	50.4	55.1	4.7	36.2	42.7	6.5	32.5	41.5	9.0

Table 2 (continued)

	Sweden			Switzerland			Turkey			OECD Europe <sup>8</sup>			OECD <sup>8</sup>		
	1980	1990	Change	1979	1990	Change	1979	1990	Change	1979	1990	Change	1979	1990	Change
Total current disbursements	56.9	59.0	2.2	29.9	28.9	-1.0	19.3	21.8	2.5	41.3	44.6	3.4	33.5	37.0	3.5
Government consumption	29.1	27.3	-1.8	12.9	12.4	-0.6	13.4	14.8	1.5	18.2	18.4	0.2	16.1	16.5	0.4
Subsidies	4.3	4.8	0.4	1.4	1.3	-0.1	0.0	0.0	0.0	2.5	1.9	-0.5	1.4	1.0	-0.4
Social security and other transfers <sup>2</sup>	19.3	21.2	1.9	13.7	13.9	0.2	6.0	7.0	1.1	17.6	19.5	1.9	13.0	14.5	1.5
Debt interest payments <sup>3</sup>	4.1	5.8	1.6	1.9	1.3	-0.6	0.0	0.0	0.0	2.9	4.8	1.8	2.9	4.9	2.0
Government investment <sup>4</sup>	4.3	2.9	-1.4	4.0	2.9	-1.1	14.2	7.7	-6.4	3.1	2.8	-0.3	3.2	2.8	-0.4
Capital transfers <sup>5</sup>	0.5	0.0	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	-0.7	0.4	0.1	-0.3
Other transfers <sup>6</sup>	-0.1	-0.5	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	-0.1	0.2	0.3	0.2
Total	61.6	61.5	-0.2	33.9	31.8	-2.1	33.5	29.6	-3.9	45.5	48.6	3.2	37.2	40.5	3.3

100

1. Data for this table have been primarily drawn from Table 6 of the internationally standardised System of National Accounts (SNA) of the OECD up to the latest year available. These data were then projected forward to 1990 using comparable series in countries' national accounts data for more recent years which have been assembled in the Analytical Data Base (ADB) of the OECD, published in the *Economic Outlook*. For Turkey, ADB data alone have been used and the series for government investment were also taken from the ADB for Switzerland. These data should be treated with caution. Totals may not add perfectly due to rounding.
2. Refers to the heading "Other current transfers" in Table 6 of the SNA.
3. Refers to the heading "Property income paid" in Table 6 of the SNA.
4. Refers to "Gross fixed capital formation" and "Increases in stocks" in Table 6 of the SNA.
5. Net capital transfers: capital transfers received from government less capital transfers to government in Table 6 of the SNA.
6. Refers to purchases of land, net and of intangible assets, net in Table 6 of the SNA.
7. Fiscal year beginning 1 July.
8. Averages for the OECD and OECD Europe exclude Greece, Norway, Switzerland and Turkey.



significant contribution from rising social security transfers, especially in France, Italy, Denmark, Greece and Norway where the change in social transfers as a ratio to GDP exceeded 3 percentage points. Public consumption – which mainly comprises the public sector wage bill – increased as a share of GDP in about half the countries.

Most countries have offset such increases by winding back public investment, reflecting the political reality that it is easier to cut-back or postpone investment spending than it is to cut current expenditures (Chart 8). Public investment as a share of GDP declined or remained stable in almost all countries. Spain was an exception, with an increase of almost 3 percentage points in the share of public investment from a low level, and there was also a small rise in France, Italy and Iceland. Cut-backs in subsidies and capital transfers were also widespread<sup>6</sup>.

The breakdown of expenditures by function or programme type in Table 3 covers a narrower range of countries than those included in Table 2 and a shorter period because of data constraints. These data attempt to group government spending in line with basic concepts of public sector economics. Four major government functions are distinguished: *i*) the provision of "pure" public goods; *ii*) merit goods (education, health and housing); *iii*) income maintenance and other transfers; and *iv*) general economic services<sup>7</sup>. As the data are drawn from a range of sources in addition to the national accounts, they are not always comparable across countries.

A few broad patterns emerge from Table 3. First, the share of public goods in GDP has remained very stable in the 1980s. The only major exception is the United States, where it rose by 1½ percentage points, reflecting a marked rise in defence spending. The share of economic services has also remained broadly constant or has fallen in most countries, with the exception of a rise in the United States and the Netherlands. Excluding debt interest payments, the main increase in the spending ratio, as in the 1970s, has been in the area of "welfare state" activities, particularly income support. However, compared with the 1970s, the increases in the 1980s were more modest. Only Germany, Australia and the Netherlands managed to lower spending on income maintenance as a share of GDP. The United States, Japan and the United Kingdom all managed to restrain the rise in income support as a proportion of GDP to less than 1 percentage point over the decade. For most countries, health care and old-age pensions have been a major source of increased spending, whereas spending on education and housing tended to decline relative to GDP.

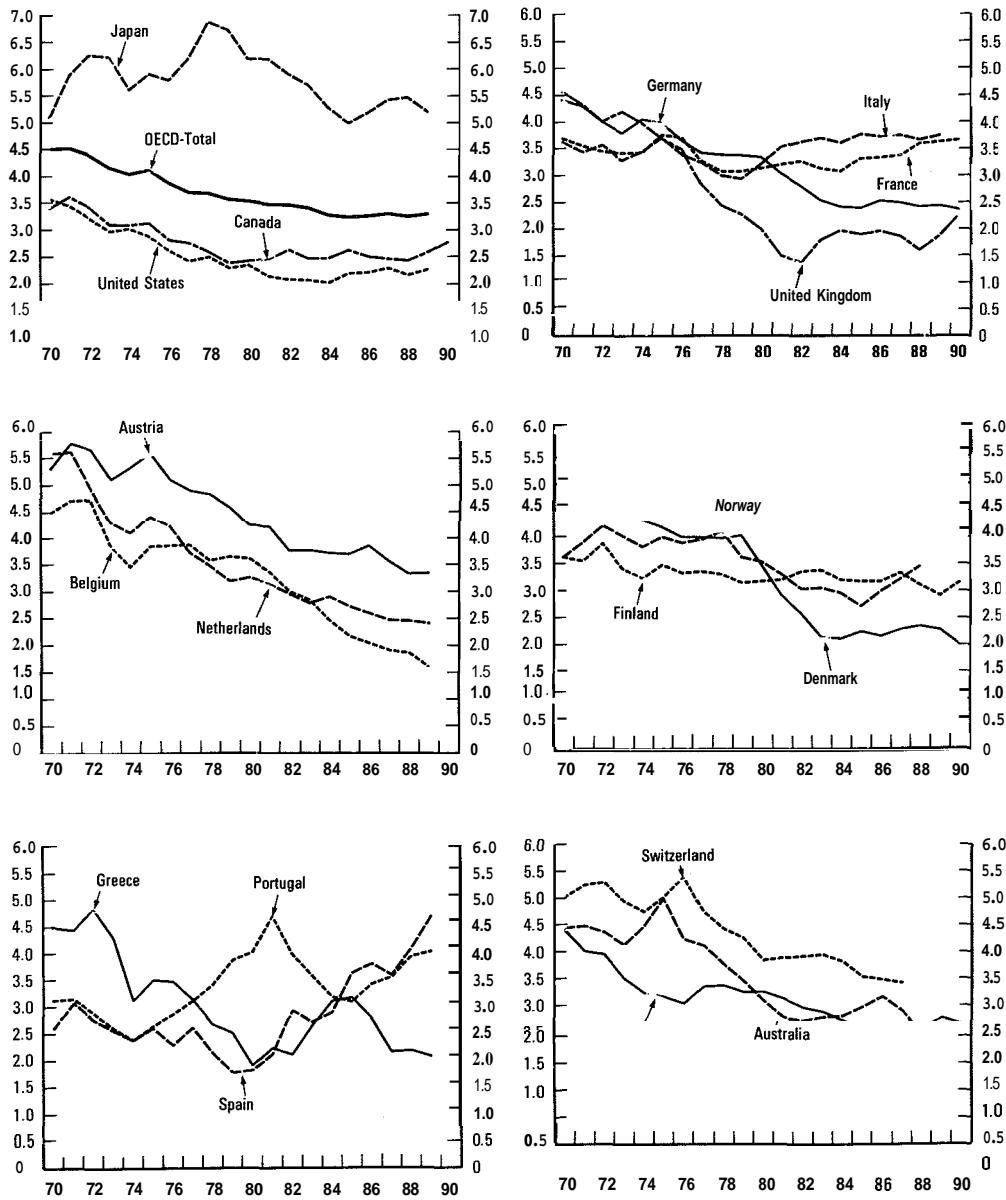
The remainder of this section examines some of the factors underlying the development of the more important expenditure components in Tables 2 and 3.

### C. Government salaries and employment

One way in which governments can exercise direct restraint on their spending is to pay less for the goods and services they supply. During the 1980s, OECD governments devoted increasing attention to securing tighter control of public sector costs. Given the relative labour intensity of public services, this often involved restraints on both public sector pay and recruitment resulting in slower growth in spending on public consumption.

The evolution of *public sector wages*, defined as average wages per employee in general government, over the past two decades is shown in Table 4. Two different

**Chart 8. General government investment**  
Percentage of GDP in volumes



Sources: OECD, *National accounts*, and OECD, *Economic Outlook* No. 49.

**Table 3. Structure of general government outlays by function<sup>1</sup>**

Per cent of GNP/GDP

	United States			Japan			Germany			United Kingdom			Australia <sup>2</sup>		
	1979	1989	Change	1979	1989	Change	1979	1988	Change	1979	1989	Change	1979	1988	Change
I. Total expenditure	32.1	36.3	4.2	31.1	31.6	0.5	48.0	46.8	-1.2	42.8	41.2	-1.6	33.7	34.6	0.9
TRADITIONAL DOMAIN															
II. Public goods	7.7	9.1	1.4	3.9	3.7	-0.2	8.3	8.2	-0.1	8.4	8.3	-0.1	6.5	6.3	-0.2
1. Defence	4.9	5.9	1.0	0.8	0.9	0.1	2.8	2.6	-0.2	4.5	4.1	-0.4	2.2	2.1	-0.1
2. General public services	2.1	2.5	0.4	3.1	2.8	-0.3	5.5	5.6	0.1	3.3	3.6	0.3	4.3	4.2	-0.1
3. Other functions	0.7	0.7	0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.0	0.0	0.0	0.0
THE WELFARE STATE															
III. Merit goods	6.2	6.1	-0.1	11.3	10.9	-0.4	13.3	12.7	-0.6	13.6	12.8	-0.8	11.8	11.8	0.0
1. Education	4.5	4.6	0.1	4.6	3.5	-1.1	5.0	4.3	-0.7	5.2	4.8	-0.4	5.8	5.1	-0.7
2. Health	0.9	0.9	0.0	4.5	4.9	0.4	6.1	6.5	0.4	4.6	5.0	0.4	4.5	5.1	0.6
3. Housing and other	0.8	0.6	-0.2	2.2	2.5	0.3	2.2	1.9	-0.3	3.8	3.0	-0.8	1.5	1.6	0.1
IV. Income transfers	10.8	11.7	0.9	..	..	..	19.4	18.5	-0.9	11.9	12.9	1.0	7.5	7.4	-0.1
a) Income maintenance	7.6	7.8	0.2	6.3	7.2	0.9	16.5	15.8	-0.7	9.2	9.6	0.4	7.0	6.5	-0.5
1. Pensions	6.6	7.0	0.4	4.1	5.7	1.6	12.3	11.3	-1.0	6.4	6.2	-0.2	4.8	4.1	-0.7
2. Sickness benefits	0.1	0.2	0.1	0.2	0.1	-0.1	0.8	0.7	-0.1	0.4	0.3	-0.1	0.1	0.2	0.1
3. Family allowances	0.4	0.4	0.0	1.6	1.2	-0.4	1.2	0.8	-0.4	1.6	1.6	0.0	1.1	1.0	4.1
4. Unemployment compensation	0.4	0.3	-0.1	0.4	0.2	-0.2	0.9	1.5	0.6	0.7	0.7	0.0	0.8	0.9	0.1
5. Other income supports	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.5	0.2	0.1	0.8	0.7	0.2	0.3	0.1
b) Administration and other spending	2.5	2.2	-0.3	..	..	..	2.5	2.4	-0.1	1.3	1.5	0.2	0.5	0.7	0.2
c) Other transfers (non-profit institutions and r.o.w.)	0.6	1.7	1.1	..	..	..	0.4	0.4	0.0	1.4	1.8	0.4	0.0	0.2	0.2
THE MIXED ECONOMY															
V. Economic services	4.5	4.5	0.0	6.6	5.5	-1.1	5.4	4.6	-0.8	3.7	3.0	-0.7	5.8	4.7	-1.1
1. Capital formation and capital transfers	1.6	1.7	0.1	4.4	3.9	-0.5	2.3	1.5	-0.8	1.1	1.0	-0.1	1.4	1.1	-0.3
2. Subsidies	0.4	0.6	0.2	1.2	0.7	-0.5	1.9	1.9	0.0	1.1	0.5	-0.6	1.4	1.0	-0.4
3. Other	2.5	2.2	-0.3	1.0	0.9	-0.1	1.2	1.2	0.0	1.5	1.5	0.0	3.0	2.6	-0.4
VI. Public debt interest	2.8	5.0	2.2	2.6	4.0	1.4	1.7	2.8	1.1	4.4	3.6	-0.8	2.1	4.4	2.3
VII. Balancing item	0.1	-0.1	-0.2	0.4	0.3	-0.1	-0.1	0.0	0.1	0.8	0.6	-0.2	0.0	0.0	0.0
VIII. Net lending	0.2	3.1	-3.3	-4.7	2.5	7.2	-2.6	-2.1	-4.7	3.2	-0.1	-3.3	-1.4	1.7	3.1

Table 3 (continued)

	Austria			Denmark			Finland			Netherlands			Norway			Sweden		
	1981	1988	Change	1979	1988	Change	1979	1989	Change	1979	1989	Change	1980	1989	Change	1980	1988	Change
I. <i>Total expenditure</i>	48.4	49.2	0.8	53.8	59.4	5.6	36.5	38.2	1.7	56.2	56.5	0.3	48.3	54.6	6.3	61.9	59.7	-2.2
TRADITIONAL DOMAIN																		
II. <i>Public goods</i>	5.3	5.1	-0.2	8.0	8.6	0.6	4.3	4.4	0.1	11.1	10.0	-1.1	6.2	7.6	1.4	8.5	6.5	-2.0
1. <i>Defence</i>	1.1	1.1	0.0	2.2	2.1	-0.1	1.3	1.4	0.1	3.1	2.9	-0.2	2.9	3.3	0.4	3.4	2.4	-1.0
2. <i>General public services</i>	4.2	4.0	-0.2	5.1	5.6	0.5	2.9	2.9	0.0	8.0	7.1	-0.9	3.2	4.2	1.0	4.4	4.0	-0.4
3. <i>Other functions</i>	0.0	0.0	0.0	0.7	0.9	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.7	0.1	-0.6
THE WELFARE STATE																		
III. <i>Merit goods</i>	10.4	10.5	0.1	15.9	14.6	-1.3	9.9	10.7	0.8	13.4	12.3	-1.1	15.7	16.2	0.5	17.3	14.5	-2.8
1. <i>Education</i>	4.3	4.4	0.1	7.3	6.9	-0.4	4.9	5.0	0.1	7.4	5.4	-2.0	6.4	6.9	0.5	6.5	5.5	-1.0
2. <i>Health</i>	5.2	5.2	0.0	5.6	5.3	-0.3	3.8	4.4	0.6	5.5	5.9	0.4	6.5	7.1	0.6	7.9	6.9	-1.0
3. <i>Housing and other</i>	0.9	0.9	0.0	3.0	2.4	-0.6	1.2	1.3	0.1	0.5	1.0	0.5	2.8	2.2	-0.6	2.9	2.1	-0.8
IV. <i>Income transfers</i>	22.1	23.0	0.9	20.4	22.5	2.1	12.9	14.3	1.4	22.1	21.1	-1.0	13.8	18.8	5.0	24.1	25.8	1.7
a) <i>Income maintenance</i>	17.7	18.8	1.1	14.8	16.3	1.5	8.5	..	..	20.0	18.3	-1.7	11.0	14.6	3.6	17.0	18.9	1.9
1. <i>Pensions</i>	13.8	14.9	1.1	8.4	9.1	0.7	5.6	..	..	10.8	10.3	-0.5	7.9	9.8	1.9	10.8	11.4	0.6
2. <i>Sickness benefits</i>	0.5	0.4	-0.1	1.3	1.2	-0.1	0.5	..	..	3.0	2.3	-0.7	1.8	2.2	0.4	3.3	4.4	1.1
3. <i>Family allowances</i>	2.5	1.9	-0.6	2.1	2.6	0.5	0.8	..	..	2.0	1.2	-0.8	1.1	1.5	0.4	1.6	1.3	-0.3
4. <i>Unemployment compensation</i>	0.5	0.9	0.4	2.7	2.9	0.2	0.6	..	..	1.9	2.7	0.8	0.2	1.0	0.8	0.4	0.6	0.2
5. <i>Other income supports</i>	0.4	0.7	0.3	0.3	0.6	0.3	1.0	..	..	2.3	1.8	-0.5	0.0	0.1	0.1	0.9	1.2	0.3
b) <i>Administration and other spending</i>	3.5	3.4	-0.1	..	..	..	2.2	..	..	1.4	2.0	0.6	1.8	2.4	0.6	4.8	4.7	-0.1
c) <i>Other transfers (non-profit institutions and r.o.w.)</i>	0.9	0.8	-0.1	5.6	6.2	0.6	2.2	3.2	1.0	0.7	0.8	0.1	1.0	1.8	0.8	2.3	2.2	-0.1
THE MIXED ECONOMY																		
V. <i>Economic services</i>	7.5	6.7	-0.8	6.0	5.8	-0.2	8.4	7.3	-1.1	5.7	6.3	0.6	9.9	8.4	-1.5	7.6	6.9	-0.7
1. <i>Capital formation and capital transfers</i>	4.4	3.2	-1.2	1.4	1.1	-0.3	3.5	3.1	-0.4	4.4	4.5	0.1	1.4	1.4	0.0	1.9	0.7	-1.2
2. <i>Subsidies</i>	2.1	2.2	0.1	2.6	2.7	0.1	3.5	2.8	-0.7	1.3	1.8	0.5	6.2	4.8	-1.4	4.3	4.4	0.1
3. <i>Other</i>	1.0	1.3	0.3	2.0	2.0	0.0	1.4	1.4	0.0	..	..	..	2.3	2.2	-0.1	1.4	1.8	0.4
VI. <i>Public debt interest</i>	2.8	3.9	1.1	3.5	7.9	4.4	0.9	1.4	0.5	4.2	6.7	2.5	3.4	4.0	0.6	4.1	5.7	1.6
VII. <i>Balancing item</i>	0.3	0.0	-0.3	0.0	0.0	0.0	0.1	0.1	0.0	-0.3	0.1	0.4	-0.7	-0.4	0.3	0.3	0.3	0.0
VIII. <i>Net lending</i>	-1.8	-3.0	-1.2	-1.7	0.5	2.2	0.4	2.8	2.4	-3.7	-5.2	-1.5	5.7	1.3	-4.4	-4.0	3.5	7.5

1. For a description of the methodology and sources used in this table, see Annex 1. Because of the approximations made for some countries, cross-country comparisons should be made with caution.

2. Fiscal year beginning 1 July.

Sources: OECD National Accounts, supplemented by data for item IV from national sources and OECD Social Expenditure Data File. For further details, see Annex 1.

wage measures are presented. The growth of government wage rates is divided by the deflator for private consumption to provide a measure of government wages at constant purchasing power – or **real wages**. The second column shows the ratio of the growth rate of average wages of government employees to that of employees in the private sector – providing a measure of **relative** growth in government wages\*. These data should be treated with caution. The average general government wage is calculated as the general government wage bill divided by government employment and, with the exceptions of Japan and Denmark, is not necessarily consistent with the national accounts concepts.

The data in Table 4 suggest that public sector wages in real terms have grown very slowly in most countries since the mid-1970s and, aside from the United States, Finland, Ireland, Spain and Switzerland, they remained flat or declined in the first half of the **1980s**. In the second half of the decade, a stabilisation or modest recovery in real wages occurred in some countries, with the largest real wage increases being recorded in Japan, Italy and Finland.

Comparisons with wage trends in the private sector are more hazardous as movements in relative wage rates may reflect differences in the composition of employment in the two sectors and differences in the composition of total remuneration between wages and fringe benefits. For example, in some countries there have been significant increases in the share of part-time employment in the public sector in the **1980s**. Growth rates of average government wages in the **1980s** in these countries would be biased downwards relative to the **1970s**, and this compositional effect could affect comparisons with the average private sector wage. Nonetheless, the data suggest that, for a wide range of countries, public sector wages have declined relative to the private sector for a considerable period, the United States being a significant exception<sup>9</sup>.

More detailed studies of trends in earnings which are able to adjust the data for compositional effects, show similar trends in the public-private wage differential in some countries to those in Table 4. For example, Bailey (1989) and Pedersen *et al.* (1990) confirm the direction of change in the differential shown in Table 4 but not the magnitude, for the United Kingdom and Denmark, respectively. However, Guilhamon (1989) finds that a broader definition of public sector wages (which includes public enterprises as well as general government) in France grew in line with the private sector over the period **1978** to **1986**, a period in which Table 4 shows a decline of relative government sector wages of almost 1 per cent per annum<sup>10</sup>.

In addition to restraining the growth of public sector wages, many OECD governments also sought to put the brakes on recruitment of government employees. As a result, **employment** growth in the public sector slowed substantially during the **1980s** compared with the **1970s** (Table 5). For the typical OECD country, the share of government employment in total employment rose between **1979** and **1984**, and stabilised thereafter at around **18** per cent. Nonetheless, the annual growth rate of government employment exceeded 2 per cent in nine countries in the second half of the decade. Only two countries recorded declines in government employment: it fell throughout the **1980s** in the United Kingdom and also in Ireland in the second half of the decade.

**Table 4. Average wages of government employees**  
Average annual growth rates in per cent

	Real wages <sup>1</sup>	Relative wages <sup>2</sup>
<b>United States</b>		
1970-74	0.3	0.4
1974-79	-0.8	-0.6
1979-84	1.5	1.4
1984-90	0.5	0.4
<b>Japan</b>		
1970-74	7.3	0.1
1974-79	0.3	-1.6
1979-84	-0.6	-1.1
1984-90	2.5	0.4
<b>Germany</b>		
1970-74	4.1	-0.1
1974-79	0.1	-1.9
1979-84	-0.3	0.1
1984-90	-0.1	-1.8
<b>France</b>		
1970-74	2.9	-1.0
1974-79	0.0	-3.1
1979-84	0.0	-0.7
1984-90	0.3	-1.0
<b>Italy</b>		
1970-74	2.4	-0.9
1974-79	0.4	-2.9
1979-84	-0.3	-1.1
1984-90	1.3	-0.8
<b>United Kingdom</b>		
1970-74	3.3	0.2
1974-79	0.0	-0.8
1979-84	0.0	-1.6
1984-90	0.5	-3.1
<b>Canada</b>		
1970-74	3.4	0.1
1974-79	2.3	0.9
1979-84	-0.1	0.0
1984-90	-0.2	-1.3
<b>Austria</b>		
1970-74	2.6	-2.7
1974-79	2.1	-0.4
1979-84	-0.3	-0.3
1984-90	0.3	-1.9
<b>Belgium</b>		
1970-74	5.3	-1.2
1974-79	-0.1	-3.7
1979-84	-0.2	-0.1
1984-90	0.4	-0.2

Table 4 (continued)

	Real wages <sup>1</sup>	Relative wages <sup>2</sup>
<b>Denmark</b>		
1970-74	1.1	-0.8
1974-79	0.0	-1.2
1979-84	0.0	0.5
1984-90	0.0	-0.8
<b>Finland</b>		
1970-74	0.9	-3.7
1974-79	0.4	-0.9
1979-84	1.5	-0.5
1984-90	3.5	-0.5
<b>Ireland</b>		
1970-74		..
1974-79	0.0	-5.0
1979-84	0.2	-0.8
1984-90	-0.1	-1.9
<b>Netherlands</b>		
1970-74	3.5	-0.9
1974-79	0.0	-2.2
1979-84	-0.1	1.3
1984-90	0.4	-0.7
<b>Norway</b>		
1970-74	4.3	0.6
1974-79	-0.5	-1.2
1979-84	-1.0	-1.0
1984-90	0.1	-0.5
<b>Spain</b>		
1970-74	-1.3	-6.8
1974-79	2.7	-0.2
1979-84	0.3	0.0
1984-90	0.2	-0.7
<b>Sweden</b>		
1970-74	-0.9	-0.8
1974-79	2.3	2.1
1979-84	-3.0	-0.3
1984-90	1.5	-0.5
<b>Switzerland</b>		
1970-74	5.2	1.1
1974-79	-0.3	-1.7
1979-84	1.1	0.8
1984-90	0.8	-2.0

1. Relative to the private consumption deflator.

2. Relative to the average private sector wage.

**Source:** OECD Secretariat Analytical Data Base. General government wage rates are calculated using individual country national accounts data for general government wages and labour force data on employment in general government (see Table 5). The average private sector wage is equal to the private sector wage bill (excluding social security and other non-wage income paid by employers) divided by the number of private sector employees in employment. For the Netherlands, employment data is in person-years. Data sets for wages and employment are not necessarily consistent.

**Table 5. Government sector employment**

	Annual average growth rate				Share in total employment				
	1970-75	1975-79	1979-84	1984-90 <sup>1</sup>	1970	1975	1979	1984	1990 <sup>1</sup>
United States	3.2	2.1	0.1	2.3	16.0	17.1	16.1	15.3	15.5
Japan	2.8	1.7	0.7	0.2	7.7	8.7	8.8	8.7	8.1
Germany	3.8	1.9	1.0	1.5	11.1	13.8	14.7	15.5	15.6
France <sup>2</sup>	2.0	1.7	1.8	1.0	17.6	19.0	19.9	22.1	22.8
Italy <sup>2</sup>	3.8	2.6	1.4	1.3	12.3	14.6	15.8	16.6	17.4
United Kingdom <sup>2</sup>	3.1	0.8	-0.3	-0.2	18.1	20.9	21.2	21.8	19.6
Canada	5.0	1.3	2.4	2.2	19.0	20.7	19.5	20.8	20.6
Australia <sup>2</sup>	7.2	2.1	2.7	1.3	11.8	15.4	16.2	17.4	15.6
Austria <sup>1</sup>	4.1	3.0	1.9	2.7	13.2	16.3	17.6	19.1	21.1
Belgium <sup>3</sup>	3.0	4.1	0.9	0.7	13.6	15.6	18.3	19.9	19.9
Denmark	6.5	4.6	2.5	0.7	17.2	23.6	26.9	30.2	30.1
Finland <sup>2</sup>	5.0	4.3	3.2	2.2	12.1	14.8	17.2	18.9	20.6
Greece <sup>3</sup>	2.6	3.3	2.2	2.5	7.4	8.2	9.1	9.4	10.1
Ireland <sup>1</sup>	4.1	4.5	1.9	-0.8	12.0	14.4	16.1	18.3	17.9
Luxembourg <sup>2</sup>	3.0	2.2	1.5	3.0	9.4	9.7	10.6	11.3	11.4
Netherlands <sup>2</sup>	2.1	2.5	0.7	0.3	12.2	13.6	14.7	16.1	15.1
Norway <sup>3</sup>	5.0	5.3	3.7	2.8	17.9	21.7	24.3	28.1	29.3
Portugal <sup>2</sup>	4.0	6.2	6.2	3.4	7.9	8.5	10.5	13.3	14.6
Spain <sup>4</sup>	7.6	5.0	2.9	4.0	5.5	7.8	10.0	12.8	13.7
Sweden <sup>3</sup>	5.3	4.6	2.2	0.0	20.9	25.7	29.9	32.9	31.8
Switzerland <sup>6</sup>	3.7	2.7	1.4	0.9	7.5	9.0	10.1	10.2	10.5
Unweighted average	4.1	3.2	2.0	1.5	12.9	15.2	16.5	18.0	18.2
Weighted average	3.4	2.1	0.8	1.4	13.5	15.2	15.3	15.6	15.6

1. Or latest year available.

#### D. Merit goods and social transfer spending

These two categories of spending have been the most important areas of growth in public spending over much of the post-war period as governments have responded to the demands for increased access to health care and education and to support individuals faced with temporary income loss or in poverty. As noted above, restraints on input costs have affected the per unit costs of production in the area of merit goods, sometimes even in cases where the private sector supplies the services. But demand for these services and the subsequent supply have also been affected by the changing age structure of the population.



## 1. Demographic factors

Changes in dependency ratios – defined as the ratio of young and old dependents to the working-age population – provide a broad indicator of the pressures on social spending arising from demographic changes (Table 6). The numbers of young and old dependents are defined as the population aged 0 to 14 and 65 and over, respectively. The working-age population is defined as the population aged 15 to 64. The differences in these two ratios and in the total dependency ratio (defined as the sum of these ratios) between the beginning and the end of each decade were then calculated.

Table 6 shows a decline in total dependency ratios during the 1980s, but the fall was not as large as the decline in the 1970s. Declines in the dependency ratio were widespread, occurring in all countries except the United States, Canada, Finland and Greece. In 15 of the countries, the changes were less than in the previous decade. Thus, changes in the age structure of the population contributed to lower pressures on the ratio of spending to GDP over the 1980s.

Falling dependency ratios largely reflected continuing sharp declines in the share of young people in the population which, in turn, affected spending on schooling and child benefits. Changes in the share of older people, whose demands on health care are much greater than other age groups and who also receive pensions (the largest component of transfer spending), probably had a larger impact on government spending than the fall in the youth dependency ratio. For the area as a whole, the old-age dependency ratio continued to rise on average, but the increase was small and less than in the 1970s in 14 countries. Only Germany, France, Austria, Ireland, Luxembourg and Turkey experienced declines. Thus, if a greater weight is given to the older age groups, the impact of the age structure on spending may have been less in the 1980s than in the 1970s.

## 2. Education and health spending

Education and health account for the two largest proportions of public spending on merit goods in most OECD countries, and it is possible to adjust these data for changes in the share of persons in the target population covered by the programmes – the so-called coverage ratio (Table 7)<sup>11</sup>. As regards *education*, demographic trends, namely the widespread fall in fertility rates, generally favoured lower real expenditures in the 1980s: the national accounts data in Table 3 show that the share of education spending in GDP was broadly stable or fell in most countries over the decade. However, the effects of falling fertility rates on the demand for education services were partly offset by increases in real spending per student (deflated by the public consumption deflator). On average, total real spending per student continued to increase at an annual rate of 1 to 1½ per cent over the 1980s compared with an average growth rate of almost 2 per cent between 1975 and 1980<sup>12</sup>.

As noted above, the rise in the old-age dependency ratio was smaller in most countries in the 1980s than it was in the 1970s and this contributed to lower pressures on *health care* spending. In addition, many governments put in place reforms to try to arrest the upward spiral of health care costs. The data in Table 7 suggest that they achieved some success in controlling this major item of government spending. Real spending (deflated by health care price indices) per head of the population covered by public insurance schemes continued to grow on average by almost 2 per cent a year in the 1980s. But this was a marked slowdown compared with the annual average growth

**Table 6. Change in dependency ratios: actual and projected'**

Percentage of workingage population<sup>2</sup>

	United States			Japan			Germany		
	70s	80s	90s	70s	80s	90s	70s	80s	90s
Young Age Dependency Ratio <sup>3</sup>	-11.6	-1.4	-2.3	0.1	-8.4	-0.6	-9.1	-6.1	2.1
Old Age Dependency Ratio <sup>1</sup>	1.2	2.0	0.1	0.2	3.4	6.8	2.6	-1.4	3.0
Total Dependency Ratio <sup>5</sup>	-10.4	0.6	-2.2	0.2	-5.0	6.3	-6.5	-7.4	5.1
	France			Italy			United Kingdom		
	70s	80s	90s	70s	80s	90s	70s	80s	90s
Young Age Dependency Ratio <sup>3</sup>	-4.9	-4.4	-0.5	-3.6	-9.5	-0.2	-6.0	-3.7	0.6
Old Age Dependency Ratio <sup>1</sup>	1.3	-1.1	2.7	3.4	0.4	4.2	3.0	0.2	-0.1
Total Dependency Ratio <sup>5</sup>	-3.6	-5.5	2.2	-0.1	-9.2	4.0	-3.0	-3.6	0.6
	Canada			Australia			Austria		
	70s	80s	90s	70s	80s	90s	70s	80s	90s
Young Age Dependency Ratio <sup>3</sup>	-15.5	-2.3	-3.4	-7.1	-5.7	-2.4	-8.1	-5.6	-1.6
Old Age Dependency Ratio <sup>1</sup>	1.6	2.6	1.7	1.4	1.7	1.0	1.0	-1.7	1.1
Total Dependency Ratio <sup>5</sup>	-13.9	0.3	-1.7	-5.6	-4.0	-1.3	-7.0	-7.3	-0.6
	Belgium			Denmark			Finland		
	70s	80s	90s	70s	80s	90s	70s	80s	90s
Young Age Dependency Ratio <sup>3</sup>	-6.7	-3.8	-0.7	-4.0	-7.1	-0.8	-7.1	-1.5	-2.8
Old Age Dependency Ratio <sup>4</sup>	0.7	0.0	2.8	3.2	0.7	-0.1	3.9	1.8	1.5
Total Dependency Ratio <sup>5</sup>	-6.0	-3.8	2.1	-0.7	-6.3	-0.9	-3.3	0.3	-1.2
	Greece			Iceland			Ireland		
	70s	80s	90s	70s	80s	90s	70s	80s	90s
Young Age Dependency Ratio <sup>3</sup>	-12.6	3.4	-3.7	-12.2	-4.6	-6.7	-1.9	-7.6	-7.3
Old Age Dependency Ratio <sup>1</sup>	-2.3	5.5	5.0	0.3	1.3	0.3	-1.0	-1.7	-2.1
Total Dependency Ratio <sup>5</sup>	-14.9	8.9	1.4	-12.0	-3.3	-6.4	-2.9	-9.2	-9.4
	Luxembourg			Nethedands			New Zealand		
	70s	80s	90s	70s	80s	90s	70s	80s	90s
Young Age Dependency Ratio <sup>3</sup>	-5.1	-4.5	-0.2	-9.9	-8.0	-1.1	-11.0	-8.5	-2.0
Old Age Dependency Ratio <sup>1</sup>	1.6	-1.4	4.1	1.2	1.3	2.0	1.5	0.8	0.2
Total Dependency Ratio <sup>5</sup>	-3.5	-5.8	3.8	-8.7	-6.7	0.9	-9.5	-7.7	-1.8
	Norway			Portugal			Spain		
	70s	80s	90s	70s	80s	90s	70s	80s	90s
Young Age Dependency Ratio <sup>3</sup>	-3.9	-6.2	-0.7	-5.5	-8.6	-3.2	-2.5	-11.7	-2.7
Old Age Dependency Ratio <sup>1</sup>	2.9	1.9	-1.3	1.6	3.1	2.1	1.3	2.6	3.2
Total Dependency Ratio <sup>5</sup>	-1.0	-4.3	-2.0	-3.9	-5.5	-1.1	-1.2	-9.1	0.6

**Table 6 (continued)**

	Sweden			Switzerland			Turkey		
	70s	80s	90s	70s	80s	90s	70s	80s	90s
Young Age Dependency Ratio <sup>3</sup>	-1.3	-5.2	0.4	-6.1	-5.6	0.8	-4.4	-14.0	-5.4
Old Age Dependency Ratio <sup>4</sup>	4.6	2.7	-1.2	3.4	1.6	3.4	2.0	-1.5	2.0
Total Dependency Ratio <sup>5</sup>	3.3	-2.5	-0.8	-2.7	-4.0	4.2	-2.3	-15.5	-3.4

	North America			Europe			Total OECD		
	70s	80s	90s	70s	80s	90s	70s	80s	90s
Young Age Dependency Ratio <sup>3</sup>	-12.0	-1.5	-2.4	-4.9	-6.6	-0.1	-6.4	-5.2	-0.9
Old Age Dependency Ratio <sup>4</sup>	1.3	2.1	0.2	2.1	-0.4	2.1	2.0	1.1	2.1
Total Dependency Ratio <sup>5</sup>	-10.7	0.6	-2.1	-2.8	-6.9	2.0	-4.4	-4.1	1.2

1. Differences in the per cent shares between 1970 and 1960, 1980 and 1990, 1990 and 2000.

2. Working-age population defined as population aged 15 to 64.

3. Ratio of population aged 0 to 14 to working-age population.

4. Ratio of population aged 65 and over to working-age population.

5. Ratio of population aged 0 to 14 and 65 and over to working-age population.

Source: United Nations, Global Estimates and Projections of Population by Sex and Age, the 1988 Revision (middle variant).

23

21

19

**Table 7. Education and health: real *per capita* spending**  
Average annual rates of growth

	Education <sup>1</sup>		Health <sup>2</sup>	
	1975 to 1980 <sup>3</sup>	1980 to 1988 <sup>4</sup>	1970 to 1979	1979 to 1989
United States	0.6	4.2	5.2	1.5
Japan <sup>5</sup>	5.2	-1.7	7.8	3.5
Germany		4.8	6.5	0.9
France	0.4	1.9	7.0	3.9
Italy	1.3	3.2	5.1	2.3
United Kingdom	-2.5	-1.8	5.7	1.1
Canada <sup>5</sup>	3.7	1.8	4.6	2.0
Australia	1.1	0.8	3.0	2.9
Austria <sup>5</sup>	1.6	3.9	4.6	1.1
Belgium <sup>5</sup>		4.3	6.4	2.6
Denmark <sup>5</sup>	-5.1	-1.4	3.6	0.9
Finland <sup>6</sup>		4.6	6.1	3.1
Greece <sup>5</sup>	2.1	0.8	2.5	4.8
Iceland			6.8	4.5
Ireland	2.3	-0.8	9.0	-1.4
Netherlands	1.1	0.2	2.3	1.3
Norway <sup>5</sup>	-0.1	2.3	8.5	0.8
Portugal	8.2	0.4		
Spain <sup>5</sup>			5.8	0.3
Sweden <sup>5</sup>	4.1	-0.3	3.9	0.7
Switzerland <sup>5</sup>	4.1	3.5	1.6	1.8
Unweighted average	1.8	1.17 (1.6) <sup>8</sup>	5.3	1.9

rate of over 5 per cent in the 1970s. Ireland even recorded falling real per capita spending in the 1980s. Only two countries had faster spending on health in the 1980s compared with the 1970s.

### 3. *Development of income transfers*

In addition to being influenced by demographic trends, spending on income transfers depends on real levels of benefits under various programmes. Table 8 tries to quantify this latter influence for four major categories of transfers: old age and invalidity/disability benefits, unemployment benefits, family allowances, and sickness and maternity benefits. Average benefits are also expressed as a ratio to per capita GDP, thereby indicating how benefit rates have fared relative to improvements in average living standards<sup>13</sup>.

The results of these calculations show a general slowdown in the growth of average real benefits (deflated by the private consumption deflator) in the 1980s for all four categories of transfer payments. The slowdown was particularly marked for temporary sickness and maternity benefits and old-age, permanent sickness and survivors pensions. Unemployment benefits and temporary sickness and maternity benefits in real terms increased little in the 1980s on average. Average benefits also rose much more slowly relative to per capita GDP, and even declined for unemployment benefits by 1½ per cent a year, and by ¾ a per cent a year for temporary sickness and maternity benefits.

Unfortunately, the data in Table 8 are not adjusted for changes in coverage ratios – as is the case with the data in Table 7. Since part of the process of restraint involved restricting eligibility to various transfer programmes – for example, to unemployment benefits – benefits per recipient may have increased relative to GDP per head in some cases as eligibility was reduced.

## E. *Summary of main findings*

In conclusion, the early years of the 1980s were marked by a widespread increase in public spending as a share of GDP, with much of the increase due to the effects of the recession. It was not until 1984 that OECD governments' attempts to control their spending began to have an impact on the expenditure share in nominal terms – a task which was significantly assisted by the economic upswing in the second half of the decade. In the event, the decline in the spending share was insufficient to offset the earlier increases and the process of fiscal consolidation remains unfinished: 13 countries were still in deficit in 1990; in four, deficits were over 5 per cent of GDP. The latest OECD projections in *Economic Outlook 49* suggest some worsening in government budget balances by 1992.

Increased revenues contributed more than slower growth in government spending to the restoration of balance to the public finances over the period 1984-90. Increases in tax pressure (i.e. the ratio of tax revenues to GDP) appear to have been the initial response of policy makers to the widening in deficits in OECD countries in the early 1980s. As the economy recovered and governments began to get better control on their expenditures (see Section III), tax pressure was kept broadly constant for the area as a whole although it had been reduced slightly in a number of countries. Nonetheless, by

	Old age, permanent sickness and survivors				Unemployment				Family assistance				Temporary sickness and maternity			
	1970-79		1979-89		1970-79		1979-89		1970-79		1979-89		1970-79		1979-89	
	Real	Relative to per capita GDP	Real	Relative to per capita GDP	Real	Relative to per capita GDP	Real	Relative to per capita GDP	Real	Relative to per capita GDP	Real	Relative to per capita GDP	Real	Relative to per capita GDP	Real	Relative to per capita GDP
United States	3.4	1.0	0.7	-0.5	-1.8	-4.1	-1.5	-2.6	3.2	0.8	0.0	-1.2	2.9	0.6	3.1	1.8
Japan	15.2	12.1	3.7	0.7	0.0	-2.7	-2.9	-5.7	11.0	8.0	1.1	-0.8	3.9	1.1	-2.0	-4.9
France <sup>1</sup>	5.0 <sup>1</sup>	2.2	3.3 <sup>3</sup>	1.2	9.6 <sup>2</sup>	6.7	-0.8 <sup>3</sup>	-2.8	3.6 <sup>2</sup>	0.8	3.0 <sup>3</sup>	1.0	2.1 <sup>2</sup>	-0.6	2.4 <sup>3</sup>	0.3
Italy	4.5	1.1	5.1	2.4	10.6	7.0	-4.3	-6.8	-3.2	-6.4	2.7	0.0	4.3	0.8	-3.7	-6.2
United Kingdom	4.1	1.4	1.8	-0.7	-1.1	-3.7	-1.4	-3.8	10.5	7.7	3.4	0.9	-5.7	-8.2	-0.9	-3.4
Canada	5.9	1.2	3.0	1.5	3.3	-1.3	2.9	1.4	5.1	0.5	-0.5	-2.1	5.9	1.3	4.9	3.3
Austria	4.4	0.6	3.2	1.2	5.3	1.5	2.5	0.5	8.4	4.4	-0.1	-2.1	0.2	-3.4	0.4	-1.6
Denmark	1.8	0.1	1.9	0.4	-1.8	-3.4	-1.1	-2.5	2.2	0.5	5.8	4.2	8.4	6.6	0.0	-1.5
Netherlands	7.0	4.3	-1.2	-1.9	-5.3	-7.7	-2.3	-3.0	3.1	0.5	-1.6	-2.4	5.5	2.9	-1.6	-2.4
Norway	4.3	0.3	2.0	0.5	1.4	-2.5	8.1	6.5	-2.1	-5.9	8.6	7.0	17.2	12.7	1.9	0.4
Sweden	5.8	3.7	1.3	0.0	7.1	4.9	7.2	5.8	4.7	2.6	0.0	-1.3	8.0	5.8	3.0	1.7
Switzerland	5.6	4.7	1.2	-1.0	1.8 <sup>5</sup>	0.6 <sup>5</sup>	-2.0	-4.1	5.9	5.0	5.2	3.0	1.5	0.7	1.5	-0.7
Average	5.6	2.7	2.2	0.3	2.4	-0.4	0.4	-1.4	4.4	1.5	2.3	0.4	4.5	1.7	0.7	-1.1

1. Deflated by the private consumption deflator.

2. France: 1970 to 1980.

3. France: 1981 to 1988.

4. Break in the series in 1981. After 1981 "welfare" is included in the category "other" which is not shown.

5. Switzerland: 1975 to 1980.

Source: OECD Secretariat and Social Expenditure Data File.

the end of the decade, total general government receipts as a share of GDP were still  $2\frac{3}{4}$  percentage points above their 1979 level.

Government spending as a share of OECD GDP in 1990 was  $3\frac{1}{4}$  percentage points above its 1979 level, but the upward trend was reversed after 1985, with many countries experiencing a decline in the ratio. The break in the upward trend is less marked once allowance is made for the cycle, but it still persists.

The slowdown in the growth of spending ratios appears to have been obtained mainly through the compression of public investment, subsidies and the public sector wage bill. Public sector wage moderation and slower growth in government employment both contributed to tighter control over the public sector wage bill. Other factors affected real spending over this period, but they are more difficult to quantify. In general, demographic developments were more favourable to spending restraint as dependency ratios fell almost everywhere. In addition, although growing numbers of retired people tended to push up spending on pensions and health, real benefits per capita rose markedly less than in the 1970s.

In sum, while the tendency of public spending to grow as a share of GDP was restrained in the 1980s, the size of government has generally not diminished. Restraint affected OECD countries unequally and, in many countries, it appears to have been exercised only at the margin.

#### IV. CHALLENGES FOR THE 1990s

##### A. Expenditure pressures in the 1990s

With budget deficits expected to widen in most OECD countries in 1992 and the share of OECD general government spending in GDP still higher than it was at the previous peak in economic activity in 1979, the process of budgetary consolidation remains unfinished. Nonetheless, a certain "battle fatigue" is appearing after a decade of restraint. Moreover, the public sector is facing renewed spending pressures, both for existing and new programmes. This section assesses some of these pressures before considering the choices facing the public sector.

##### 1. "Catch-up" effects from the 1980s

The prolonged period of *public sector wage restraint* may be coming to an end, and there may even be pressures to restore past real wage cuts. Even now, some governments are facing increasing difficulties in recruiting qualified personnel and growing complaints about the declining quality of public services<sup>14</sup>.

*Public investment* as a share of GDP has been falling in most countries since the mid-1970s (Chart 8). While this partly reflects the political reality that public investment proved easier to cut than public consumption<sup>15</sup>, it may also have reflected the completion of major infrastructure systems and a more critical evaluation of the social rate of return on new public investment (see OECD, 1990a). Nonetheless, there is evidence that infrastructure is deteriorating in some OECD countries and that this may be one factor accounting for poor productivity performance by the private sector<sup>16</sup>. In addition,

there are several areas where congestion is having an impact on private sector costs and where higher returns to public investment may now exist – local authority infrastructure being a case in point.

Therefore, numerous plans exist to expand maintenance and investment in transport and urban infrastructure in many countries and to improve the functioning of other public services (post, telephone, communications). Although the associated investment programmes would imply substantial rises in outlays, overall public investment would not necessarily have to increase to the same extent. Savings could be made in other areas and, in some cases, financing formulae which bring in private funds (user charges, franchising and even privatisation) may be appropriate.

## **2. Social spending**

Recent analyses by the OECD (OECD, **1988a**, **1988b**, **1988c**; Hagemann and Nicoletti, **1989**) and the IMF (Heller *et al.*, **1986**) concluded that the share of social outlays will rise significantly in the next century as a consequence of projected demographic changes. The potential reductions in spending on education and family assistance resulting from smaller cohorts of young people should be more than outweighed by rising health and pension costs associated with ageing populations. These studies argued that the prospective imbalances between expenditures and financing capacity required a rapid policy response if future outlays are to be contained.

On the basis of United Nations projections for the **1990s** presented in Table 6, area-wide dependency ratios are expected to start rising again after their declines in the **1970s** and **1980s**, suggesting that changes in the age structure of the population will put additional pressures on public spending during the present decade. The projected change in the dependency ratio is less favourable than in the **1980s** in all countries except the United States, Canada, Greece, Iceland and Ireland, although increases are projected in only 11 countries. While this largely reflects the stabilisation of the share of young people in the population, the share of older people, who make significantly higher calls on social expenditure than the young, is expected to increase by more than in the **1980s** for the area as a whole, with rather larger changes expected in Japan, Germany, Italy, Greece, Luxembourg, Spain and Switzerland.

In addition, OECD projections of social spending were generally based on the assumption that there would be no real increase in income-transfer spending per beneficiary. This may underestimate future trends in *pensions* because *i*) benefit formulae often link the real value of pension benefits to the real average wage; *ii*) governments are likely to remain under pressure to raise pension benefits in line with overall living standards, even when they are not mechanically linked; and *iii*) not all pension systems have reached maturity. Similarly, real per capita public spending on *health* can be expected to keep increasing in coming years (see OECD, **1988b**), partly reflecting the rising fraction of the very old among the retired population and the introduction of new and more expensive diagnostic tests and methods of treatment.

As regards the *education* system, the impact of the declining number of young people may be offset by higher enrolment rates at upper secondary and particularly tertiary levels. Partly reflecting the subsidised cost of studies, there is an unsatisfied demand for student places in many countries. In addition, there is a growing clamour in many countries for higher levels of education achievement and for making education systems more responsive to labour market needs through an expansion of vocational



and technical education. In a few countries (e.g. France and Australia), recently announced education policies appear to require further resources. Labour market policies are also placing greater emphasis on training to improve the skills of the unemployed or those workers in jobs who are vulnerable to becoming unemployed. However, individuals and employers may finance part of this cost where it takes place within the private sector.

**Child care** received increasing attention from policy makers in the 1980s and further increases in both the participation rate of women and in the number of single-parent families are likely to give it even greater prominence in the 1990s<sup>17</sup>. Moreover, the direct or indirect subsidisation involved in this area, in combination with the belief held by some, that early socialisation and schooling may benefit the social/educational performance of young people has led to calls for an expansion of existing public-sector kindergartens or school systems for children under five. Furthermore, to the extent that it is deemed socially desirable to encourage certain groups, such as single parents receiving income support, to re-enter the labour market, this may lead to calls for subsidised child care to be made available for them.

### 3. **The environment**

Environmental concerns are likely to be high on governments' agendas in the 1990s. Governments will have to play a more prominent role in setting both the regulatory framework and appropriate pollution charges. A study undertaken by the OECD (Nicolaisen *et al.*, 1991) concluded that current regulatory regimes suffer from complexities and distortions that potentially involve serious efficiency losses, suggesting that the elimination of distorted incentives could lead to substantial efficiency gains. For example, where economic instruments have replaced regulation, sizeable savings have been achieved, as with tradeable emission rights for air pollutants in the United States.

If governments follow the polluter pays principle, there need not be large increases in public spending at central government level, except on enforcement<sup>18</sup>. However, governments are likely to come under pressure to provide subsidies to ease the cost of adjustment in some sectors. Furthermore, governments may have to take charge of the clean-up of past pollution in areas of their own responsibility or where the polluter has disappeared (for example, bankrupt firms). This could imply substantial outlays. In the United States, for example, estimates for the clean-up of nuclear weapons production range between \$120 and 200 billion (2.3 to 3.8 per cent of 1989 GDP) spread over several years. There are likely to be large payments into the "Superfund" for the clean-up of industrial waste sites as well. In the Netherlands, the cost to the government for similar clean-ups in the first half of the 1990s has been estimated at 0.2 per cent of GDP per annum.

In summary, some areas of public sector activity may require some catch-up, social spending on several programmes is set to increase and pressures are building up for additional spending of various kinds. Budget constraints may be eased by spending reductions in other categories. For a few countries, a fall in the size of government debt may lead to a reduction in debt interest payments. The apparent end to the political division of Europe has raised the prospect of a significant reduction in defence spending. However, defence spending accounts for only 2 to 3 per cent of GDP in most OECD countries (see Table 3), being significantly greater than this only in the United States and in the United Kingdom. While it seems probable that some

savings can be made in defence spending over the course of the 1990s, it may be difficult to secure large cuts, especially in the short term, as recent events in the Middle East illustrate.

## B. Policy issues for the 1990s

There is a broad consensus amongst OECD governments that the scope for increasing government resources through the existing tax system is very limited: recent tax reforms have widened the tax base and the political feasibility of extending them further seems low; there is increasing recognition of the negative incentive effects of high marginal tax rates; and some tax rates (capital taxes, for example) may have to **decline**<sup>19</sup>. The introduction of environment-related user charges might provide a new income source, but, even if this were to occur, some governments are likely to take this opportunity to lower other taxes or reduce government deficits.

Given the limited scope for revenue increases, governments will need to continue the efforts initiated in the 1980s in order to respond both to present commitments and to new needs. Policies will need to evolve on three broad fronts: *i*) increasing efficiency in the delivery of government goods and services and in programme efficacy; *ii*) reviewing spending priorities and programme objectives; and *iii*) devolving some public responsibilities to the private sector.

Improvements in **government efficiency** are to be sought in those areas where the nature of the goods and/or political preferences will combine to keep production in the government sector. Substantial gains in efficiency might result from vigorous implementation of managerial reforms, including greater market testing and increased private sector competition. In terms of size, general government own production represents around one-sixth of GDP in the typical OECD country. If there were, by way of illustration, 10 per cent "productivity reserves" to be released through greater efficiency, this would represent a potential gain of about 1½ per cent of GDP. Given past experience with public sector managerial reforms, however, the benefits may be very slow in coming.

A few OECD countries have introduced policy initiatives aimed at creating **internal markets** in the health and education sectors, two sectors where information problems are believed to make it more difficult to promote effective competition. These measures aim at raising the quality of services provided by making hospitals and schools compete with each other. Since these reforms permit "clients" to express their choice between alternative providers, governments expect them to raise quality and induce more efficient use of resources. In education, for example, one way of making the existing system more responsive to developments in the economy and to the demands of the users is to provide vouchers to parents/students allowing greater choice among alternative suppliers and to increase administrative and supply flexibility by delegating to schools most decisions within a standardised framework. While it is too early to assess the impact on spending or on educational or health outcomes, such reforms may provide a promising avenue for improving supply responsiveness in two important areas of public spending.

Even if government services are supplied more efficiently, the fact that they are supplied at zero or subsidised prices means that the demand is likely to be excessive

and therefore the costs of provision too high. This often leads to unsatisfied demand and non-price allocation (e.g. rationing) of available supply. In the light of this, many OECD governments are making more widespread use of user charges to ensure that those who benefit pay a greater portion of the costs. However, political opposition from groups benefiting from existing subsidised services combined with concern that lower income groups may be unable to pay for them are factors preventing governments from extending user charges more widely. On the other hand, limiting access by rationing, besides being inefficient, may raise equity problems of its own, for example if higher income groups in fact prove more adept in obtaining access to better quality services.

As income transfers are likely to exert continuing upward pressure on expenditure, governments may choose to review both the programme goals and the best means of achieving them. However, large numbers of people currently receive benefits or have acquired rights to transfers at some time in the future, making it politically difficult to introduce major modifications to existing social transfer systems or to re-orient spending to meet new challenges.

As regards old-age pensions (which account for between half and three-quarters of total income transfers in most countries), raising the age of initial receipt of a full pension and changing the method of indexing benefits are alternatives which could ease the financing of existing systems. A few governments are shifting towards greater reliance on private sector pensions, but where governments actively encourage this shift, for example through tax exemptions, such policies can have budgetary implications of their own.

In reviewing other transfers programmes, governments may be able to reduce overall spending by focusing on a longer-run preventive orientation and, in this context, the linkages between income transfer and other programmes. For example, combining transfer programmes with so-called "active" labour market policies aimed at getting recipients into jobs by increasing skills and promoting a better-functioning labour market may eventually result in lower transfers.

Increased targeting of transfers to specific groups is another policy option which may permit governments to reduce outlays. However, most governments have been reluctant or unable to move in this direction because of widespread attachment to the principle of universal access to benefits under existing social programmes, the prospect of compounding "poverty trap" problems and concern that stringent eligibility requirements may reduce the take-up amongst those people who have a right to such benefits.

There appears to be considerable scope for countries to explore *private production* or *provision* of goods and services now supplied by the public sector. However, past experience suggests that a competitive market is essential if the full benefits of privatisation are to be reaped. Deregulation has increased the potential for competition in a range of industries. But this process has not been pushed very far in many countries and sectors, for example in air transport and telecommunications (both domestic and international) – see Oxley *et al.* (1990) for details.

Moreover, a partial devolution of responsibilities to the private sector may also be an answer to some of the most pressing problems that will be felt during the coming decade. Private provision of public infrastructure and private funding of some aspects of social security schemes, such as complementary health care, may constitute valid

alternatives without necessarily having undesirable consequences on vertical equity or access.

The challenge for the **1990s** is to develop a more flexible public sector. Governments will have to look more closely at their objectives, the scope of the services they provide and the best ways of delivering them. The **1990s** are likely to be a decade of transition before the demographic pressures consequent on ageing populations begin to make a major impact on social expenditures. The most should be made of opportunities to introduce far-reaching and necessary reforms.

## NOTES

1. There are some statistical difficulties with these data for the purpose of international comparisons:
  - i) Definitional differences can remain if countries have not accepted all **SNA** conventions in their submissions to the OECD or interpret them differently:
  - ii) Countries achieve goals in different ways and this may affect the level of spending in one country compared to another:
  - iii) Detailed **SNA** data used in this paper are often received with a lag. Thus, national data have been used to update **SNA** series, where definitions and coverage appear similar: and
  - iv) In analysing the forces acting on expenditures, data have been drawn from disparate sources which are not always consistent.
2. More precisely the deficit is defined as:  
Taxes, social security contributions and other current receipts  
– total current expenditure  
= **saving**  
+ capital consumption  
+ net capital transfers received  
- capital accumulation  
= **net lending**  
where total current expenditure includes government consumption, social security payments, interest payments and other current payments.
3. Cyclically-adjusted revenues are estimated assuming that the economy is operating at its full capacity. Potential GDP is computed using the method set out in Chouraqui *et al.* (1990). However, peak-to-peak estimates of full capacity were used in a few countries where estimates of potential were significantly different from actual GDP at the peak in 1989-90. The difference between actual and cyclically-adjusted revenues is estimated by applying elasticities of government revenues to the difference between the levels of actual and potential GDP. For a more detailed description of the method, see Chouraqui *et al.* (1990). The cyclically-adjusted revenue series should be interpreted with caution. The elasticities used to calculate the adjusted series were not changed subsequent to tax reforms occurring in the 1980s. To the degree that such changes reduced the cyclical impact (for example, by making the tax system less progressive), the decline in the adjusted series in the second half of the 1980s may be overstated. Cyclical adjustment of expenditures was limited to unemployment benefits. The cyclical component was estimated as the difference between mean unemployment for the period 1979-90 and unemployment in any one year, multiplied by the average unemployment benefit in that year.
4. For instance, in Japan, where net lending increased by 4.8 percentage points over the period, the improvement was due to savings from expenditure cuts (+2.2 percentage points) and higher tax revenues (+2.6 percentage points).

5. Public consumption expenditure was deflated by its national accounts deflator, transfer payments by the private consumption deflator and subsidies by the GDP deflator.
6. For a full discussion of trends in subsidisation, see Ford and Suyker (1990).
7. Government net lending/borrowing represents the net demand of the general government sector on national savings. The data in Table 3 on this item are not always consistent with Table A1 reflecting different sources. The balancing item in Table 3 represents the discrepancy between the total of the sub-components and the total spending ratio.
8. The comparison is on the basis of the wage per employee in the private sector excluding social security and pension charges.
9. However, this appears to largely reflect trends at the state and local government levels in the United States since Moulton (1990) shows that there was a narrowing in the pay differential for federal employees.
10. There is also evidence from other sources of significant pay compression *within* the public sector, especially in some Scandinavian countries and in the United States (see OECD, 1990c). While such compression does not have immediate effects on wage levels, it can create pressures for wage increases for employees whose skills are in high demand. This can then have a wider impact on overall government wages in countries where higher wage increases for these workers are followed by successful demands for comparable wage increases by other employees.
11. The coverage ratios in education and health are defined as the share of students in the number of persons of school-going age and the share of persons covered by public health insurance in the total insurable population, respectively.
12. The growth of real per capita spending slowed in nine of the 16 countries between the second half of the 1970s and the 1980s.
13. Average benefits are calculated as total spending divided by the target population. No allowance was made for changes in the take-up of benefits.
14. A study by the U.S. General Accounting Office (see Kleeman, 1989) stressed the need to widen wage differentials in order to attract more qualified staff into the government sector. It also called for the introduction of geographical compensation differences.
15. For example, Livesey (1987) argues that during the 1980s there was a tendency to maintain current expenditure at the expense of capital expenditure at the local government level in the United Kingdom.
16. The magnitude of the impact of public investment on total factor productivity is hard to measure. For the United States, Aschauer (1989) attributes as much as 60 per cent of the productivity slump in the United States to neglect of core infrastructure, by which he means streets and highways, mass transit, airports, water and sewer systems and electrical and gas facilities. But this result remains controversial. For other estimates and a discussion of the literature, see Ford and Poret (1991).
17. The number of single-parent households has increased sharply in most countries for which data are available; in the United States, they now account for 23 per cent of all households with children. See Sorrentino (1990).
18. The Dutch National Environmental Policy Plan (NEPP) estimates that annual expenditure on environmental protection may double to 4 per cent of GDP by the year 2000, but only 20 per cent of the cost would be borne directly by the government. See OECD (1990b) for further details on NEPP.
19. With capital account restrictions largely removed inside the OECD area, capital is internationally mobile and its location will partly depend on differences in tax treatment between countries. Hence, countries are facing pressure to bring their tax rates on capital income more closely into line with those in countries having the lowest rates.

## Annex 1

### METHOD UNDERLYING TABLE 3

The definition structure for this table is based on SNA Table 5 which breaks government services into ten broad *functional* categories. These functional categories are, in turn, subdivided by expenditure type similar to those found in Table 2 in this paper. Functional categories in Table 5 have been regrouped slightly for the following components: "Housing and other" (sub-section 1113) includes the SNA categories "Housing and community amenities" and "Recreation, cultural and religious affairs". Income transfers (Section IV) refers to the category "Social security and welfare" in Table 5 of the SNA. The sub-section IV.a (Income maintenance) of this table is, in principle, equal to that part of "Social Security and welfare" spending which corresponds to "Other current transfers and property income", but excluding the category "Property income" found in SNA Table 6. Sub-section IV.a was then broken down into the various income transfer programmes using national data entered into the OECD Secretariat's Social Expenditure Data File (individual country sources can be obtained from the authors on request). Part IV.b in this table corresponds to "Social security and welfare" spending on "Final consumption", "Gross capital formation" and "Other capital outlays". Part IV.c is a residual item which appears to include transfers to remaining sectors of the economy (the business sector, non-profit institutions and the rest of the world). Economic services (Section V) corresponds to the same component in SNA Table 5. Sub-section V.1 (Capital transactions) equals the components "Gross capital formation" and "Other capital transactions" under this functional category; V.2 (Subsidies) refers to the subsidy component; and V.3 (Other) is the remainder. Public debt interest is equal to the component "Property income" in SNA Table 6. The balancing item represents a range of factors including rounding and, in some cases, definitional differences, discrepancies and apparent incoherence in the data between SNA Tables 5 and 6.

Because gross rather than net capital transfers are used in this table, total spending at the top of Table 3 can differ slightly from the totals in Table 2.

This procedure was generally followed for Japan, Germany, the United Kingdom, Australia and Austria. For the remaining countries, the authors attempted to approximate the remaining categories by drawing on a mix of other SNA data and national sources. The principal assumptions/approximations were:

- United States, Denmark and Finland: Data broken down by function are only available for "Final consumption expenditure". Hence, public goods and merit goods (Sections II and III) do not include other elements of spending in these areas (i.e. transfers, subsidies etc.). The errors here are not likely to be large for individual components. Section IV (Income transfers) equals the "final consumption expenditure" component of "Social security and welfare" in SNA Table 5 plus "Other current transfers" in SNA Table 6. Thus Section IV includes transfers made under other functional categories (i.e. health, education, etc.). Under Section V. (Economic services), sub-section V.1 (Capital transactions) equals *total* government investment and other capital outlays from SNA Table 6; sub-section V.2 (Subsidies) equals total subsidies from Table 6; and V.3 (Other) equals the "Final consumption" component of "Economic services";

- Netherlands: Functional breakdown is not given in SNA Table 5 for most functional categories and SNA data were supplemented by information drawn from the Netherlands national accounts. Sub-section 112 (General public services) equals total “Final consumption expenditure” less “Final consumption expenditure” on education and defence. Sub-section 1111 covers spending on schools only. Sub-section 1112 equals health insurance spending drawn from the Dutch national accounts and **1113** (Housing) is equal to “object” subsidies for housing (i.e. subsidies to private owners of rental accommodation facing rent controls) and direct contributions to owner occupiers. Section IV (Income transfers) is equal to the category “Other current transfers” in SNA Table 6. Sub-section IV.a (total Income maintenance) is equal to the components “Social security payments” and “Social assistance grants” in SNA Table 6 *less* Dutch national accounts data for health insurance spending. Sub-section IV.b (Administrative and other spending) was also drawn from the Dutch national accounts but refers to current administrative spending only. Sub-section IV.c (Other transfers) is the residual. Sub-section V. I (Capital formation and capital transfers) equals *total* “Gross capital formation” plus *total* “Other capital outlays” in SNA Table 5 *less* spending in these categories on education. Sub-section V.2 (Subsidies) is equal to *total* subsidies *less* the components for housing listed above;
- Norway: “Subsidies” and “Other capital outlays” in Table 5 are not broken down by function. Sub-section V.1 (Capital formation and capital transfers) therefore includes *total* “Other capital outlays” and V.2 (Subsidies) equals *total* “Subsidies”;
- Sweden: Breakdown of spending by function is available for both “Final consumption” and “Fixed capital” expenditure. Otherwise the procedure was the same as for the United States.

In practice these assumptions are unlikely to lead to large errors for V.2 (Subsidies) and IV.a (Income maintenance) as subsidies largely go to private industry while social security and welfare payments outside the area of income support are generally small. Errors may be larger for V.1 as a considerable amount of public investment is generally found in other functional categories. In general, caution should be exercised in making international comparisons, particularly for the Netherlands.



**Table A1. General government financial balances (net lending)<sup>1</sup>**

Surplus (+) or Deficit (-) as per cent of nominal GDP/GNP

	1970	1979	1982	1984	1989	1990
United States	-1.4	0.2	-4.0	-3.8	-3.1	-3.8
Japan	1.6	-4.7	-3.6	-2.1	2.5	2.7
Germany	0.2	-2.6	-3.3	-1.9	0.2	-2.1
France	0.9	-0.8	-2.8	-2.8	-1.4	-1.9
Italy	-3.5	-9.5	-11.3	-11.6	-10.1	-10.7
United Kingdom	2.5	-3.2	-2.9	-3.9	-0.1	-1.7
Canada	0.8	-2.0	-6.0	-6.5	-3.4	-4.1
Total of above countries <sup>2</sup>	-0.4	-2.0	-4.3	-4.0	-2.0	-2.7
Australia	1.7	-1.4	-2.3	-3.1	1.2	1.4
Austria	1.2	-2.4	-3.4	-2.6	-2.7	-1.9
Belgium		-7.5	-11.5	-9.4	-6.7	-6.0
Denmark		-1.7	-9.1	-4.1	-0.5	-1.4
Finland	4.3	0.4	-0.6	0.4	2.8	0.4
Greece		-2.5	-7.6	-10.2	-19.2	-18.8
Iceland		0.9	2.0	2.6	-2.7	
Ireland	-3.7	-10.1	-13.2	-9.5	-3.0	-2.4
Luxembourg	3.2	0.7	-1.0	3.4		
Netherlands	-1.2	-3.7	-7.1	-6.3	-5.2	-5.7
Norway	3.2	1.3	4.4	7.4	1.3	2.2
Portugal	2.7	-6.3	-7.6	-7.0	-3.1	
Spain	0.7	-1.6	-5.6	-5.4	-2.8	-3.5
Sweden	4.4	-2.9	-7.0	-2.9	5.3	3.7
Total smaller <sup>2,3</sup>		-2.6	-5.5	-4.2	-1.5	-1.9
OECD Europe <sup>2,3</sup>		-3.6	-5.2	-4.8	-2.5	-3.6
North America <sup>2</sup>	-1.2	0.0	-4.2	-4.1	-3.1	-3.8
OECD <sup>2,3</sup>		-2.1	-4.5	-4.0	-1.9	-2.6

1. Data in this table are not equal to data in Table A2 less data in Table A3 because capital consumption is not included in revenues.

2. Averages computed using 1985 purchasing power parities.

3. Excluding Greece, Iceland, Luxembourg and Portugal.

Source: OECD *National Accounts* and OECD *Economic Outlook* 49. See Table 2 for method.

**Table A2. General government current receipts<sup>1</sup>**  
Per cent of nominal GDP

	1970	1979	1982	1984	1989	1990
United States	28.9	30.5	31.1	30.7	31.8	31.9
Japan	20.6	26.3	29.4	30.2	33.3	32.8
Germany	38.3	44.5	45.6	45.4	45.0	43.3
France	38.5	42.7	45.9	47.5	46.3	46.7
Italy	30.4	35.7	35.9	37.4	41.3	42.2
United Kingdom	40.2	38.0	42.8	42.1	39.7	40.0
Canada	34.2	35.5	39.1	38.7	39.6	41.0
Total smaller <sup>2</sup>	30.7	33.3	35.0	35.0	35.9	35.9
Australia	26.6	29.8	32.3	33.3	34.2	36.1
Austria	39.7	45.8	46.7	47.5	46.1	46.0
Belgium	39.8	50.2	52.4	53.0	48.5	48.3
Denmark	41.7	50.8	51.2	55.5	57.4	55.3
Finland	34.1	36.1	37.3	39.0	39.8	39.9
Greece	26.8	30.6	32.3	34.8	31.8	35.1
Iceland	30.9	32.7	35.6	34.0	36.6	
Ireland	35.3	35.9	41.9	43.8	43.0	41.5
Luxembourg	35.4	52.1	53.8	54.2		
Netherlands	42.0	51.4	53.0	54.1	50.1	49.9
Norway	43.5	50.8	51.9	53.0	54.9	56.4
Portugal	24.3	30.0	35.4	37.3	38.7	
Spain	22.3	28.2	31.1	33.0	38.0	37.4
Sweden	46.6	56.4	58.0	59.2	64.1	63.9
Switzerland	26.5	33.1	33.3	34.7	34.1	32.8
Turkey <sup>3</sup>		23.6 <sup>4</sup>	24.7	21.2	28.1	28.3
Total smaller <sup>2,5</sup>	33.2	39.7	41.7	43.0	43.5	43.6
OECD Europe <sup>2,5</sup>	36.3	40.7	42.9	43.7	43.7	43.6
North America <sup>2</sup>	29.3	30.9	31.8	31.4	32.5	32.7
OECD <sup>2,5</sup>	31.1	34.2	35.9	36.0	36.9	36.9

1. Current receipts of general government mainly consist of direct and indirect taxes and social security contributions paid by employers and employees.

2. Averages computed using 1985 purchasing power parities.

3. OECD Secretariat estimates.

4. 1980.

5. Excluding Iceland, Luxembourg, Portugal and Turkey.

Source: OECD National Accounts and OECD Economic Outlook 49. See Table 2 for method.

**Table A3. General government outlays<sup>1</sup>**  
As per cent of GDP

	1970	1979	1982	1984	1989	1990
United States	31.7	31.7	36.5	35.8	36.1	37.0
Japan	19.4	31.6	33.6-	32.9	31.5	30.7
Germany	38.6	47.7	49.7	48.1	45.4	46.0
France	38.5	45.0	50.4	52.0	49.5	50.4
Italy	34.2	45.5	47.4	49.3	51.7	53.2
United Kingdom	38.8	42.5	46.9	47.2	40.9	42.9
Canada	34.8	39.0	46.6	46.8	44.3	46.4
Total of above countries <sup>1</sup>	32.1	36.5	40.4	40.0	38.9	39.7
Australia <sup>3</sup>	26.8	33.5	37.0	38.5	34.8	36.4
Austria	39.2	48.9	50.9	50.8	49.6	48.6
Belgium	42.2	58.1	64.2	62.8	55.5	54.7
Denmark	40.2	53.2	61.2	60.3	58.7	57.5
Finland	30.5	36.7	39.1	39.8	38.2	40.8
Greece	22.4	29.7	37.0	40.2	47.7	50.4
Iceland	30.7	32.8	34.2	32.1	39.8	
Ireland	39.6	46.8	55.8	54.0	46.6	44.5
Luxembourg	33.1	52.5	55.8	51.8		
Netherlands	43.9	55.8	61.6	61.0	56.0	56.3
Norway	41.0	50.4	48.3	46.3	54.6	55.1
Portugal	21.6	36.2	43.0	44.4	41.7	
Spain	22.3	30.5	37.6	39.4	41.8	41.9
Sweden	43.3	60.7	66.3	63.5	60.1	61.5
Switzerland <sup>4</sup>	21.3	29.9	30.1	31.4	29.9	
Turkey <sup>5</sup>		25.8 <sup>6</sup>	26.4	25.5	28.8	30.4
Total smaller <sup>2,7</sup>	33.6	43.6	48.8	48.9	47.4	47.9
OECD Europe <sup>2,7</sup>	36.9	45.3	49.3	49.6	47.6	48.6
North America <sup>2</sup>	31.9	32.4	37.4	36.8	36.8	37.8
OECD <sup>2,7</sup>	32.3	37.4	41.5	41.2	40.0	40.7

1. Total outlays consist mainly of current disbursements plus gross capital formation.

2. Averages computed using 1985 purchasing power parities.

3. Fiscal year beginning 1 July.

4. Current disbursements only.

5. OECD Secretariat estimates.

6. 1980.

7. Excluding Iceland, Luxembourg, Portugal, Switzerland and Turkey.

Source: OECD NationalAccounts and OECD Economic Outlook 49. See Table 2 for method.

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