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The Public Sector: Issues
for the 1990s

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THE PUBLIC SECTOR: ISSUES FOR THE 1990s

by

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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Since the early 1980s, most OECD countries have embarked on medium-term strategies to restore greater balance to the public finances and to wind back government intervention in the economy. The attached paper examines the progress so far. It also reviews and evaluates some of the changes to public sector management practices which were implemented in the 1980s and assesses some of the pressures on the public sector which are likely to arise in the 1990s. Most OECD governments appear to have made significant headway in budgetary consolidation, particularly in the second half of the last decade, and public expenditure as a share of GDP has stabilised for the area as a whole, once allowance is made for cyclical effects. There has also been some measure of success in reducing economic regulation in a number of sectors. Nonetheless, governments are likely to face increased spending pressures in the 1990s, partly reflecting catch-up following expenditure restraint in the 1980s. Improving government efficiency and effectiveness through better public management is one avenue for restraining spending increases. However, past experience suggests that the benefits from public management reforms may be slow to materialise. Greater recourse to private sector supply is likely to figure high on the agenda of public sector reforms over the coming years.

* * *

Depuis le début des années 1980, la plupart des pays membres de l'OCDE ont mis en oeuvre des politiques à moyen terme visant à rétablir l'équilibre des finances publiques et à réduire le niveau d'intervention dans le secteur public. Ce document examine les progrès accomplis jusqu'à présent. Il passe en revue et évalue les changements intervenus dans les systèmes d'administration publique, pendant la dernière décennie et les pressions qui pourraient amener une augmentation des dépenses publiques pendant les années 1990. Dans la domaine de la consolidation budgétaire, la plupart des gouvernements ont fait des progrès appréciables, surtout après 1985. Pendant cette période, la part des dépenses publiques dans le PIB, corrigée pour les effets cycliques, s'est stabilisée pour la zone de l'OCDE. Dans une certaine mesure, des succès ont été obtenus, par une libéralisation de la réglementation "économique" dans certains secteurs. Néanmoins, les gouvernements des pays membres seront probablement confrontés à des pressions visant à augmenter les dépenses publiques au cours des années 1990, reflétant partiellement les restrictions sur les dépenses intervenues dans les années 1980. Une amélioration de l'efficacité et de la performance du secteur public suite aux réformes de gestion peut aider à limiter les augmentations des dépenses publiques. Cependant, l'expérience du passé suggère que les effets négatifs sur les dépenses se manifesteront seulement avec un certain retard. Un plus grand recours à l'offre du secteur privé dans la provision des biens et services publics sera certainement un élément important des réformes de gestion du secteur public pour les années futures.

THE PUBLIC SECTOR: ISSUES FOR THE 1990s

by

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and Patricia Alongo-Gamo***

December 1990

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THE PUBLIC SECTOR: ISSUES FOR THE 1990s

I. INTRODUCTION

The policy agenda on the public sector in the 1980s reflected the progressive shift in attitudes regarding the appropriate role of government which had occurred over 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 broader distribution of the fruits of growth through more income-support/redistribution programmes and merit goods was believed desirable, as was government regulation to correct market failures. 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 or lower inflation rates to more acceptable levels. At the same time, policy makers found their budgets increasingly inflexible as expenditures on many social security programmes rose inexorably and public debt interest payments mounted.

Against this background, policies changed course sharply in the 1980s. Expansionary fiscal policy was generally eschewed following OPEC II and many OECD countries embarked on medium-term strategies to reduce their budget deficits. Inspired by concerns that the size of the public sector was hampering private sector performance and by a greater appreciation of the social costs of higher taxation, there was broad agreement that this should be achieved by reductions in expenditure rather than increases in taxes. 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 provides a broad overview of public sector trends in the 1980s, building on previous OECD work (e.g. Saunders and Klau, 1985; OECD, 1989d). Second, it assesses the main spending pressures which governments are likely to face over the coming decade and some possible policy responses.

The structure of the paper is as follows. Section II examines the process of budgetary consolidation in the 1980s, beginning with net financial balances and debt before considering developments on the revenue and expenditure sides of the budget. This is followed by a review of developments in deregulation and privatisation. Section IV considers the range of experiments put in place in Member countries with the aim of improving public sector efficiency and effectiveness. The final section discusses some of the factors likely to affect public expenditures in the 1990s and draws out some policy issues.

II. TRENDS IN GENERAL GOVERNMENT ACTIVITY 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 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 systems¹.

1 Financial balances

In 1979, the general government net borrowing (national accounts basis) for the OECD area was 2 per cent of GDP (Table 1 and Chart A). Only four countries were in surplus. The position of the United States with a small surplus contrasted with large deficits in Europe, averaging over 3 per cent. The sharp decline in economic activity in 1981-82 led to a deterioration in the OECD average deficit to over 4 per cent of GDP. The widening in the deficit was particularly marked in the United States. During this period, fiscal policy was generally tightened outside of North America: in most European countries and Japan, the cyclically-adjusted primary deficit (i.e. net lending/borrowing adjusted for the effects of cyclical fluctuations and net of interest payments) moved closer to balance (Chart B). But as monetary policy tightened and real interest rates rose sharply world-wide, debt interest payments increased as a fraction of GDP. As a consequence, the size of the primary balance required to stabilise the debt to GDP ratio also increased in most countries².

By dint of a gradual reduction in the primary deficit, most countries managed to stabilise, and in some cases to reduce, the ratio of debt to GDP during the second half of the 1980s (Chart B). By 1989, the average deficit for the OECD area as a whole was down to 1.4 per cent, its lowest level since 1974. Eight countries -- Australia, Finland, Germany, Japan, Norway, Sweden, Switzerland and the United Kingdom -- were in balance or in surplus. The largest improvement in the ratio of net lending to GDP over the period 1982-89 was recorded in Sweden (+12.3 percentage points), followed by Ireland (+11.3 points) and Denmark (+8.7 points). But not all OECD countries were able to make headway in cutting public sector deficits. The principal exceptions to the process of budgetary consolidation and debt stabilisation are Italy, the Netherlands and, particularly, Greece where net government debt continues to rise at a sustained pace.

The ways through which budgetary consolidation has been achieved since the mid-1980s vary considerably among countries. Chart C shows the contribution of taxes and spending to the change in the ratio of government net lending to GDP over the period 1984-89. The change in net lending -- which is positive in all countries except Austria, Greece and Norway -- is decomposed

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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 section 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 The debt-stabilising primary balance is the ratio of the primary surplus (deficit) to GDP needed in each period to cover interest payments (receipts) on public debt, on a cyclically-adjusted basis (see Chouraquei et al., 1990).

into the absolute value of the change of receipts and expenditures (both net of interest receipts or payments) and net interest payments. Hence, expenditure cuts and revenue increases are shown as having positive effects on the deficit, while expenditure increases and revenue declines have negative impacts³. Overall, revenue increases and expenditure cuts accounted almost equally for the decline of 2.2 percentage points in the OECD average deficit/GDP ratio over the 1984-89 period: the former contributed 1.2 percentage points and the latter one percentage point. In the rest of this section, these trends are assessed in more detail.

2. Revenues

Total revenues as a share of total OECD GDP (Table 2 and Chart D) rose rapidly in the 1970s to reach 34 per cent in 1979. Between 1979 and 1984 there was a further rise in the revenue share of 2 percentage points. But as this period coincided with a recession in 1981-82, the "cyclically-adjusted" increase in the revenue share was probably about double this figure (Chart E)⁴. The unadjusted ratio continued to rise at a slower pace thereafter, but it remained broadly constant on a cyclically-adjusted basis. At the end of the decade, the ratio of revenues to GDP was still 3 percentage points higher than 10 years earlier. While the increase in the early part of the decade (and particularly up to 1982) was widespread, there were diverging trends thereafter across OECD countries: the share continued to rise in Japan but fell back in North America and in Europe on a cyclically-adjusted basis.

Focusing on overall trends in tax to GDP ratios obscures the considerable progress in tax reform which has occurred since the mid-1980s in many countries (see OECD, 1989d and Hagemann *et al.*, 1988, for country detail). The three common features of this reform movement are:

- i) A reduction of personal income tax rates via a broadening of the tax base, a reduction in the number of marginal rates and a lowering of top rates relative to standard rates;
- ii) A trend to base broadening and greater neutrality in the corporate tax system; and
- iii) A rationalisation and broadening of the consumption tax base, in many cases through a switch to a VAT.

3. For instance, in Germany, where net lending increased by 2 percentage points over the period, the improvement was due to savings from expenditure cuts (+3.2) which were partly compensated by a decline in tax revenues (-1); net interest payments increased by 0.2 percentage points and, hence, contributed negatively to the change in net lending.
4. Cyclically-adjusted revenues are estimated assuming the economy is operating at full capacity. Potential GDP is obtained using the method set out in Torres and Martin (1990). 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 estimated full-capacity output levels. For a more detailed description of the method, see Chouraqui, Hagemann and Sartor (1990). The cyclically-adjusted 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.

The objectives set for tax reform were very similar across countries and emphasised the traditional criteria of simplicity, fairness and efficiency. However, there was a much greater emphasis laid on efficiency objectives with respect to saving and investment decisions and work incentives, and relatively less emphasis on vertical equity in the sense of tax progressivity. In some small open economies, keeping tax systems from getting too far out of line with major trading partners was an important additional argument for tax reform.

Because of the short time which has elapsed since these reforms were enacted, it is difficult to evaluate how far they will achieve their stated goals. The changes have, as yet, had relatively little impact on the average tax rate (including social security contributions) paid by workers (Table 3). Nonetheless, they have led to significant cuts in the top rates of personal income tax in many countries and to cuts in the first positive rate in some countries (Table 4). Most countries have also cut corporate tax rates -- the OECD average is estimated to have fallen from 43 per cent in 1986 to 36 per cent in 1990 -- and trimmed depreciation allowances and investment tax reliefs (Table 5). Falls in marginal personal and corporate tax rates have been offset in most cases by broadening the tax base. Most tax changes were, therefore, broadly revenue-neutral.

3. Expenditures

Total government spending as a per cent of OECD GDP has risen by 2 1/2 percentage points since 1979, considerably less than the 5 3/4 points rise in the previous decade (Table 6) (Chart F). There was an initial increase of 4 percentage points in the share between 1979 and 1982, but it has fallen back by 1 1/2 percentage points since then. In some countries, such as Australia, Germany, New Zealand, Sweden, Turkey and the United Kingdom, spending ratios in 1989 were even below their 1979 values.

This picture of a break in the upward trend of the public spending to GDP ratio in the second half of the 1980s is modified somewhat after: i) correcting for the effects of the business cycle on transfer payments and GDP and ii) adjusting for differential movements in the public sector deflators relative to the private sector (see box for a description of this "relative price" effect) and netting off government interest payments (Chart G)⁵. The second measure provides an estimate of real "discretionary" spending. For the OECD area as a whole, the break in the second half of the decade is confirmed by the adjusted spending ratios. However, the sharp rise in the early part of the decade clearly had a large cyclical component. The development of debt interest payments and "relative price" effects also played an important role. This was most marked in North America and in Japan, where the cyclically-adjusted real spending share (net of debt interest payments) tended to decline in the first half of the decade. In contrast, the cyclically-adjusted share of real spending rose steadily in Europe over the same period. This share appeared to start rising again in Japan and North America around the middle of the 1980s, falling back in the latter towards the end of the decade. It remained virtually flat in Europe from 1985 on.

5. Non-cyclical income transfers are computed as in Chouraqui et al. (1990). Government consumption and investment were deflated by their own price indices; government transfers were deflated by the private consumption deflator.

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 – other things being equal – 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, government wage rates grow more rapidly 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 nominal terms during the 1970s (Chart H). Over the 15 years to the mid-1970s, the relative price effect increased on average in the OECD area by about 1 1/2 per cent per annum (1.7 per cent per annum from 1970 - 1974). It decelerated sharply in the second half of the 1970s to 1/2 per cent (annual rate) and, after a slight pick up in the early 1980s, 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.

4. Spending by level of government

The OECD area includes countries with both federal and unitary constitutions. In both groups, the relative importance of different levels of government -- central, regional (or state) and local -- varies widely, but most countries have attempted to restrain state and local spending as well as spending by central government. The share of total government spending (excluding social security) accounted for by state and local government generally grew during the 1970s (Table 7). During the 1980s, the share stabilised or increased marginally in most countries.

State and local governments rely on three main sources of revenues: local taxes, non-tax revenues (e.g. user charges) and central government grants. Central governments have used the latter as a means of exercising some restraint on spending by lower levels of government. In both the federal and unitary countries in Table 8, the reliance on tax revenues increased in the 1980s while, at the same time, the share of central government grants declined in all countries except the United Kingdom and Spain.

5. The changing structure of government expenditure

Total government expenditure can be decomposed by economic category and by function or programme. Taking the former first, Table 9 shows the contributions to the change in the expenditure/GDP ratio between 1979 and 1989 of: public consumption, subsidies, current transfers, debt interest payments, public investment and capital transfers.

Despite considerable diversity across countries, some common patterns do emerge. Debt interest payments put upward pressure on the expenditure ratio in all countries other than the United Kingdom. There was also a widespread and significant contribution from rising social security transfers, especially in Denmark, France, Greece, Ireland, Italy, and Norway where the change in social transfers as a ratio to GDP exceeded 3 percentage points. Public consumption increased as a share of GDP in about half the countries. Most countries have offset such increases by winding back public investment. Public investment as a share of GDP declined or remained stable in almost all countries (Chart I). Spain was an exception, with an increase of 2 1/2 percentage points in the share of public investment from a low level, and there was also a small rise in France and Italy. Cut-backs in subsidies and capital transfers were also widespread⁶.

The breakdown of expenditures by function or programme type in Table 10 covers a narrower range of countries and a shorter period because of data constraints. These data attempt to group spending in line with basic concepts of public sector economics. Four major government functions are distinguished: the provision of "pure" public goods, merit goods (education, health and housing), income maintenance and general economic services⁷. As the data are drawn from a range of sources in addition to the national accounts, they are not always comparable across countries.

6. For a full discussion of trends in subsidisation, see Ford and Suyker (1990).

7. Net lending/borrowing of the public sector represents the net demand of the general government sector on national savings. Data are not always consistent with Table 1 reflecting different sources. The balancing item in Table 10 represents the discrepancy between the total of the sub-components and the total. This "error term" has tended to widen in a number of countries, possibly reflecting data inconsistencies and

A few broad patterns emerge from Table 10. First, the share of public goods has remained very stable in the 1980s. The only major exception is the United States, where it rose by 2 percentage points, reflecting a marked rise in defence spending⁸. The share of economic services has also remained broadly constant or has fallen in most countries, with the exception of a rise in the Netherlands and the United States. Excluding debt interest, the main increase, as in the 1970s, has been in the area of the "welfare state", particularly income support. However, compared with the 1970s, the increases in the 1980s were more modest. Only Germany managed to lower spending on income maintenance as a share of GDP. For most countries, health and old-age pensions have been a major source of increased spending, whereas spending on education and housing has tended to decline relative to GDP.

6. Controlling the costs of government services

One way in which governments can reduce spending is to pay less for the goods and services they provide. During the 1980s, OECD governments devoted increasing attention to closer control of public sector costs. Given the relative labour intensity of public services, this often involved restraints on both public sector pay and recruitment.

The evolution of public sector wages over the past two decades is shown in Table 11. Two different wage measures are presented. The deflator for public sector wage growth is first compared with the private consumption deflator, providing an indication of trends in real wages, and then to the average private sector wage, providing a measure of trends in relative wages⁹.

The data in Table 11 suggest that real and relative public sector wages have grown very slowly in most countries since the mid-1970s¹⁰. Aside from Austria, Finland, Japan, Switzerland and the United States, real wages appear to have remained flat or fallen since the beginning of the 1980s. Comparisons

(.../...)

breaks in the series.

8. The rising share of general public services in Sweden probably reflects data problems. General public services appear surprisingly low in 1981 and there is an opposite movement of similar size in the balancing item between the beginning and end of the period.
9. The comparison is on the basis of the wage per employee in the private sector excluding social security and pension charges.
10. These deflators should be treated with caution. The general government wage rate is calculated as the general government wage bill divided by government employment and, with the exceptions of Denmark and Japan, is not necessarily consistent with the national accounts concepts. The growth rates can be affected inter alia by changes in the composition of employment. 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 government wages in the 1980s in this case would be biased downwards relative to the 1970s, and this compositional effect could also affect comparisons with the average private sector wage. For these reasons, one must be very cautious in interpreting data on public-private pay trends, such as those in Table 11. For example, a recent study by Guilhamon (1989) suggests that public sector wages in France grew in line with the private sector over the period 1978 to 1986, a period in which Table 11 shows a decline in relative wages of

with the private sector are more hazardous as movements in 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. 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 the significant exception¹¹. 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).

Many OECD governments have also sought to put the brakes on recruitment of public sector employees. As a result, employment growth in the public sector slowed substantially during the 1980s compared with the 1970s (Table 12). For the typical OECD country, however, the share of public employment in total employment rose between 1979 and 1984, and stabilised thereafter at 17 1/2 per cent. Nonetheless, the annual growth rate was still 2 per cent or more in some countries in the 1984-89 period (Canada, Finland, Greece, Luxembourg, Norway, Portugal, Spain and the United States). Government employment declined in the United Kingdom throughout the 1980s and also in Ireland in the 1984-89 period.

7. Social spending

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 13). The number 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. The results show a decline in total dependency ratios during the 1980s, which is, on balance, more marked than in the 1970s, implying that demographic forces have put less pressure on public spending in recent years¹².

(.../...)

around 1 per cent per annum. However, more detailed studies of public sector pay in the United Kingdom and Denmark confirm the direction of relative wages in Table 11, but not the magnitude, over the 1970s and 1980s -- see Bailey (1989) and Pedersen *et al.* (1990). In addition, recent studies point to a narrowing in the differential for the federal service in the United States -- see Moulton (1990).

11. However, this appears to largely reflect trends at the state and local levels in the United States.
12. The calculations in Table 13 weight individual population groups equally even though their "needs" for, or "entitlements" to, public spending may be significantly different. However, even when a greater weight is given to the number of older people, demographic changes remain more favourable to restraining government spending in the 1980s, although the difference with the 1970s is less marked.

Development of income transfers

In addition to being greatly influenced by demographic trends, spending on income transfers is also affected by policy decisions concerning the appropriate levels of benefits in real terms under various programmes. Table 14 tries to quantify this latter influence for four major categories of transfers: old age and permanent sickness benefits, unemployment benefits, family allowances and temporary 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 living standards¹³.

The results show a general slowdown in the growth of average real benefits in the 1980s for all four categories of transfer payments. The slowdown was particularly marked for unemployment benefits, whose real value on average remained unchanged in the 1980s, and temporary sickness and maternity benefits. Average benefits also rose much more slowly relative to per capita GDP, and even declined for unemployment benefits by almost 2 per cent a year, and by 1 per cent a year for temporary sickness and maternity benefits.

Unfortunately, the data in Table 14 are not adjusted for changes in coverage ratios. Since part of the process of restraint has taken the form of restricting eligibility to various transfer programmes, in some cases benefits per recipient may have increased relative to GDP per head as eligibility was reduced.

Education and health spending

Spending on education and health accounts for the largest proportions of the merit goods category, and it is possible to adjust these data for changes in coverage ratios (Table 15). As regards education, demographic trends generally favoured lower real expenditures in the 1980s and national accounts data in Table 10 indicate that the share of education spending tended to remain broadly stable or fall in most countries over the 1980s. However, demographic effects were partly offset by increases in real spending per student. On average, total real spending per student (deflated by the index for general government) continued to increase at an annual rate of 1 to 2 per cent over the period 1980-86¹⁴. Health spending has also continued to rise, although the increase in average real spending per beneficiary was much slower in the 1980s than it was in the 1970s.

8. Summary of main findings

The 1980s witnessed a significant reduction in the budget deficit in nearly all OECD countries, although the process of budgetary consolidation is clearly unfinished in some. The improvement was mainly concentrated in the second half of the decade when debt/GNP ratios fell in most countries and it clearly owes much to cyclical factors. Increased revenues and slower growth in spending contributed equally to the restoration of balance to the public finances over the period 1984-89. By the end of the decade, current receipts as a share of GDP were 3 percentage points above the level ten years earlier and most countries had introduced major reforms to their systems of personal

13. Average benefits are calculated as total spending divided by the target population. No allowance was made for changes in take-up of benefits.

14. Spending slowed in nine of the sixteen countries between the second half of the 1970s and the 1980s, and there was some overall slowing in real spending per student.

and corporate income taxation. Government spending as a share of OECD GDP was still 2 1/2 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 trend is less marked once allowance is made for cyclical factors.

The slowdown in the growth of spending ratios was obtained mainly through the compression of public investment, subsidies and the public sector wage bill. The latter was restrained by wage moderation and cuts in public sector employment growth. Other factors affected real spending over this period, but they are more difficult to quantify. In general, demographic developments were probably 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 previous decade.

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

III. DEREGULATION AND PRIVATISATION

Government intervention in the economy extends beyond the spending, revenue raising and borrowing activities which are included in the general government budget in the national accounts. These other activities include regulatory policies and public enterprises. By their very nature such activities are difficult to quantify, especially for the purposes of international comparisons.

The concept of "regulation" can be defined broadly as the set of instruments by which governments intervene in markets. This section only considers recent changes to "economic" regulation, defined as measures aimed at altering conditions in particular industries, for example, the use of price controls and barriers to entry, and privatisation. "Social" regulations (e.g. pollution control or health and safety regulation), which are applicable over a wide range of industries and deregulation in financial markets are not discussed.

Recent changes to "economic" regulation have been extensive but they have been largely concentrated in the area of public utilities: gas, water, electricity, transportation services and communications. These industries are important: they account on average for 10 to 12 per cent of industrial value added in the OECD area and, because of their capital-intensive nature, 15 to 20 per cent of total industrial investment (Table 16). In most cases, they produce inputs for production in other sectors and, for this reason, their efficiency can have an important bearing on overall economic performance.

1. Rationale for deregulation and privatisation

The regulation of public utilities and other sectors has often been based on various public interest criteria, such as national security concerns and ensuring equal access to services (Helm, 1989). Regulation has also resulted from pressure from, and a desire to protect, already-regulated sectors. For example, much of road transport was regulated in order to protect the railways, even though the former has a competitive market structure.

The principal economic rationale for regulation, however, rests on the existence of market failures¹⁵. The traditional example of such a market failure is where the regulated industry is a "natural monopoly" -- where a market is more efficiently served by one provider because of the existence of economies of scale and/or scope. A competitive solution will not exist, or be sustainable, in this case; nor would it be desirable, since costs will be minimised if the industry is operated as a monopoly. Since the monopoly can exploit its market power to raise prices above marginal cost, some form of regulation is therefore desirable.

OECD countries have followed two main approaches to resolving market failures and meeting various public interest criteria: public ownership and regulatory control. The first approach has been widely employed in Europe and Oceania; the United States, and to a lesser degree Canada, opted instead for regulatory control of private firms (Table 17). Although, in principle, the question of ownership is separate from how the market works, the practical implications of the two approaches may differ considerably, due to the different nature of the incentives introduced by regulation or by direct ownership.

While the existence of market failures gives rise to a prima facie case for government regulation or ownership, the actual intervention chosen may make the situation worse. In recent years, governments have become increasingly concerned that regulation and public ownership were having a negative effect on performance, partly because the instruments employed were not providing the correct incentives. Empirical evidence shows that regulation has not decreased prices in those industries considered to be "natural monopolies", and seems to have increased prices in naturally competitive sectors (see Peltzman, 1989). This may be because regulated firms are almost always better informed than the regulators about their costs and the consequences of adopting particular regulatory schemes. Where regulated sectors have been predominately under public ownership, this has often resulted in poor performance. Public enterprises seem particularly prone to productive inefficiency, partly because they are usually required to achieve a complex set of objectives beyond (or in place of) profit maximisation.

Furthermore, there has been a major reassessment of the extent and nature of market failure in recent years (see Keeler, 1984). Many industries that were once thought to be natural monopolies are no longer viewed as such. For instance, in telecommunications and electricity generation, technology has greatly reduced the significance of economics of scale¹⁶. In transportation, while railways might be considered natural monopolies, there is still ample scope for competition from road or air transport.

Finally, the effect of regulation and public ownership on technical progress and innovation must be considered. Research on the economics of innovation indicates that where competition is hampered, the volume and pace of innovation is reduced. Because competitive pressures are weak, monopoly firms

15. Market failures can be broadly classified into four types: natural monopoly, externalities, public goods and asymmetric information. Market failures need not be mutually exclusive. For example, many natural monopolies are characterised to some extent by externalities.

16. However, technological change may also give rise to opportunities to develop or extend market power, e.g. computerised booking systems for airline reservation systems.

do relatively little R&D compared with the optimum (Dasgupta and Stiglitz, 1980). Furthermore, there are spillover effects in competitive markets from one firm to another, which allow innovation to be introduced more quickly and at a lower cost (Pera, 1989).

These considerations have underlain most of the recent moves towards regulatory reform. In competitive industries, regulations were modified or eliminated, and competitive sectors of regulated industries are increasingly being separated from the rest of the industry. In areas where natural monopoly still appears prevalent, market contestability and competition have been increased and the methods of price regulation changed. Achieving greater efficiency in public enterprises has also become a higher priority for governments. Finally, governments have moved to privatise publicly-owned firms; in many cases, the sale of public sector assets has occurred in competitive sectors, where compelling reasons for public ownership are absent. Sales of publicly-owned monopolies have usually been combined with new forms of regulation designed to address the incentive problems which bedevilled traditional regulatory regimes (see box).

2. The process of regulatory reform

There are three principal dimensions to economic regulation:

- Entry/exit controls to limit the number of firms;
- Price controls over the firm's prices, fares or rates;
- Output regulations to set or approve routes, capacity, etc.

The changes to these three aspects of regulation in OECD countries are summarised in Table 18 for selected "public utilities": airlines, trucking, telecommunications (local and long-distance), and the energy sector (electricity and gas). This section does not describe the history of regulatory reforms in OECD countries; instead it gives a brief description of the current state and direction of regulatory reforms for the selected industries¹⁷.

In the OECD area, most transportation industries have been subject to some form of government control over entry and exit, prices, and the range and quality of services. Overall, this industry does not display natural monopoly characteristics since there is considerable competition between different transportation modes. Although the potential for competition in this sector is much greater in Europe than in North America, because distances are much shorter and competition is more intense, more deregulation has occurred in North America¹⁸.

Railroads have been deregulated only in North America. In other OECD countries, the rail systems are entirely state owned and concerns about the impact of increased competition on the financial deficits of railways have slowed reforms. Regulatory reform in the trucking industry has been quite

17. See Pera (1989) for a detailed discussion of regulatory reform.

18. A comparison of the United States and Europe in the 1970s indicated the greater importance in Europe of rail traffic (in the range of 400 to 1 500 km.) and the lesser importance of road transport over long distances (over 2 000 km.). The air transport market in Europe is weak in the 100 km. range, and relatively strong in the 2 000 km. range. Since the average European flight is about 1 000 km., rail transport is an important competitor, especially in France with the introduction of high-speed trains.

RATE-OF-RETURN VERSUS RPI-X REGULATION

Most theoretical and empirical findings about the flaws of regulation refer to the particular case of rate-of-return regulation where the regulated firm is allowed to cover its production costs plus some fair rate of return on its investment. However, the regulated firm has little incentive to reduce its costs, instead it has an incentive to overcapitalise, creating productive inefficiencies (see Averch and Johnson, 1962).

It has recently been argued that price cap regulation, also known as RPI-X regulation, is a superior instrument of regulatory policy. It has been adopted by the British government for British Telecom and other privatised monopoly firms. The U.S. authorities have also adopted it for AT&T and are considering adopting it for the regional companies and for other regulated industries.

RPI-X regulation is characterised by several properties. The regulator sets a ceiling for prices that the firm can charge, but the firm is free to choose prices below the ceiling. The second characteristic is that price ceilings are defined for baskets of services offered by the firm, which are adjusted periodically by a pre-announced adjustment factor that is exogenous to the regulated firm. Over longer intervals the adjustment factors and baskets can be reviewed and possibly changed. The key feature is that, for a pre-specified period, the company can make any changes it wishes to prices, provided that the average price of a specified basket of its goods and services does not increase faster than RPI-X, where RPI is the Retail Price Index and X is a number specified by the regulator.

Beesley and Littlechild (1989) argue that RPI-X is less vulnerable than rate-of-return regulation to cost-plus inefficiency and over-capitalisation since the firm has the right to keep whatever profits it can earn during the specified period (and must absorb any losses). This preserves the incentive to productive efficiency associated with unconstrained profit maximisation. Part of this expected increase in efficiency can then be passed on to consumers via the level of X. RPI-X also allows firms greater flexibility to adjust the structure of prices within a basket. On the other hand, greater price flexibility may be a disadvantage rather than an advantage, since it allows cross-subsidisation which is allocatively inefficient and may be used anticompetitively.

One important issue, therefore, is determining the composition of the basket of services that are subject to the price cap. This is particularly important if firms have the possibility of selling some goods or services in competitive markets. Another important issue is the determination of the change in price caps and the frequency with which they are adjusted, especially the value of X. For example, resetting the price cap too often implies that the regulation scheme is effectively the same as traditional rate-of-return regulation (Acton and Vogelsang, 1989). Yet, setting the rate once and for all means that at some point in the future, it will be either too high or too low. Unlike rate-of-return regulation, RPI-X does not assume costs and demands are given or known. In fact, the problem is to provide adequate incentives for the company to discover them and to induce lower cost techniques.

Many claims have been made about the superiority of price caps over rate-of-return regulation. Littlechild (1983) argues that price caps are likely to protect consumers against monopoly, help promote competition, improve productive efficiency and innovation, reduce the administrative burden of regulation, and improve the expected profitability of the regulated firm. Cabral and Riordan (1989) look at innovation under rate-of-return and price cap regulation and find that price cap regulation is superior. Bradley and Price (1988) and Vogelsang (1988) show that, under stationary cost and demand conditions, price caps converge to efficient price structures. However, when allowance is made for uncertainty, Schmalensee (1989) has shown that, in the limited case of a single product firm, regimes in which price partly depends on actual costs generally out-perform pure price caps. The question of the superiority of price caps over rate-of-return regulation is, therefore, an empirical one upon which there is little firm evidence yet.

varied, with some countries beginning to implement it as early as the 1960s, while others have only recently deregulated the industry. The industry now, however, is effectively deregulated in most OECD countries. Regulatory reforms in the airline industry have also been diverse, with the earliest and most extensive changes occurring in the United States. More recent changes have occurred in Australia, Canada, Japan and New Zealand. European air transport, with the exception of the United Kingdom, remains tightly controlled, although a significant part of the market for leisure travel is now served by competitive charter companies.

Rapid technological change has challenged the long-standing view of telecommunications as a natural monopoly; there is a growing awareness that in many segments of the market, competition could raise technical efficiency and responsiveness to consumer needs. This, in turn, has led to a reappraisal of the regulatory framework and policies in a number of cases. Segments of the industry that are considered to be competitive have been deregulated and, consequently, there has been increased competition in peripheral goods and services, such as equipment, installation, and VANS¹⁹. Furthermore, alternative transmission systems, such as satellite, microwave, cellular radio, and cable networks have created new parallel services capable of competing with traditional telecommunications carriers at the local and regional level.

Nevertheless, the basic telecommunications service, both local and long-distance, remains strongly regulated in most countries and existing price structures are characterised by heavy cross-subsidisation. However, greater ease of entry and price flexibility, for example in national long-distance markets, is placing pressure on such price structures²⁰. Therefore, easing entry restrictions also requires allowing greater flexibility in carriers' pricing policies. In a few countries, regulatory reform has been coupled with privatisation, with the market being overseen by an independent regulatory body. This was traditionally the practice in North America but it has been extended to Australia, New Zealand and the United Kingdom. These bodies now regulate prices as well as establishing the dividing line between "monopoly" and "competitive" services. However, it is too early to say whether easier entry will lead to an effective increase in competition in basic services, given the market power of the established firms.

Natural gas production has experienced an easing of regulations and the introduction of competition, whereas distribution and transmission remain strongly regulated and, in most countries, are franchised monopolies. Reforms in the electricity industry have been slow in coming and are only now beginning despite the growing recognition that potential benefits can be gained from increased competition in electricity generation. Some countries are now encouraging the development of a competitive independent generating sector. In the United States, in a number of cases, competitive bidding has been

19. Value added network services (VANS) are services provided to users beyond simple voice telecommunications. Such services are extensive in communications services, for example Fax, data transfer, and other computer-related services.

20. Technological change is making entry harder to control. For example, firms can normally lease long-distance lines for their individual use, but are forbidden to sublet excess capacity. New in-house equipment (e.g. customer premise equipment) makes it possible for firms to re-route telephone calls from third parties over leased lines undetected, permitting them potentially to "enter" the market and undercut the long-distance pricing practices of the telecommunications carrier.

introduced as a form of competition in generation markets. However, in most other countries, the electricity industry remains a franchised or state monopoly, a notable exception being the United Kingdom, where the electricity industry is being privatised and restructured, with the aim of introducing competition into electricity generation and supply.

3. Privatisation

Table 17 indicates that state ownership is most important in postal, telecommunications, rail transport, electricity, gas, and air transport. In these sectors, public ownership appears to be most important in Austria, France, Italy and Sweden and least prevalent in Canada, Japan, and the United States. However, such measures probably understate the extent of public ownership, since many countries have holdings in other sectors -- for example the financial sector. International comparisons also encounter the additional problem that OECD countries differ widely in the way they classify public enterprises²¹. Some countries provide data only on large nationalised firms, whereas others use a very broad definition, sometimes including enterprises in which the public sector owns less than 50 per cent.

The last decade witnessed a growing disenchantment with public enterprises in a number of OECD countries because of their unsatisfactory performance. They often moved into deficit during the 1970s and reacted sluggishly to changing market conditions and demand. Although this partly reflected direct government intervention or the imposition of goals other than profit maximisation, poor management and the absence of the monitoring discipline of private capital markets also played important roles²².

In response to these concerns, several OECD countries reduced the degree of state intervention through the sale of public enterprises during the 1980s (Table 19). Proceeds from the privatisation process are provided for five OECD countries (Table 20). While the sums raised have been substantial, they are still very small as a proportion of total government revenues. Sales of public enterprises have included both firms which operate in competitive markets, and monopolies or public utilities in which there is frequently considered to be a substantial element of natural monopoly and public interest. Where privatisation has concerned a natural monopoly, this has involved converting a public enterprise into a regulated private enterprise. Chart J shows the resulting changes in the size of the public enterprise sector²³. While international comparisons of such data should be interpreted with great

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21. See Pathirane and Blades (1982) for a discussion of this issue.
22. There are numerous examples of governments seeking to achieve non-profit objectives by intervening in the management of public utilities. See Keating (1990).
23. The relative "size" of public enterprises is measured by the average of three different variables, namely the share of gross capital formation, employment and value added over the economy-wide total for each. The definition of a public enterprise only includes firms where central or local governments own more than 50 per cent of capital, or control the majority of votes. The potential for public intervention is probably larger than this if large minority holdings implying effective control are taken into account. The heterogeneity of data sources underlying Chart J suggests some care is required when making cross-country comparisons of the absolute size of public enterprises.

caution, the United Kingdom appears to be the country where the largest reduction in the size of public enterprises occurred in the 1980s, followed by Portugal, France and Germany. More modest declines occurred in Belgium, Spain, Italy and the Netherlands.

Among OECD countries not included in Chart J, New Zealand has had extensive recourse to privatisation, with the explicit aim of improving the efficiency and profitability of loss-making firms. Large-scale privatisation was also viewed as an additional source of funds to reduce the country's large foreign debt. In Japan, privatisations were made on the recommendation of the DOKO Commission, which proposed the reduction of operating expenditures and the gradual privatisation of the main public enterprises, such as telecommunications (NTT), railways (JNR) and airlines (JAL).

Answering the key question of the effects of privatisation on performance is a highly complex exercise: measurement is difficult; it is hard to separate out the effects of ownership from simultaneous changes in market structure and regulatory reform; and only limited time has elapsed since many of the most important cases of privatisation. Nonetheless, for transfers to the private sector of state-owned firms operating in competitive markets, the available evidence suggests that, where competition is effective, private enterprises are generally to be preferred to public ownership on both internal efficiency and social welfare grounds (Vickers and Yarrow, 1990). The available evidence on contracting out and franchising also suggests that where competition is effective, private supply is likely to have the edge in terms of cost efficiency.

The effect of transfers to the private sector of state-owned natural monopolies is more difficult to judge. Vickers and Yarrow (1990) conclude from studies of the electricity and water industries in the United States that there is no presumption in favour of either public or private (but regulated) ownership. In the case of the United Kingdom, the change in ownership of natural monopolies was often preceded by significant improvements in performance and accompanied by regulatory reform. There has been little evidence of subsequent gains in efficiency or profitability. However, it is too early to judge the final outcome.

4. Concluding comments

Deregulation has been pushed furthest in the United States and has spread to Canada, the United Kingdom, and New Zealand. There has also been some deregulation in continental European countries, but the extent of change has generally been less than in North America or New Zealand, except in a few areas such as road transport. Possibly one reason for this has been the predominance of state-owned public utilities in many European countries. In these sectors, price structures characterised by extensive cross-subsidisation are the rule rather than the exception, reducing both the transparency of the operations of public utilities and the possibilities for increasing competition. A number of governments have moved to give state-owned utilities greater independence through regulatory reforms and privatisation. This has often been accompanied by a separation of monopoly and competitive services, but there appears to be ample opportunities to push this further. Others have sought to privatise many public enterprises operating in competitive markets, which in the past had been used to achieve a range of non-profit objectives.

It is very hard to assess the effects of privatisation on economic performance, partly because very little time has elapsed since most of the major transfers of ownership have occurred. Where there is competition, it is difficult to justify government intervention and private ownership appears most likely to result in the best outcome. Where there is market failure, policy

assessment is more difficult, notably because privatisation invariably involves a change in regulatory policy and because public ownership and regulated private ownership both have their problems. Increasing the degree of product market competition (where possible) and the effectiveness of regulatory policy are probably more important for performance than ownership per se. In a number of cases, the short-term results of deregulation/privatisation have been less than impressive in terms of improving the efficiency of the firms in question and raising consumer welfare. This appears to be related to the survival of the market power of the incumbent beyond the deregulation/privatisation that was supposed to have undermined it. This supports the hypothesis that competition, rather than ownership, is the crucial determinant of the economic success of privatisation programmes.

However, two additional points should be stressed. First, in many countries, publicly-owned utilities have faced a range of pressures and day-to-day intervention in management decisions and have been asked to achieve "non-economic" objectives. This has diluted managerial responsibility, reduced the transparency of operations and made it more difficult to concentrate on maximising efficiency and minimising costs. Public ownership therefore needs to be combined with adequate managerial independence and the achievement of rates of return comparable to those in the private sector (once output prices have been established and the costs of any non-economic objectives estimated and allowed for). Adequate managerial independence and greater transparency may be easier to achieve with regulated private sector ownership in certain circumstances. Second, it can be argued that privatisation is essential for regulatory reforms and necessary in order to open a previously regulated sector to competition. With continued public ownership, there may be bureaucratic resistance to change and impediments to competition where publicly owned firms have the advantage of government guarantees and support whereas others do not.

IV. THE SEARCH FOR GREATER PUBLIC SECTOR EFFICIENCY

During the 1980s, initial efforts to rein in the growth of government took the form of aggregate or top-down budgetary constraints, often in the form of targets for manpower and operating costs (OECD, 1987a). While these have achieved some success in breaking the upward momentum of expenditure in the 1980s, they may also have exacerbated the rigidities inherent in the current budgetary control systems. Centrally-imposed budget targets can improve the budget position in the short term, but they can reduce incentives and lower efficiency over the longer term unless they are accompanied, inter alia, by measures to devolve managerial responsibility and increase flexibility of resource use at the operational level. Thus, over the last decade, many countries have put in place a wide range of experiments aimed at improving efficiency in the use of resources by the public sector.

Management in the public sector is complex, given its size and the diversity of its activities. Traditionally, control and monitoring have been exercised through detailed cash allocations. These procedures resulted from the need to ensure legislative control over spending and the difficulties in assessing performance where there are a range of objectives to be achieved and no straightforward measures of the degree of success²⁴. But such systems may have fostered inefficient operations, where managers have focused on maximising budgets and staff rather than minimising costs in the pursuit of well-specified ends.

24. This contrasts with private sector firms where estimates of profits,

The purpose of this section is to outline and provide a preliminary assessment of the main initiatives aimed at improving the government's capacity to achieve its goals better. It begins by discussing the ways in which OECD governments have sought to use new management methods to improve performance in general government. This is followed by an assessment of the scope for making greater use of market signals within the public sector.

1. Reforms in public sector management

Reforms have generally tried to introduce private management practices and to simulate market processes, paying more attention to the objectives and outputs of government agencies. They aim to give managers budgetary incentives to reduce costs and improve performance. They also seek to establish a hospitable management environment for using performance measures. In this context, objectives and indicators are agreed between agency managers and the budget offices or between the managers and lower administrative levels rather than being imposed.

a) Information and incentives

A precondition for achieving greater cost efficiency in government is that each activity is adequately costed and this information is made available to management. In New Zealand, accrual-based accounts have been introduced to gauge how efficiently capital is employed in departments, as well as to prevent output targets being achieved by running down physical or human capital (OECD, 1989b). In the United Kingdom, the drive towards making managers more cost conscious has centred around the introduction of similar accounting systems.

Better information systems also need to be backed up by appropriate incentives for good performance. Incentive structures in the government sector have traditionally not encouraged efficiency, as governments have offered few rewards for good performance and rarely imposed significant penalties for failure. Three elements have contributed to this: job protection, promotion and pay arrangements. There is some evidence that job protection in the government sector is on the decrease. Governments have started encouraging mid-career entry and fixed-term contracts, often in connection with the separation of policy and operational decision-making -- examples are to be found in Sweden, New Zealand and the United Kingdom. Rules concerning the dismissal of staff have also been eased in Australia and the Netherlands. Limited progress has been made in making promotion dependent on managerial abilities rather than seniority. About a third of OECD countries have made pay partially dependent on performance. But this must be seen against a backdrop of wage compression for government employees (see Part II), and monetary rewards for good performance are often very small compared to the basic salary.

b) Devolution of responsibility and increased accountability

Some OECD countries, notably Australia, Denmark, Canada, New Zealand, Sweden and the United Kingdom, are seeking to forge a tighter link between objectives, resources and results by greater devolution of budget responsibility to spending agencies and within the agencies themselves. Central budget offices have moved away from detailed control and direct intervention towards setting priorities, fixing global targets and initiating management responses. These measures have given Ministries more discretion

(...)

costs and output are easier to obtain and broadly accepted as measures of achievement.

over input selection, timing of expenditures and the allocation of funds between programmes or activities. Increased focus is being placed on results rather than achieving budgetary targets alone and this has been accompanied by greater devolution of operational decision making to individual managers.

In addition, there is increasing recognition that the allocation of responsibilities across different levels of government influences the degree of public sector efficiency (Pommerehne, 1990). During the past decade there has been a progressive shift in responsibilities from central to state and local governments. Since lower levels of government have superior information on local needs, such devolution may result in more adequate solutions being found. The autonomy of local government has also been enhanced by its increased reliance on its own revenue sources, a consequence of reduced transfers from central to local government as fiscal consolidation has proceeded (Table 8).

At the same time, attempts have been made to improve institutional and managerial accountability, reflecting a general perception that devolution will not, in itself, improve performance even if it does restrain spending. To overcome the problem of the lack of a measure of "final output", some countries have introduced independent audit and efficiency review units. The U.K. authorities introduced efficiency audits for both central and local governments in the 1980s, with about half of all resources in auditing agencies engaged in value-for-money audits. The General Accounting Office in the United States has developed sophisticated methods to evaluate programme effectiveness and management performance in the federal government.

c) Prospects and problems

The basic concepts and aims underlying these reforms are not new²⁵. While present reforms have sought to learn from past failures in a number of ways, there is little hard evidence on their impact on public sector efficiency. Implementation of these managerial reforms has run into various problems. The tension between central and decentralised control continues and there is no consensus on the appropriate balance, particularly with respect to local government. Despite changes, the discretionary power of managers at lower levels is still relatively modest. In most countries, policies governing pay and employment conditions are determined centrally, reflecting fears of a wages break-out in the absence of central budget resistance to strong public sector unions. Switching between current and capital spending is limited and the possibilities of carrying over unspent reserves into the following budgetary period are still not large. Meeting relatively tight budget ceilings continues, in many cases, to be the primary concern of administrations, even in decentralised budget agencies.

Information systems which seek to quantify objectives ("outputs") remain rudimentary in most countries. With proxy "output" indicators -- such as student test scores and quality-adjusted life spans for health -- often controversial, governments have focused on creating intermediate or activity

25. In the 1960s, they led to the widespread introduction of Programming, Planning and Budgeting (PPB) systems in many OECD countries. However, it is generally agreed that PPB failed to bring about significant changes to managerial practices, higher efficiency or improved outcomes.

indicators²⁶. But there are often tradeoffs between indicators of quality and volume, the latter being less costly to collect and "easier" to interpret (see box on Measuring Public Sector Efficiency). This can distort the behaviour of the agency if managers work to meet intermediate volume targets rather than the more fundamental objectives²⁷. Further, information systems for managing inputs, such as accrual accounting, are poorly developed and little used.

Personnel management (OECD, 1988c, 1990d) systems have not kept pace with the reforms. Systems of personnel evaluation -- the foundation of management incentive systems -- are weak and career development has been largely absent, in contrast with large private enterprises. If the wage differential with the private sector continues to widen (see Part II), there is a danger that the quality of staff will deteriorate. Finally, and possibly most important, there is no market imperative exerting pressure on public sector institutions to make the necessary management changes and to respond flexibly to new needs. But recent experience suggests that there is much scope for bringing the pressure of competitive markets into the public sector.

2. Introducing market disciplines into the public sector

a) Vouchers

Vouchers have been used as an instrument for introducing competition in services of a merit good nature, such as food for the poor, education, housing and health. By giving individuals the means to purchase specific services on the market, vouchers allow them to obtain the best value for money in private markets. However, "implicit" vouchers also exist in a number of cases, such as freedom of choice in health care under a (public) insurance system or in an education system where parents are allowed to choose the school. The success of such measures depends on sufficient competition among suppliers, although the introduction of vouchers in itself spurs competition. The main advantage of vouchers is that there is less need for the government to monitor quality of the services, to the extent that there is sufficient information to allow consumers to do that directly.

b) User charges

Another alternative open to governments to tap market information is to introduce user charges. Confronting consumers with the full or even partial cost of the service may allow governments to cut back on supply. Increased user charges also add to total revenues, thereby allowing taxes to be reduced elsewhere. However, at present, user charges are not widely used by the public sector: they represent around 5 per cent of total revenue of general government, 1.6 per cent of central government and 18 per cent of local government own revenue (10 per cent of local government total revenue) (OECD, 1990e).

26. Countries which made the greatest efforts to create PPB-type systems in the past -- the United States, Canada, Sweden and the United Kingdom -- have been the best placed to produce intermediate indicators, but a number of other countries -- Australia, New Zealand and a few continental European countries -- have also been active.

27. For example, in the United States, the use of the number of job placements in judging "output" of public job placement agencies led to an emphasis on temporary jobs.

MEASURING PUBLIC SECTOR EFFICIENCY

The ultimate objective of all the reforms discussed in this section is to produce a more efficient and responsive public sector. A constant theme in the literature is the need for better information on public sector "outputs" in order to guide decision making. There are well-known difficulties in measuring public sector outputs but some countries have devoted much effort to trying to overcome them.

Among OECD countries, productivity measures are available for the U.S. federal government and for general government in Sweden. These indicators are constructed by combining data on resource use and intermediate outputs (e.g. measures of workload or number of clients served). As it has been impossible to derive any meaningful output measures for some public sector activities, the aggregate indicators cover only about two-thirds of the relevant government activity in both countries. The methodology employed in the United States and Sweden differs with respect to the specification of outputs and resource use. In Sweden, an attempt is made to identify final products of the public sector, i.e. the volume of services directly delivered to consumers: the number of passports issued, the number of books borrowed from libraries, the number of patients admitted to the various hospital wards, etc. In the United States the output indicators relate to individual activities which make up the final products, such as the amount of documents processed in the course of preparing delivery, as well as the final products themselves. The input measure in the United States is the number of hours worked, while in Sweden the costs of providing output, measured at constant prices, serve as an indicator of resource use.

Notwithstanding these differences in measurement, there appears to have been a striking difference in the ability of the government sectors in the two countries to deliver productivity increases. In the United States, output per employee-year in the federal government increased by an annual average of about 1.5 per cent in the 20-year period up to 1987 (Chart K), whereas productivity in general government in Sweden fell by 1.5 per cent on average in the 1970s (Table 21). This divergence is not due to the inclusion of local government activity in the Swedish indicator (it is excluded in the U.S. one). A fall in labour productivity was registered in almost all government activities in Sweden, whereas the opposite was the case for U.S. federal government activity.

Government productivity trends in both countries have been more stable than in their private service sectors. Thus, in contrast to the experience of the business service sector, growth in output per unit of input in the U.S. federal government showed no tendency to decelerate in the 1970s. Nor did it pick up in the 1980s when there was some recovery in productivity in private services. The decline in government productivity in Sweden was fairly steady in the 1970s, but the productivity performance in some agencies has improved in the 1980s. The regress in productivity in the Swedish Government sector has been in stark contrast to advances in the private service sector.

In conclusion, these data provide a salutary warning to optimism about public sector reforms translating rapidly into higher public sector efficiency. The United States and Sweden have both been at the forefront of OECD countries in attempting to introduce measures aimed at increasing public sector productivity. But the experience of the past two decades suggests that they have had no success in improving the underlying trends.

The goods and services covered by user charges and the methods of setting prices vary significantly between countries. Partial cost recovery is generally the rule. Various justifications are made for this: the presence of externalities (e.g. lower prices for public transport to reduce traffic congestion or compulsory education to ensure widespread literacy) and the fact that it is often difficult to apportion the costs where goods and services are jointly produced. Only in cases where there is a direct relation between the service and the benefit is full-cost recovery generally seen as appropriate by Member governments.

There appears to be scope for applying user charges to a wider range of public sector output. For example, in an interesting alternative approach recently introduced in Australia, university students now pay tuition fees which can be paid via the tax system once their income rises above the country average. Concerns over equality of access and, in some cases, vertical equity are, nonetheless, likely to remain significant political constraints.

c) Improved procurement practices

Difficulties in public procurement are most marked where the kind of good being purchased (for example defence hardware or large capital equipment items which cannot be bought "off the shelf") is only supplied by a very small number of firms and where contracts on a fixed-price basis are more difficult to establish. The European Community estimates that 25 to 50 per cent of all government purchases from the private sector are covered by procurement contracts. In such cases, purchasing decisions are often taken on regional and industrial policy grounds as well as on the basis of cost. These practices have removed or weakened the role of market signals and, therefore, reform of procurement practices has been high on the agenda.

Increased centralisation has been used in the United Kingdom and France to create larger purchasing units and to improve the flow of information (price comparisons, etc.) to those responsible for purchasing. New Zealand and the United Kingdom have given agencies greater freedom to select sellers. In the United States, several congressional acts have reduced the number and scope of justifications for negotiating non-competitive contracts rather than using open tender. In the key area of defence procurement, there has been some movement away from granting contracts on a cost-plus basis in favour of competition amongst a number of selected producers, particularly in the United Kingdom.

While reforms have served to increase the market contestability of government procurement, much remains to be done. Direct imports have generally a much smaller share in government procurement than in the private sector, suggesting restrictions on foreign suppliers. By removing those restrictions in line with the GATT procurement code, and sourcing from the lowest-cost country, large savings could result. A major objective of completing the internal market in the European Community is to establish a single market in public procurement. The EC Commission has estimated that direct savings of between 0.1 and 0.2 of a percentage point of community GDP could be gained from greater competition in public procurement within the EC, rising to 0.6 per cent once the dynamic effects of greater competition and industrial restructuring are taken into account²⁸.

28. See Commission of the Economic Communities (1988).

d) Contracting out

Putting selected government services out to contract has been widely used in the United States and the United Kingdom, and is under active consideration in a number of other countries (Australia, Canada, France, the Netherlands, New Zealand and Sweden). This procedure is most common at lower levels of government, in areas such as refuse collection, maintenance, hospital ancillary services and catering. The principal argument in its favour is that contracting out through competitive tender brings market forces to bear.

In the United Kingdom and the United States, considerable savings appear to have been made from such procedures (OECD, 1987b, 1989a, 1990a). In the former, scrutinies of existing posts have resulted in estimated annual savings of almost \$700 million without loss of service (OECD, 1989a) although it is sometimes difficult to ensure that outputs are the same²⁹. In the United Kingdom, contracting out still covers only a relatively small portion of overall spending (estimated at around 7 per cent in FY 1986-87). Savings in the range of 20 per cent have been common in the National Health Service and at the local government level, particularly with respect to refuse collection and public transport³⁰. There appears to be considerable scope for further contracting out.

The prospective benefits from contracting out must be balanced by two considerations. First, the market for the goods and services to be provided must be competitive, with a relatively large number of suppliers and different contracts (for example, garbage disposal over a wide range of local authorities) permitting cost comparisons. Second, the expected gains need to be judged against the potential costs of contracting. Transactions costs will increase where it is difficult to judge the quality, the potential costs of default are high and frequent tendering is necessary to ensure competitiveness.

e) Franchising and private financing of public infrastructure

The distinction between private and public sector responsibilities should not be seen as all or nothing; public decisions on infrastructure may be necessary, but their execution does not necessarily demand public investment or, more to the point, operation. In some cases, governments have moved to contract out infrastructure spending by leasing, allowing private sector provision and operation, or franchising. Franchising consists of granting the exclusive right to an operator who guarantees to provide the service under the best conditions, usually including lower prices. In sectors where a subsidy is required, competitive bidding for the franchise leads to its minimisation. As the system reduces the incentive to invest and maintain capital, it is considered more suitable for ventures with low capital requirements and, more usually, for "operating" franchises, where the public sector still takes the investment decisions.

29. In the United Kingdom, for example, studies of day-care services for the elderly and geriatric care suggest that private-public sector cost comparisons are easily distorted by differences in the level of disability. The private sector has an incentive to select "low-cost" patients, leaving the more difficult cases to the public sector. See Cullis and Jones (1987).

30. OECD (1989a), OECD (1987b) and references cited therein.

Several problems, notably the length of the concession and difficulties in monitoring performance and maintaining competitive pressures, arise with franchising arrangements. For example, when the contract comes up for revision, the incumbent's knowledge of costs and the industry gives him a substantial advantage over the other bidders³¹, even in the case of an "operating" franchise.

Nevertheless, if an appropriate incentive structure can be built into the contracts, operation by the private sector may lead to more efficient use of resources. The use of private finance for some trunk roads, bridges and tunnels is increasing in Norway, for bridges in the United Kingdom and for road tunnels in the Netherlands. The Channel Tunnel between France and the United Kingdom is a major example of such private sector initiatives.

3. Concluding comments

There has been a shift in emphasis within governments from merely exerting budgetary control towards achieving well-defined objectives at minimum cost, as well as being able to respond flexibly to new challenges. Devolution of spending authority, greater accountability for results and better incentives to encourage improved performance are major ingredients. This has been accompanied by greater recognition that, in a number of areas, the private sector may be a lower-cost producer of services traditionally provided by the public sector.

The potential for market testing of many government activities remains under-utilised. Where these possibilities have been exploited, significant gains in efficiency have accrued. Moreover, there are considerable savings to be achieved from improving public procurement, especially by encouraging greater foreign competition. While there is definitely scope for increasing the efficiency of public administration through improved management practices and incentives, it remains difficult to judge, at this early stage, whether recent changes are bearing fruit. Initial results may first be seen in improved service, with the impact on budgets appearing only over the longer haul.

V. CHALLENGES FOR THE 1990s

During the 1980s, governments in most OECD countries managed to restore greater balance to public finances, to brake the upward trend in public spending which had characterised the 1960s and 1970s and to reduce the scope of many regulatory activities. Nonetheless, the process of budgetary consolidation and regulatory review and reform remains unfinished. Twelve countries were still in deficit in 1989; in five, deficits were over 5 per cent of GDP. The latest OECD Secretariat projections in Economic Outlook 48 suggest little overall improvement by 1992. Government spending as a per cent of OECD GDP is still higher than it was at the previous cyclical peak in 1979, and a certain "battle fatigue" is appearing after almost 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 before considering the choices facing the public sector.

31. See Williamson (1976) for the case of cable TV franchising.

1. Expenditure pressures in the 1990s

i) "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 quality of public services³².

Public investment as a share of GDP has been falling in most countries since the mid-1970s. While this partly reflects the political reality that public investment proved easier to cut than public consumption³³, 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 some evidence that infrastructure is deteriorating and that this may be one factor accounting for poor productivity performance³⁴. 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 will not necessarily have to increase to the same extent. Savings can 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.

ii) Social spending

Recent analysis by the OECD (1988a, 1988b and 1988d) 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 demographic changes. The potential reductions in education and family assistance spending resulting from smaller young cohorts will be more than outweighed by rising health and pension costs. The above studies make clear that the prospective imbalances between expenditures and financing capacity require a rapid policy response if future outlays are to be contained.

Recent OECD projections show a relatively modest demographic impact on social spending in the 1990s. Table 10 presents a projection of the change in dependency ratios in nine OECD countries for the 1990s; dependency is defined (as in Part II) as the ratio of the number of young and old dependents to the

32. A study by the U.S. General Accounting Office (See Kleeman, 1989) stresses this point, and in particular the need to consider geographical compensation differences.

33. 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.

34. 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.

working-age population. The projections show a significant decrease in the young-age dependency ratio and a small increase in the old-age dependency ratio at the OECD level, resulting in a decline of the total dependency ratio over the same period.

Nonetheless, there is likely to be some demographic-related spending pressure because older persons make significantly higher calls on social expenditure than the young. Furthermore, OECD projections 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 a) benefit formulae often link the real value of pension benefits to the real average wage; b) 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 c) not all pension systems have reached maturity. Similarly, public real per capita spending on health can be expected to keep increasing in coming years (see OECD, 1988b). This partly reflects the rising fraction of the very old among the retired, new and more expensive diagnostic tests and methods of treatment and the cost of treating AIDS. More widespread use of addictive drugs may also affect the cost of law enforcement, medical spending and associated social programmes.

Despite the heavy spending on transfers, there remain significant pockets of poverty in many OECD countries, associated with high and persistent unemployment, the adequacy of support payments under existing systems and family structure and size³⁵. Lack of marketable skills or work experience has contributed to welfare dependency for many of these persons.

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 have been calls for higher levels of education achievement and greater relevance 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 the participation rate of women and in single-parent families will give it even greater prominence in the 1990s³⁶. Moreover, belief that early socialisation and schooling may benefit the social/educational performance of young people has raised the associated issue of the quality of child care and led to calls for an expansion of existing public-sector

35. The following groups are often found in lower parts of the income distribution, although not always at the same level of disadvantage: part-time workers, long-term unemployed, single parents, large families, the long-term unemployed, and early retirees.

36. The number of single-parent households has increased sharply in most countries for which data are available; in the United States, they account for 23 per cent of all households with children. See Sorrentino (1990).

kindergarden/maternal school systems and for the regulation of private sector child-care institutions. Furthermore, it has been argued that the availability of subsidised child care is necessary to encourage certain groups, such as single parents receiving income support, to re-enter the labour market.

iii) 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 and Hoeller, 1990) 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 in enforcement³⁷. However, governments are likely to come under pressure to provide subsidies to ease the cost of adjustment in some sectors even though such policies should be eschewed. Furthermore, governments may have to take charge of the clean-up of past pollution in areas of their own responsibility and 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 are put at between \$120 and 200 billion³⁸, and 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 some groups are arguing 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 reduction in defence spending. However, defence spending accounts for only 2 to 3 per cent of GDP in most OECD countries covered in Table 10, rising significantly above 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.

37. 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.

38. This represents 2.3 to 3.8 per cent of 1989 GDP but will be spread over several years.

2. 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. The introduction of environment-related user charges might provide a new income source, but 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 any new needs. Policies will need to evolve on three broad fronts: increasing efficiency in the delivery of government goods and services and in programme efficacy; reviewing spending priorities and programme objectives; and 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 1 1/2 per cent of GDP³⁹. Given past experience, however, the benefits may be 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 have been aimed 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, they may provide a promising avenue for improving supply responsiveness in two important areas of 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 inevitably leads to unsatisfied demand and non-price allocation (e.g. rationing) of available supply. In the light of this, many governments are making more widespread use of user charges to ensure those who benefit pay a greater

39. This is not negligible. For instance, in 1988, total budgetary subsidies also represented 1 1/2 per cent of GDP on average for the OECD as a whole. See Ford and Suyker (1990).

portion of the costs. However, concern that lower income groups may be unable to pay for the services is one factor preventing governments from extending this on a more widespread basis. On the other hand, limiting access by rationing, besides being inefficient, may raise equity problems of its own.

As income transfer spending seems likely to continue exerting 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 alternative 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 them, 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 less transfers.

Increased targeting of transfers to specific groups is another policy option by which governments may be able 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 problems of the "poverty trap" and concern that stringent eligibility requirements may reduce the take-up amongst those people who have a right to them.

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).

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 social spending begins to rise sharply. The most should be made of opportunities to introduce far-reaching and necessary reforms.

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Table 1

General Government Financial Balances (net lending) (a)
Surplus (+) or Deficit (-) as per cent of nominal GDP/GNP

	1970	1975	1979	1982	1984	1989
United States	-1.0	-4.1	0.5	-3.5	-2.8	-1.7
Japan	1.7	-2.8	-4.7	-3.6	-2.1	2.7
Germany	0.2	-5.6	-2.6	-3.3	-1.9	0.2
France	0.9	-2.4	-0.8	-2.8	-2.8	-1.5
Italy	-4.0	-12.9	-10.2	-11.3	-11.6	-10.2
United Kingdom	3.0	-4.5	-3.2	-2.5	-3.9	0.9
Canada	0.8	-2.5	-2.0	-5.9	-6.5	-3.4
Australia	2.8	-3.1	-2.4	-1.4	-3.2	1.6
Austria	1.2	-2.5	-2.4	-3.4	-2.6	-2.7
Belgium	-2.1	-5.3	-7.5	-11.2	-9.2	-6.3
Denmark	3.2	-1.4	-1.7	-9.1	-4.1	-0.6
Finland	4.3	2.7	0.4	-0.6	0.4	2.9
Greece	-0.1	-3.4	-2.5	-7.6	-9.9	-18.4
Ireland	-3.6	-11.1	-11.0	-14.1	-10.1	-3.0
Netherlands	-1.1	-3.0	-3.7	-7.1	-6.3	-5.2
Norway	3.2	3.3	1.3	4.4	7.5	1.2
Portugal	1.5	-3.9	-7.9	-11.8	-13.4	-6.6
Spain	0.0	-0.5	-2.2	-5.6	-5.5	-2.6
Sweden	4.6	2.8	-3.0	-7.0	-2.9	5.1
Switzerland	..	..	3.8	4.3	4.9	6.4
OECD Europe (b)	0.3	-4.8	-3.6	-5.1	-4.7	-2.4
North America (b)	-0.9	-3.9	0.2	-3.7	-3.1	-1.8
OECD (b)	0.0	-4.1	-2.0	-4.2	-3.6	-1.3

a) On a SNA basis, except for the United States, the United Kingdom, Australia, Greece and Sweden where the data are based on national methods.

b) Averages computed using 1985 purchasing power parities.

Source: OECD Secretariat.

Table 2
General Government Current Receipts (a)
 Per cent of nominal GDP

	1970	1979	1982	1984	1989
United States	28.9	30.5	31.1	30.7	32.0
Japan	20.6	26.3	29.5	30.4	35.0
Germany	38.3	44.4	45.4	45.3	44.6
France	38.5	42.7	45.9	47.5	46.5
Italy	30.4	35.7	35.9	37.4	41.1
United Kingdom	40.2	38.0	42.8	42.1	39.1
Canada	34.2	35.5	39.1	38.7	39.7
Total of above countries (b)	30.8	33.3	35.0	35.0	36.2
Austria	39.7	45.8	46.7	47.5	45.9
Belgium	35.2	43.1	45.1	45.7	42.6
Denmark	41.7	50.8	51.2	55.5	58.1
Finland	34.1	36.1	37.3	39.0	40.1
Greece	26.8	30.6	32.3	34.8	32.6
Iceland	30.9	32.7	35.6	34.0	34.7
Ireland	35.3	35.9	41.9	43.8	42.6
Luxembourg	35.4	52.1	53.8	54.2	*
Netherlands	42.0	51.4	53.8	54.1	50.0
Norway	43.5	50.8	51.9	53.0	53.3
Portugal	24.3	30.0	35.4	37.3	36.1
Spain	22.5	28.4	31.4	33.2	38.5
Sweden	46.7	56.5	58.0	59.2	64.5
Switzerland	26.5	33.1	33.3	34.7	33.9
Turkey	*	15.8	19.9	19.9	16.0
Total of other European countries (b)	30.1	37.3	39.4	40.7	40.1
Australia	26.6	29.8	32.4	33.4	34.7
New Zealand	*	36.7	41.1	40.7	38.7
OECD-Europe (b)	34.8	39.4	41.6	42.4	41.9
North America (b)	29.3	30.9	31.8	31.4	32.7
OECD (b)	30.5	33.8	35.6	35.7	36.7

- a) Current receipts of general government mainly consist of direct and indirect taxes and social security contributions paid by employers and employees.
- b) Averages computed using 1985 purchasing power parities.

Source: OECD Secretariat.

Table 3

**Income tax and social security contributions paid by an average
production worker as a percentage of gross earnings (a)**

(Single earner)

	Income tax payments		Social security contributions		Income tax plus social security contributions	
	1984	1988	1984	1988	1984	1988
United States	23	19	7	8	30	27
Japan	9	8	7	7	16	15
Germany	18	18	17	17	35	35
France	8	7	15	17	23	24
Italy	17	19	9	9	26	28
United Kingdom	22	19	9	9	31	28
Canada	19	20	4	4	23	24
Australia	21	24	1	1	22	25
Austria	10	10	16	17	26	27
Belgium	23	23	12	12	35	35
Denmark	40	45	6	2	46	47
Finland	30	32	3	3	33	35
Greece	3	6	13	13	16	19
Ireland	26	27	8	8	34	35
Luxembourg	17	13	12	12	29	25
Netherlands	12	12	27	26	39	38
New Zealand	27	24	0	0	27	24
Norway	23	24	10	9	33	33
Portugal	7	6	11	11	18	17
Spain	13	11	6	6	19	17
Sweden	36	37	0	0	36	37
Switzerland	11	11	10	10	21	21
Turkey	26	21 (b)	8	14 (b)	34	35 (b)

a) To nearest percentage point. These figures do not take account of expense-related reliefs, which even at this income level vary considerably from country to country. They include tax levied at lower levels of government. Social security contributions paid by employers are not included.

b) 1987.

Source: OECD, The Tax/Benefit Position of Production Workers 1985-88, Paris, 1989.

Table 4

Top and first positive rates of the central government (a) personal income tax: 1986 and latest announced data (b)
(to nearest percentage point of taxable income)

Country	Top Rates *			First Positive Rates **			
	1986 top tax rate A	Tax rate in latest announced year (c) B	Difference C	Country	1986 first positive rate D	Tax rate in latest announced year (c) E	Difference F
Sweden	50	20 (iv)	30	Austria	21	10 (ii)	11
New Zealand	57	33 (ii)	24	Netherlands	19	13 (iii)	6
United States (a) (d)	50	28 (ii)	22	Ireland	35	30 (iii)	5
United Kingdom	60	40 (ii)	20	United Kingdom	29	25 (ii)	4
Japan (a)	70	50 (ii)	20	Australia	24	21 (ii)	3
Norway (a) (d)	40	20 (ii)	20	Germany	22	19 (iii)	3
Belgium (a)	72	55 (iii)	17	Italy	12	10 (ii)	2
Greece	63	50 (iii)	13	Luxembourg	12	10 (ii)	2
Austria	62	50 (ii)	12	Japan	10.5	10 (ii)	0.5
Italy	62	50 (ii)	12	Switzerland	1	1 (i)	0
Netherlands (e)	72	60 (iii)	12	France	5	5 (ii)	0
Australia	57	47 (iii)	10	Turkey	25	25 (iii)	0
Spain	66	56 (ii)	10	Belgium	24	25 (iii)	-1
France	65	57 (ii)	8	Denmark	20	22 (ii)	-2
Finland (a)	51	43 (iii)	8	Finland	6	9 (iii)	-3
Iceland	38.5	33 (iii)	5.5	United States	11	15 (ii)	-4
Denmark (a) (d)	45	40 (ii)	5	New Zealand	17.5	24 (ii)	-6.5
Canada (a) (d)	34	29 (i)	5	Norway	3	10 (ii)	-7
Ireland	58	53 (iii)	5	Greece	10	18 (iii)	-8
Germany	55	53 (iii)	2	Canada	6	17 (i)	-11
Luxembourg	57	56 (i)	1	Iceland	18.5	33 (iii)	-14.5
Turkey	50	50 (ii)	0	Sweden	4	20 (iv)	-16
Switzerland (a)	13	13 (i)	0	Spain	8	25 (ii)	-17

* Countries ranked by order in column C.

** Countries ranked by order in column F.

a) Countries with important taxes at subordinate levels of government, typical rates for 1988 being flat Belgium 7, Canada 17, Denmark 30 Finland 16, Norway 25, Sweden 31, ~~PROGRESSIVE~~ Japan 5 to 16, Switzerland 5 to 31 (cantonal and communal), United States 2 to 14.

b) Comparison not possible for Portugal where system is completely changed.

c) i) = 1988 (ii) = 1989 (iii) = 1990 (iv) = 1991.

d) Countries with separate alternative minimum or additional income taxes on a wider tax base. In Norway the latter were increased from 6 to 8.5 per cent in 1989.

e) 1986 figures refer to the personal income tax only, whereas 1989 refer also to social security contributions, now levied on the same base as the income tax.

SOURCE: OECD Secretariat.

Table 5
 Schedule rates of corporation tax
 (Central government)

Country	1986	1990
United States	46	34
Japan	43	37
Germany	56	50
France	45	37
Italy	36	36
United Kingdom	35	35
Canada	36	28
Australia	49	39
Austria	55	30
Belgium	45	43
Denmark	50	40
Finland	33	25
Greece	49	46
Iceland	51	50
Ireland	50	40
Luxembourg	40	34
Netherlands	42	35(a)
New Zealand	45	33
Norway	28	28
Portugal	47	36
Spain	35	35
Sweden	52	52
Switzerland	10	10
Turkey	46	46
OECD Average (b)	43	36

a) 40 per cent for income beneath
Gld. 250 000.

b) Unweighted.

Source: OECD (1990), Taxation and
International Investment Flows.

Table 6
 General Government Outlays (a)
 as per cent of GDP

	1970	1979	1982	1984	1989
United States	31.6	31.7	36.5	35.8	36.5
Japan	19.4	31.6	33.7	33.2	32.9
Germany	38.6	47.6	49.4	48.0	45.1
France	38.5	45.0	50.4	52.0	49.3
Italy	34.2	45.5	47.4	49.3	51.7
United Kingdom	38.8	42.5	46.9	47.2	39.7
Canada	34.8	39.0	46.6	46.8	44.2
Total of above countries (c)	32.1	36.5	40.5	40.1	39.3
Austria	39.2	48.9	50.9	50.8	49.4
Belgium	36.5	49.3	55.3	54.1	48.9
Denmark	40.2	53.2	61.2	60.3	59.5
Finland	30.5	36.7	39.1	39.8	38.3
Greece	22.4	29.7	37.0	40.2	46.3
Iceland	30.7	32.8	34.2	32.1	38.4
Ireland	39.6	46.8	55.8	54.0	46.4
Luxembourg	33.1	52.5	55.8	51.8	*
Netherlands	43.9	55.8	61.6	61.0	55.7
Norway	41.0	50.4	48.3	46.3	52.9
Portugal	21.6	36.2	43.0	44.4	40.9
Spain	22.2	30.5	37.5	39.3	41.8
Sweden	43.6	61.0	66.3	63.5	60.6
Switzerland (c)	21.3	29.9	30.1	31.4	29.7
Turkey	*	33.5	28.3	24.7	26.2
Total of other European countries	29.1	41.8	45.5	45.1	43.9
Australia (d)	26.8	33.4	37.1	38.6	34.3
New Zealand (b)	*	35.9	39.5	37.1	30.9
OECD Europe (b)	34.9	44.1	47.6	47.8	45.5
North America (b)	31.9	32.3	37.4	36.7	37.2
OECD (b)	31.5	37.2	41.1	40.7	39.8

- a) Total outlays consist mainly of current disbursements plus gross capital formation.
 b) Averages computed using 1985 purchasing power parities and excluding New Zealand and Turkey.
 c) Current disbursements only.
 d) Fiscal year beginning on 1st July.

Source: OECD Secretariat.

Table 7

State and local expenditures

Percentage of total general government expenditure
(excluding social security)

	1970	1975	1979	1982	1984	1988
United States	0.51	0.55	0.55	0.52	0.51	0.54
Japan	0.71	0.74	0.74	0.74	0.74	0.75
Germany	0.61	0.61	0.61	0.62	0.60	0.61
France	0.24	0.27	0.28	0.29	0.27	0.30 ~
United Kingdom	0.38	0.39	0.35	0.31	0.34	0.34 (a)
Canada	0.64	0.60	0.64	0.62	0.60	0.64
Australia	0.48	0.52	0.53	0.51	0.50	0.50
Austria	0.38	0.44	0.43	0.43	0.43	0.44
Belgium	0.16	0.17	0.18	0.19	0.19	0.20
Finland	0.45	0.48	0.50	0.52	0.52	0.54
Greece	0.18	0.13	0.16	0.17	0.20	0.23
Ireland	0.37	0.39	0.40	0.39	0.39	0.35 (a)
Luxembourg	0.25	0.28	0.25	0.24	0.21	0.25 (b)
Netherlands	0.50	0.53	0.53	0.53	0.53	0.50
Sweden	..	..	..	0.51	0.53	0.53
Switzerland	0.70	0.74	0.72	0.73	0.72	0.74

a) 1987.

b) 1986.

Source: SNA.

Table 8
Revenues and Grants Received by State and Local Government
 Percentage of total revenues

	Tax Revenue		Non-tax Revenue		Grants	
	1980	1987	1980	1987	1980	1987
<u>Federal Countries</u>						
Austria						
State	47.3	59.4 (a)	13.1	12.4 (a)	39.6	28.2 (a)
Local	53.2	53.8 (a)	30.7	30.8 (a)	16.1	15.4 (a)
Germany						
State	70.5	71.8	11.7	12.7	17.9	15.5
Local	35.3	34.7	34.3	36.9	30.4	28.4
Switzerland						
State	54.8	56.0 (b)	18.1	18.4 (b)	27.1	25.6 (b)
Local	52.9	52.7 (b)	31.6	31.2 (b)	15.6	16.1 (b)
<u>Unitary Countries</u>						
Belgium	27.8	33.4 (a)	7.9	6.5 (a)	64.4	60.2 (a)
Denmark	38.9	48.4	9.3	9.4	51.8	42.3
France	42.7	46.3	14.2	18.1	43.1	35.6
Netherlands	5.2	5.9	12.7	13.8	82.2	80.3
Spain						
Local	52.4	54.5 (a)	37.8	17.1 (a)	9.8	28.4 (a)
Regional			9.4	8.8 (a)	90.6	91.2 (a)
United Kingdom	29.6	32.5 (a)	23.6	19.9 (a)	46.7	47.6 (a)

a) 1986.

b) 1984.

Source: Owens and Norregaard (1990), Table 4.

Table 9
Structure of government outlays by economic category (a)
Per cent of GDP

	United States			Japan			Germany			France			Italy		
	1979	1989	Change	1979	1989	Change	1979	1989	Change	1979	1989	Change	1979	1989	Change
Total current disbursements	30.4	34.9	4.5	23.9	27.0	3.1	42.4	41.3	-1.0	41.4	46.2	4.8	37.7	47.1	9.5
Government consumption	17.0	18.3	1.3	9.7	9.3	-0.4	19.6	18.6	-1.0	17.6	18.3	0.7	14.7	16.9	2.2
Subsidies	0.4	0.3	-0.1	1.3	0.8	-0.6	2.2	2.0	-0.2	2.0	1.7	-0.2	2.9	2.5	-0.4
Social security and other transfers	10.2	11.0	0.8	10.3	12.6	2.3	18.9	18.0	-0.8	20.4	23.5	3.0	14.8	18.6	3.8
Debt interest payments (b)	2.8	5.4	2.5	2.6	4.3	1.7	1.7	2.6	1.0	1.4	2.7	1.4	5.3	9.1	3.8
Government investment	1.7	1.7	0.0	6.1	5.0	-1.3	3.2	2.3	-1.0	3.1	3.3	0.2	3.2	3.5	0.4
Capital transfers	-0.4	-0.2	0.1	0.5	-0.1	-0.6	1.8	1.1	-0.6	0.4	0.1	-0.3	0.9	1.1	0.2
Other transfers	-0.1	0.1	0.1	0.9	1.1	0.2	0.2	0.1	-0.1	0.1	0.0	-0.1	0.0	0.0	0.0
Total outlays	31.7	36.3	4.6	31.6	33.1	1.5	47.6	44.8	-2.8	45.0	49.6	4.6	41.7	51.7	10.0
	United Kingdom			Canada			Australia			Austria			Belgium		
	1979	1989	Change	1979	1989	Change	1979	1989	Change	1979	1989	Change	1979	1989	Change
Total current disbursements	39.4	37.6	-1.8	36.0	41.7	5.7	30.4	30.9	0.5	42.9	44.9	2.0	46.1	48.0	1.9
Government consumption	19.7	19.6	-0.1	19.0	18.6	-0.5	17.3	16.4	-0.9	18.1	18.1	0.1	18.0	15.3	-2.7
Subsidies	2.4	1.1	-1.3	2.0	1.9	-0.1	1.5	1.1	-0.3	2.9	2.7	-0.2	1.7	1.2	-0.5
Social security and other transfers	12.9	13.2	0.3	9.9	12.2	2.2	9.5	9.7	0.2	19.6	20.1	0.5	21.3	21.0	-0.3
Debt interest payments (b)	4.4	3.7	-0.7	5.0	9.0	4.0	2.1	3.7	1.6	2.3	3.9	1.6	5.0	10.5	5.4
Government investment	2.6	1.5	-1.1	2.7	2.4	-0.3	3.0	2.0	-1.0	4.4	3.1	-1.3	3.2	1.6	-1.7
Capital transfers	0.7	0.4	-0.3	0.3	0.4	0.1	0.1	0.2	0.1	1.3	1.3	0.0	*	*	*
Other transfers	*	*	*	*	*	*	0.0	-0.1	-0.1	0.3	0.1	-0.3	*	*	*
Total outlays	42.7	39.5	-3.2	39.0	44.5	5.5	33.4	33.0	-0.4	48.9	49.3	0.4	49.3	49.5	0.2

Notes: Totals may not add due to rounding.

a) Figures for 1989 are Secretariat estimates.

b) Defined as property income paid.

c) Source: ADA.

SOURCE: SWA.

Table 9 (continued)

	Denmark			Finland			Greece			Iceland			Ireland		
	1979	1989	Change	1979	1989	Change	1979	1989	Change	1979	1989	Change	1979	1989	Change
Total current disbursements	48.9	57.3	8.4	33.0	35.3	2.3	29.7	47.1	17.4	26.6	31.5	4.9	41.6	44.3	2.6
Government consumption	25.0	25.5	0.5	17.9	20.0	2.1	16.3	21.6	5.2	17.0	19.3	2.3	18.1	15.5	-2.6
Subsidies	3.2	3.3	0.0	3.5	2.8	-0.7	2.3	1.4	-1.0	3.9	3.2	-0.7	3.8	2.5	-1.3
Social security and other transfers	17.1	20.9	3.8	10.6	11.2	0.6	8.9	15.9	7.0	4.6	5.7	1.1	14.0	18.1	4.1
Debt interest payments (b)	3.5	7.6	4.1	0.9	1.4	0.4	2.2	8.3	6.1	1.1	3.4	2.2	5.8	8.2	2.4
Government investment	3.8	2.2	-1.6	3.3	3.2	-0.2	*	*	*	3.4	4.1	0.7	4.2	2.2	-2.0
Capital transfers	0.7	0.7	0.0	0.2	0.1	-0.1	*	*	*	2.8	2.7	-0.1	1.1	0.3	-0.7
Other transfers	-0.1	-0.3	-0.2	0.2	0.0	-0.2	*	*	*	*	*	*	*	*	*
Total outlays	53.2	59.9	6.7	36.7	38.6	1.9	29.7	47.2	17.4	32.8	38.3	5.5	46.8	46.7	-0.1
	Netherlands			Norway			New Zealand (c)			Portugal			Spain		
	1979	1989	Change	1979	1989	Change	1979	1989	Change	1979	1989	Change	1979	1989	Change
Total current disbursements	51.3	51.7	0.4	46.1	50.2	4.1	28.8	27.0	-1.8	31.2	36.9	5.6	29.7	35.5	5.9
Government consumption	18.1	15.1	-3.0	19.5	20.9	1.4	16.9	14.6	-2.3	13.9	16.1	2.2	12.7	14.1	1.4
Subsidies	1.3	1.6	0.3	7.0	6.2	-0.9	1.8	0.4	-1.4	4.5	1.4	-3.2	2.1	1.9	-0.2
Social security and other transfers	27.6	28.2	0.6	16.3	19.8	3.5	10.1	12.0	1.9	10.0	11.6	1.7	14.2	16.2	2.1
Debt interest payments (b)	4.2	6.8	2.6	3.2	3.3	0.1	*	*	*	2.9	7.8	4.9	0.7	3.3	2.6
Government investment	3.1	2.3	-0.8	4.3	3.7	-0.6	7.1	4.2	-2.8	3.8	3.7	-0.1	1.8	4.3	2.5
Capital transfers	1.5	2.0	0.5	*	*	*	*	*	*	1.1	0.2	-1.0	1.3	1.1	-0.2
Other transfers	*	*	*	*	*	*	*	*	*	0.1	0.0	-0.1	0.1	0.1	0.0
Total outlays	55.8	56.0	0.1	50.4	54.0	3.6	35.9	31.3	-4.7	36.2	40.5	4.3	32.9	41.0	8.1

Table 9 (continued)

	Sweden			Switzerland			Turkey		
	1979	1989	Change	1979	1989	Change	1979	1989	Change
Total current disbursements	56.9	57.8	1.0	29.9	30.0	0.1	19.3	17.0	-2.3
Government consumption	29.1	26.2	-2.9	12.9	12.6	-0.3	13.4	10.5	-2.9
Subsidies	4.3	4.7	0.4	1.4	1.4	0.0	0.0	0.0	0.0
Social security and other transfers	19.3	21.3	2.0	13.7	14.6	0.9	6.0	6.5	0.6
Debt interest payments (b)	4.1	5.6	1.5	1.9	1.4	-0.5	*	*	*
Government investment	4.3	2.8	-1.5	*	*	*	14.2	8.3	-5.8
Capital transfers	0.5	0.1	-0.5	*	*	*	*	*	*
Other transfers	-0.1	-0.4	-0.3	*	*	*	*	*	*
Total outlays	61.6	60.4	-1.3	29.9	30.0	0.1	33.5	25.3	-8.1

Table 10

Structure of general government outlays
(Per cent of GNP/GDP)

	United States			Japan			Germany			France			United Kingdom		
	1979	1987	Change	1979	1988	Change	1979	1987	Change	1979	1986	Change	1979	1986	Change
I. <u>Total expenditure</u>	31.7	36.9	5.2	31.6	32.9	1.3	47.6	46.9	-0.7	45.0	51.6	6.6	42.7	45.5	2.8
TRADITIONAL DOMAIN															
II. <u>Public goods</u>	7.7	9.7	2.0	..	..	..	7.9	7.9	0.0	7.0	7.8	0.8	8.3	8.9	0.6
1. Defence	4.9	6.6	1.7	0.8	0.9	0.1	2.8	2.7	-0.1	3.3	3.1	-0.2	4.5	4.9	0.4
2. General public services (b)	2.8	3.1	0.3	..	..	..	5.1	5.2	0.1	3.7	4.7	1.0	3.8	4.0	0.2
THE WELFARE STATE															
III. <u>Merit goods</u>	6.2	6.0	-0.2	11.4	11.4	0.0	12.7	12.2	-0.5	14.1	13.4	-0.7	12.1	12.1	0.0
1. Education	4.5	4.5	0.0	4.9	4.3	-0.6	5.0	4.4	-0.6	5.5	5.5	0.0	5.2	5.1	-0.1
2. Health	0.9	0.9	0.0	4.5	4.9	0.4	6.0	6.2	0.2	5.7	4.3	-1.4	4.6	5.1	0.5
3. Housing and other	0.8	0.6	-0.2	2.0	2.2	0.2	1.7	1.6	-0.1	2.9	3.6	0.7	2.3	1.9	-0.4
IV. <u>Income maintenance</u>	7.6	7.9	0.3	6.3	7.9	1.6	16.9	16.4	-0.5	16.9	23.9	7.0	10.5	13.2	2.7
1. Pensions	6.6	7.0	0.4	4.1	6.2	2.1	12.3	11.5	-0.8	12.3	13.9	1.6	6.4	6.8	0.4
2. Sickness benefits	0.1	0.2	0.1	0.2	0.2	0.0	0.8	0.7	-0.1	0.8	5.3	4.5	0.4	0.3	-0.1
3. Family allowances	0.4	0.4	0.0	1.6	1.2	-0.4	1.2	0.8	-0.4	1.2	3.0	1.8	1.6	1.8	0.2
4. Unemployment compensation	0.4	0.3	-0.1	0.4	0.3	-0.1	0.9	1.5	0.6	0.9	1.7	0.8	0.7	1.8	1.1
5. Other	..	..	..	0.0	0.0	0.3	1.7	1.9	0.2	1.7	0.0	-1.7	1.3	2.5	1.2
THE MIXED ECONOMY															
V. <u>Economic services</u>	4.6	5.7	1.1	6.0	4.9	-1.1	5.4	4.7	-0.7	3.5	3.6	0.1	4.8	4.3	-0.5
1. Capital transactions	1.6	1.8	0.2	3.8	3.2	-0.6	2.3	1.6	-0.7	0.9	0.8	-0.1	1.1	1.0	-0.1
2. Subsidies	0.4	0.7	0.3	1.2	0.6	-0.6	1.9	1.9	0.0	1.4	1.4	0.0	1.2	1.3	0.1
3. Other	2.6	3.2	0.6	1.0	1.1	0.1	1.2	1.2	0.0	1.2	1.4	0.2	2.5	2.0	-0.5
VI. <u>Public debt interest</u>	2.8	5.0	2.2	2.6	4.3	1.7	1.7	2.8	1.1	1.4	2.9	1.5	4.4	4.5	0.1
VII. <u>Balancing item (c)</u>	2.8	2.2	-0.6	4.5	3.6	-0.9	3.0	3.0	0.0	2.1	0.0	-2.1	2.7	2.6	-0.1
VIII. <u>Net lending</u>	0.2	-3.7	-3.9	-4.7	2.1	6.8	-2.6	-1.9	0.7	-0.8	-2.7	-1.9	-3.3	-2.8	0.5

a) Fiscal year beginning July 1st

b) General public services includes outlays not allocated by function.

c) The data coverage of the different items are not entirely consistent, which explains the presence of this item.

Totals may not add due to rounding.

SOURCES: OECD, Annual National Accounts, supplemented by data for item IV from national sources and OECD Social Expenditure Data File.

Table 10 (continued)

	Australia			Austria			Denmark			Finland		
	1979	1987	Change	1981	1987	Change	1979	1988	Change	1979	1988	Change
I. Total expenditure	33.4	36.4	3.0	50.3	52.8	2.5	53.2	57.6	4.4	36.7	40.2	3.5
TRADITIONAL DOMAIN												
II. Public goods	6.4	6.7	0.3	5.3	5.3	0.0	7.8	8.2	0.4	4.3	4.6	0.3
1. Defence	2.1	2.3	0.2	1.1	1.1	0.0	2.2	2.0	-0.2	1.3	1.5	0.2
2. General public services (b)	4.3	4.4	0.1	4.2	4.2	0.0	5.6	6.2	0.6	3.0	3.1	0.1
THE WELFARE STATE												
III. Merit goods	11.5	12.1	0.6	9.5	10.1	0.6	15.3	13.8	-1.5	9.9	10.9	1.0
1. Education	5.7	5.2	-0.5	4.2	4.5	0.3	7.3	6.8	-0.5	4.9	5.1	0.2
2. Health	4.4	5.3	0.9	4.6	4.9	0.3	5.6	5.2	-0.4	3.8	4.4	0.6
3. Housing and other	1.4	1.6	0.2	0.7	0.7	0.0	2.4	1.8	-0.6	1.2	1.4	0.2
IV. Income maintenance	7.1	7.3	0.2	18.6	20.3	1.7	14.7	15.4	0.7	8.6	11.6	3.0
1. Pensions	4.8	4.5	-0.3	13.8	15.2	1.4	8.5	8.5	0.0	5.6	..	..
2. Sickness	0.1	0.2	0.1	0.5	0.4	-0.1	1.3	1.1	-0.2	0.5	..	..
3. Family allowances	1.1	1.0	-0.1	2.5	2.1	-0.4	1.9	2.7	0.8	0.8	..	..
4. Unemployment compensation	0.8	1.1	0.3	0.5	0.9	0.4	2.7	2.8	0.1	0.6	..	..
5. Other	0.4	0.5	0.1	1.3	1.7	0.4	0.4	0.3	-0.1	1.0	..	..
THE MIXED ECONOMY												
V. Economic services	5.6	5.1	-0.5	8.1	7.2	-0.9	6.0	5.7	-0.3	9.0	6.1	-2.9
1. Capital transactions	1.4	1.1	-0.3	4.4	3.4	-1.0	1.4	1.1	-0.3	3.5	3.5	0.0
2. Subsidies	1.3	1.2	-0.1	2.4	2.5	0.1	2.6	2.5	-0.1	3.5	2.6	-0.9
3. Other	2.9	2.8	-0.1	1.3	1.3	0.0	2.0	2.1	0.1	2.0	..	-2.0
VI. Public debt interest	2.1	4.0	1.9	2.8	3.9	1.1	3.5	8.3	4.8	0.9	1.6	0.7
VII. Balancing items (c)	0.6	1.2	0.6	5.9	5.9	0.0	5.8	6.1	0.3	4.0	5.4	1.4
VIII. Net lending	-1.4	0.5	1.9	-1.8	-4.3	-2.5	-1.7	2.5	4.2	0.4	1.4	1.0

Table 10 (continued)

	Netherlands (d)			Norway			Sweden		
	1979	1986	Change	1981	1988	Change	1981	1987	Change
I. Total expenditures	55.2	57.9	2.7	47.9	53.5	5.6	64.2	59.3	-4.9
TRADITIONAL DOMAIN									
II. Public goods	14.5	13.7	-0.8	6.4	7.2	0.8	3.9	6.7	2.8
1. Defence	3.3	3.0	-0.3	3.1	3.0	-0.1	3.1	2.6	-0.5
2. General public services (b)	11.2	10.7	-0.5	3.3	4.2	0.9	0.8	4.1	3.3
THE WELFARE STATE									
III. Merit goods	14.7	13.0	-1.2	15.1	16.5	1.4	15.4	14.7	-0.7
1. Education	7.4	5.7	-1.7	6.2	6.7	0.5	5.9	5.7	-0.2
2. Health	6.3	6.3	0.0	6.4	7.4	1.0	7.4	6.9	-0.5
3. Housing and other	0.5	1.0	0.5	2.5	2.4	-0.1	2.1	2.1	0.0
IV. Income maintenance	16.6	19.1	0.5	12.3	15.6	3.3	16.7	17.2	0.5
1. Pensions	10.8	10.5	-0.3	7.9	9.7	1.8	11.5	11.3	-0.2
2. Sickness benefits	2.1	1.6	-0.5	1.8	2.1	0.3	3.2	3.6	0.4
3. Family allowances	1.8	1.3	-0.5	1.2	1.4	0.2	1.3	1.5	0.2
4. Unemployment compensation	1.8	2.1	0.3	0.3	0.6	0.3	0.5	0.8	0.3
5. Other	2.2	3.6	1.4	1.1	1.8	0.7	0.2	0.1	-0.1
THE MIXED ECONOMY									
V. Economic services	2.6	3.7	1.1	10.3	9.4	-0.9	13.0	7.7	-5.3
1. Capital transactions	1.8	2.8	1.0	1.3	1.4	0.1	5.2	0.9	-4.3
2. Subsidies	0.8	0.9	0.1	6.7	5.8	-0.9	4.6	4.7	0.1
3. Other	..	..	..	2.3	2.2	-0.1	3.2	2.1	-1.1
VI. Public debt interest	4.2	6.9	2.7	3.3	3.9	0.6	5.4	6.5	1.1
VII. Balancing item (c)	1.1	2.1	1.0	0.4	0.8	0.4	9.8	6.5	-3.3
VIII. Net lending	-3.7	-5.0	-1.3	4.7	2.5	-2.2	-5.3	4.2	9.5

d) For the Netherlands General Public Services equal Public consumption and investment less sub-categories relating to defence and education. Total Income Maintenance equals social assistance grants plus social security benefits excluding spending on the health cost insurance. Housing and other includes subsidies to private owners of rental accommodation and contributions to owner occupiers.

Table 11

Average wages of government employees
(Average annual growth rates in per cent)

	Real wages (a)	Relative wages (b)
United States		
1970-74	0.3	0.4
1974-79	-0.8	-0.6
1979-84	1.5	1.4
1984-89	0.9	0.2
Japan		
1970-74	7.3	0.1
1974-79	0.4	-1.6
1979-84	-0.5	-0.9
1984-89	2.4	0.4
Germany		
1970-74	4.0	0.2
1974-79	0.0	-1.7
1979-84	-0.1	0.4
1984-89	0.1	-2.0
France		
1970-74	2.9	-1.0
1974-79	0.0	-3.1
1979-84	0.0	-0.7
1984-89	0.0	-0.9
Italy		
1970-74	2.4	-0.9
1974-79	0.4	-2.9
1979-84	-0.3	-1.1
1984-89	0.2	-0.9
United Kingdom		
1970-74	3.3	0.2
1974-79	0.1	-0.8
1979-84	0.0	-1.6
1984-89	0.0	-3.1
Canada		
1970-74	3.4	0.1
1974-79	2.3	0.9
1979-84	-0.1	0.0
1984-89	-0.7	-1.7
Austria		
1970-74	2.2	-3.1
1974-79	2.1	-0.3
1979-84	-0.4	-0.4
1984-89	1.8	-0.5

- a) Relative to the private consumption deflator.
b) Relative to the average private sector wage (excluding social security contributions).

Source: OECD Secretariat.

Table 11 (continued)

	Real wages (a)	Relative wages (b)
Belgium		
1970-74	5.3	-1.2
1974-79	-0.1	-3.7
1979-84	-0.2	-0.1
1984-89	0.0	-0.2
Denmark		
1970-74	1.1	-0.8
1974-79	0.0	-1.2
1979-84	0.0	0.5
1984-89	0.3	-1.5
Finland		
1970-74	0.9	-3.7
1974-79	0.6	-0.8
1979-84	1.4	-0.6
1984-89	3.6	-0.3
Ireland		
1970-74	..	..
1974-79	0.0	-5.0
1979-84	0.1	-0.8
1984-89	0.1	-2.2
Netherlands		
1970-74	3.5	-0.9
1974-79	0.0	-2.2
1979-84	-0.1	1.3
1984-89	0.1	-1.0
Norway		
1970-74	4.3	0.6
1974-79	-0.5	-1.4
1979-84	-1.0	-1.0
1984-89	-1.0	-2.8
Spain		
1970-74	-1.3	-6.8
1974-79	2.7	-0.2
1979-84	0.3	0.0
1984-89	0.0	1.0
Sweden		
1970-74	-0.9	-0.8
1974-79	2.3	2.1
1979-84	-3.2	-0.5
1984-89	1.0	-1.2
Switzerland		
1974-74	5.2	1.1
1974-79	-0.3	-1.7
1979-84	1.1	0.5
1984-89	1.6	-2.1

Table 12

Government sector employment

	Annual average growth rate					Share in total employment				
	1970-75	1975-79	1979-84	1984-89	1989	1970	1975	1979	1984	1989
United States	3.2	2.1	0.1	2.0	15.1	16.0	17.1	16.1	15.3	15.1
Japan	2.8	1.7	0.7	0.0	8.2	7.7	8.7	8.8	8.7	8.2
Germany	3.8	1.9	1.0	1.0	15.4	11.1	13.8	14.7	15.5	15.4
France	2.0	1.7	1.8	0.9	22.7	17.6	19.0	19.9	22.1	22.7
Italy	3.8	2.6	1.4	1.2	17.3	12.3	14.6	15.8	16.6	17.3
United Kingdom	3.1	0.8	-0.3	-0.2	19.5	18.1	20.9	21.2	21.8	19.5
Canada	5.0	1.3	2.4	2.2	20.3	19.0	20.7	19.5	20.8	20.3
Australia (a)	7.2	2.1	2.7	1.4	15.7	11.8	15.4	16.2	17.4	15.7
Austria	4.1	3.0	1.9	1.8	20.2	12.9	15.9	17.3	19.1	20.2
Belgium	3.0	4.1	0.9	0.7 (b)	19.9 (c)	13.6	15.6	18.3	19.9	19.9 (c)
Denmark	6.5	4.6	2.5	0.9	30.2	17.2	23.6	26.9	30.2	30.2
Finland	5.0	4.3	3.2	2.5	20.9	11.4	14.0	17.2	18.9	20.9
Greece	2.6	3.3	2.2	3.0	10.5	7.4	8.2	9.1	9.4	10.5
Ireland	4.1	4.5	1.8	-0.2	18.1	12.0	14.4	16.1	18.2	18.1
Luxembourg	3.0	2.2	1.5	2.5 (b)	11.3 (c)	9.4	9.7	10.6	11.3	11.3 (c)
Netherlands	2.1	2.5	0.7	0.4	15.2	12.2	13.6	14.7	16.1	15.2
Norway	5.0	5.3	3.7	2.7	30.8	17.9	21.6	24.3	28.0	30.8
Portugal	4.0	6.2	6.2	2.7	14.1	7.9	8.5	10.5	13.3	14.1
Spain	7.6	5.0	2.9	4.4	14.2	5.5	7.8	10.0	12.8	14.2
Sweden	5.3	4.6	2.2	0.1	31.5	20.9	25.7	29.9	32.9	31.5
Switzerland	3.7	2.7	1.4	1.0	10.6	7.5	9.0	10.1	10.2	10.6
Unweighted average	4.2	3.3	1.8	1.5	17.6	12.7	14.9	16.3	17.5	17.6
Weighted average	3.5	2.2	0.9	1.0	15.1	13.0	14.8	15.2	15.4	15.1

a) Secretariat estimates.

b) 1984-88.

c) 1988 data.

Source: OECD Secretariat.

Table 13

Change in Dependency Ratios: Actual and Projected (a) (b)
(Percentage of working-age population) (c)

	United States			Japan			Germany		
	70s Change	80s Change	90s Change	70s Change	80s Change	90s Change	70s Change	80s Change	90s Change
Young Age Dependency Ratio (d)	-11.9	-3.1	-5.0	1.0	-6.9	-2.5	-7.7	-7.9	3.6
Old Age Dependency Ratio (e)	1.1	1.6	0.2	3.0	3.1	8.1	2.9	-1.8	3.8
Total Dependency Ratio (f)	-10.8	-1.5	-4.8	4.0	-3.9	5.6	-4.8	-9.7	7.4

	France			Italy			United Kingdom		
	70s Change	80s Change	90s Change	70s Change	80s Change	90s Change	70s Change	80s Change	90s Change
Young Age Dependency Ratio (d)	-4.2	-4.7	-3.1	-4.0	-6.3	0.5	-3.3	-5.9	-2.8
Old Age Dependency Ratio (e)	1.2	-1.4	2.6	2.4	2.7	4.2	2.7	0.4	-0.8
Total Dependency Ratio (f)	-3.0	-6.1	-0.5	-1.6	-3.6	4.7	-0.5	-5.4	-3.6

	Australia			Spain			Sweden		
	70s Change	80s Change	90s Change	70s Change	80s Change	90s Change	70s Change	80s Change	90s Change
Young Age Dependency Ratio (d)	-6.6	-6.1	-1.3	-2.8	-9.8	-7.4	-0.9	-4.2	-0.1
Old Age Dependency Ratio (e)	1.5	1.8	1.0	2.6	1.5	1.5	2.3	-0.0	-2.7
Total Dependency Ratio (f)	-5.1	-4.4	-0.3	-0.2	-8.3	-5.0	1.3	-4.3	-2.8

a) Differences in the per cent shares between 1970 and 1979, 1979 and 1989, 1989 and 1999.

b) Projections based on assumptions described in main text (footnote 61).

c) Working-age population defined as population aged 15 to 64.

d) Ratio of population aged 0 to 14 to working-age population.

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

f) Ratio of population aged 0 to 14 and over to working-age population.

SOURCE: OECD Secretariat.

Table 14
Real spending per head of target population in the 1970s and 1980s (a)
(Average annual per cent change)

	Old age, permanent sickness and survivors						Unemployment						Family assistance						Temporary sickness and maternity					
	1970 to 1979 (b)		1979 to 1988 (c)		1970 to 1988 (c)		1970 to 1979 (b)		1979 to 1988 (c)		1970 to 1988 (c)		1970 to 1979 (b)		1979 to 1988 (c)		1970 to 1979 (b)		1979 to 1988 (c)		1970 to 1979 (b)		1979 to 1988 (c)	
	Real per capita GDP	Relative to per capita GDP	Real per capita GDP	Relative to per capita GDP	Real per capita GDP	Relative to per capita GDP	Real per capita GDP	Relative to per capita GDP	Real per capita GDP	Relative to per capita GDP	Real per capita GDP	Relative to per capita GDP	Real per capita GDP	Relative to per capita GDP	Real per capita GDP	Relative to per capita GDP	Real per capita GDP	Relative to per capita GDP	Real per capita GDP	Relative to per capita GDP	Real per capita GDP	Relative to per capita GDP	Real per capita GDP	Relative to per capita GDP
Austria	4.4	0.6	3.4	1.5	5.3	1.5	1.9	0.0	8.4	4.4	0.1	-1.7	0.2	-3.4	0.6	-1.2	0.2	-3.4	0.6	-1.2	0.2	-3.4	0.6	-1.2
Canada	5.9	1.3	3.3	1.7	3.3	-1.3	3.1	1.5	5.1	0.5	-0.2	-1.7	5.9	1.3	5.7	4.0	5.9	1.3	5.7	4.0	5.9	1.3	5.7	4.0
Denmark	1.8	0.1	1.3	-0.2	-1.8	-3.4	-0.6	-2.1	1.3	-0.4	0.5	6.9	7.5	5.8	0.0	-1.5	7.5	5.8	0.0	-1.5	7.5	5.8	0.0	-1.5
France (d)	5.0	2.2	3.3	1.3	9.6	6.7	-0.8	-2.7	3.6	0.8	3.0	1.0	2.1	-0.6	2.4	0.4	2.1	-0.6	2.4	0.4	2.1	-0.6	2.4	0.4
Italy	4.5	1.1	5.2	2.5	10.6	7.0	-3.4	-5.9	-2.6	-6.0	1.7	-1.0	4.3	0.8	-1.9	-4.4	4.3	0.8	-1.9	-4.4	4.3	0.8	-1.9	-4.4
Japan	15.3	12.1	5.0	2.1	0.1	-2.7	-3.1	-5.8	11.0	8.0	1.0	-1.8	4.0	1.1	-1.5	-6.1	4.0	1.1	-1.5	-6.1	4.0	1.1	-1.5	-6.1
Netherlands	6.9	4.3	-1.2	-1.8	-4.2	-6.6	-5.3	-5.8	3.0	0.4	-0.6	-1.2	4.8	2.2	-1.6	-2.2	4.8	2.2	-1.6	-2.2	4.8	2.2	-1.6	-2.2
Norway	4.3	0.3	1.9	0.4	1.4	-2.5	6.3	4.8	-2.1	-5.5	8.6	7.1	17.3	12.3	1.2	-0.2	17.3	12.3	1.2	-0.2	17.3	12.3	1.2	-0.2
Sweden	5.8	3.7	1.2	0.0	7.1	4.9	6.2	6.9	4.7	2.6	1.2	0.0	8.0	5.8	3.0	1.7	8.0	5.8	3.0	1.7	8.0	5.8	3.0	1.7
Switzerland	5.6	4.7	1.6	-0.5	129.3	127.4	-2.2	-4.2	5.9	5.0	5.1	3.0	1.5	0.7	1.2	-0.9	1.5	0.7	1.2	-0.9	1.5	0.7	1.2	-0.9
United Kingdom	4.2	1.8	1.9	-0.6	-1.1	-3.7	-1.7	-4.1	10.6	7.7	4.3	1.7	-5.7	-8.2	-1.4	-3.8	-5.7	-8.2	-1.4	-3.8	-5.7	-8.2	-1.4	-3.8
United States	3.4	1.0	0.8	-0.5	-1.8	-4.1	-2.8	-3.9	3.2	0.8	0.0	-1.2	2.9	0.6	2.7	1.4	2.9	0.6	2.7	1.4	2.9	0.6	2.7	1.4
Average	5.6	2.7	2.3	0.5	13.1	10.3	0.0	-1.8	4.3	1.6	2.7	0.9	4.4	1.6	0.9	-0.9	4.4	1.6	0.9	-0.9	4.4	1.6	0.9	-0.9

a) deflated by the private consumption deflator

b) France: 1970 to 1980.

c) France: 1981 to 1988.

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

SOURCE: OECD Secretariat and Social Expenditure Data File.

Table 15
Education and health: real per capita spending
(Average annual rates of growth)

	Education (a)		Health (b)	
	1975 to 1980 (c)	1980 to 1988 (d)	1970 to 1979	1979 to 1988
United States	0.6	4.2	5.0	1.3
Japan (e)	5.2	-1.7	7.8	3.4
Germany	..	4.8	6.5	1.3
France	0.4	1.9	7.1	3.7
Italy	1.3	3.2	5.0	2.5
United Kingdom	-2.5	-1.8	5.7	0.9
Canada (e)	3.7	1.8	4.6	1.4
Australia	1.1	0.8	4.6	3.2
Austria (e)	1.6	3.9	4.6	1.1
Belgium (e)	..	4.3	6.7	2.3
Denmark (e)	-5.1	-1.4	3.6	0.8
Finland (f)	..	4.6	6.1	3.0
Greece (e)	2.1	0.8	7.1	6.0
Iceland	..	..	6.8	5.2
Ireland	2.3	-0.8	9.0	-2.0
Netherlands	1.1	0.2	-0.9	4.9
Norway (e)	-0.1	2.3	8.5	1.1
Portugal	8.2	0.4	..	..
Spain (e)	..	..	5.8	-0.2
Sweden (e)	4.1	-0.3	3.9	0.7
Switzerland (e)	4.1	3.5	1.6	1.5
Unweighted average	1.8	1.1 (g) (1.6) (h)	5.5	2.1

- a) Average spending per student. The following countries use data on Public expenditure on public education/Enrolments in public education: Australia, Belgium, Canada, France, Germany, Japan, the Netherlands, Norway, Sweden, Switzerland and the United States. Other countries use data on Public expenditure (total)/Total enrolments: Austria, Denmark, Finland, Greece, Ireland, Italy, Portugal and the United Kingdom.
- b) Spending per head of population covered by the public health insurance system.
- c) Australia: 1975-79; Switzerland: 1976-80.
- d) Australia, Belgium and Germany. 1983-87; Canada, Denmark, the Netherlands, Portugal, the United Kingdom and the United States: 1980-87; Ireland and Italy: 1980-86.
- e) 1988 estimated for health care price deflator.
- f) Public and private expenditure.
- g) Average excluding countries for which data are unavailable for the period 1975-80.
- h) Average of all countries.

Source: OECD, Health Data File, 1990 and country submissions.

Table 16

Public utilities

A. Value added as a share of total industry at current prices, average 1980-87 (a)

	Electricity, gas and water	Transport and storage	Communication	Total
United States	3.3	4.0	3.0	10.3
Japan	3.4	|..... 6.6		10.0
Germany	3.2	4.2	2.7	10.1
France	2.8	5.0	2.7	10.5
Italy	5.1	4.9	1.5	11.5
United Kingdom	3.5	|..... 8.1		11.6
Canada	3.9	5.5	3.0	12.4
Australia	3.6	|..... 7.5		11.1
Austria	3.9	4.4	2.7	11.0
Belgium	3.8	|..... 8.9		12.7
Denmark	1.8	8.3	2.0	12.1
Finland	3.6	6.8	2.5	12.9
Iceland	6.0	8.0	1.8	15.8
Luxembourg	2.4	3.6	2.0	8.0
Netherlands	2.6	5.2	2.4	10.2
New Zealand	3.5	6.0	3.2	12.7
Portugal	2.7	5.3	2.2	10.2
Spain	3.0	4.7	1.8	9.5
Sweden	3.8	5.6	2.7	12.1
Turkey	3.3	|..... 10.7		14.0

B. Gross capital formation as a per cent of total industry at current prices, average 1980-87

	Electricity, gas and water	Transport and storage	Communication	Total
United States	5.8	3.9	6.2	15.9
Germany	6.2	5.5	4.5	16.2
France	6.6	6.5	3.6	16.7
Italy	..	|..... 10.9		10.9
United Kingdom	5.8	4.7	3.8	14.3
Canada	9.5	5.1	4.1	18.7
Austria	8.3	..	..	8.3
Belgium	6.6	|..... 15.0		21.6
Denmark	7.5	11.3	3.7	22.5
Finland	5.8	6.9	2.6	15.3
Iceland	14.5	|..... 12.6		27.1
Luxembourg	3.7	4.8	2.7	11.2
Netherlands	4.6	|..... 11.4		16.0
New Zealand	7.1	8.1	3.6	18.8
Portugal	10.2	6.8	2.8	19.8
Sweden	10.3	7.5	4.9	22.7

a) 1980-86: Canada, the Netherlands, New Zealand, Austria, Denmark, Portugal and Spain.

Source: OECD, National Accounts.

Table 17
Extent of public enterprises as a percentage of each industry, by country

	Post	Telecom	Elec- tricity	Gas	Oil	Coal	Rail	Air	Motor	Steel	Ship- building
United States	90	0	25	0	0	0	25	0	0	0	0
Japan	100	33	0	0	na	0	25	0	0	0	0
Germany	100	100	75	50	25	50	100	100	25	0	25
France	100	100	100	100	na	100	100	75	50	75	0
Italy	100	100	75	100	na	na	100	100	25	75	75
United Kingdom	100	0	100	25	25	100	100	0	0	75	50
Canada	100	25	100	0	0	0	75	75	0	0	0
Australia	100	100	100	100	0	0	100	75	0	0	na
Austria	100	100	100	100	100	100	100	100	100	100	na
Belgium	100	100	25	25	na	0	100	100	100	50	0
Netherlands	100	100	75	75	na	na	100	75	50	25	0
Spain	100	50	0	75	na	50	100	100	0	50	75
Sweden	100	100	50	100	na	na	100	50	25	75	75
Switzerland	100	100	100	100	na	na	100	25	0	0	na

Source: Based on The Economist, 4th January 1986, p. 72, updated by Savas (1989). All figures should be considered rough approximations and are not uniform over time.

Table 16
Regulatory reform in OECD countries (a)

	Tracking		Airlines		Local telecommunications		Long-distance telecommunications		Electricity		Gas	
	Price	Entry Output	Price	Entry Output	Price	Entry Output	Price	Entry Output	Price	Entry Output	Price	Entry Output
<u>ited</u>												
<u>ates</u>												
1990	U	U	U	U	R	R	P	U	R	Generation:P R Distribution:R	Distribution:P Wellhead: U	Distribution:R R Wholesale: U
1975	P	R	P	R	R	R	R	R	R	R	R	Distribution:R R Production: U
<u>pan</u>												
1990	P	P	R	P	P	P	P	P	R	R	R	R
1975	R	R	R	R	R	R	R	R	R	R	R	R
<u>emary</u>												
1990	R	R	R	R	R	R	P	P	P	R	U	U
1975	R	R	R	R	R	R	R	R	P	R	U	U
<u>ited</u>												
<u>ngdom</u>												
1990	U	U	P/U	U	P	P	P	P	P	Generation:P R Distribution:R	Distribution:P Wellhead: U	Distribution:P U Production: K R
1975	U	U	R	P	R	R	R	R	R	R	R	Production: U
<u>ade</u>												
1990	U	P	U	U	R	R	R	R	P	R	Distribution:R Wellhead: U	Distribution:R U Production: U
1975	P	R	R	R	R	R	R	R	P	R	R	Distribution:R R Production: U
<u>ustralia</u>												
1990	U	U	U	U	R	R	P	R	R	R	Distribution:P Wellhead: U	Distribution:P P Wholesale: U
1975	U	U	R	R	R	R	P	R	R	R	n.a.	n.a.
<u>Austria</u>												
1990	U	U	P	P	R	R	R	R	P	R	Distribution:P Wellhead: R	R R
1975	P	R	R	R	R	R	R	R	P	R	Distribution:P Wellhead: R	R R

a) U = unregulated; P = partly regulated; R = regulated.

A change between the two years means that reforms have occurred. Controls can be total or partial depending on the specific regulatory environment. As regards entry, partial regulation refers to situations where incumbent firms are required to prove that the firm should not enter or where regulatory authorities allow some limited entry or competition. If the requirement is only that the firm be "fit, willing, and able", then entry is considered to be unregulated. Partly-regulated prices refer to situations where the firm is given some, but not complete, freedom in setting prices. A system of rate zones, or price floors and price caps would be an example of partial regulation. Prices or rates that must be filed and approved by a regulatory authority, but where the authority routinely approves any submitted fares are considered to be unregulated. For partly-regulated output, firms can have some, but not complete, freedom in selecting the services they offer. Regulated output refers to situations where routes, capacity, etc. are set or approved by the regulatory authority; carrier-of-last-resort obligations fall into this category.

Table 18 (continued)

	Trucking		Airlines		Local telecommunications		Long-distance telecommunications		Electricity		Gas	
	Price	Output	Price	Output	Price	Output	Price	Output	Price	Output	Price	Output
<u>Denmark</u> 1990	U	U	R	R	P	R	P	R	R	R	R	R
1975	R	R	R	R	P	R	P	R	R	R	R	R
<u>Iceland</u> 1990	P	R	R	R	P	R	R	R	U	R	U	Distribution:P Production: U
1975	R	R	R	R	R	R	R	R	P	R	R	Distribution:R Production: U
<u>Ireland</u> 1990	U	U	P	P	R	R	P	R	R	R	R	R
1975	U	R	R	R	R	R	R	R	R	R	R	R
<u>New Zealand</u> 1990	U	U	U	U	P	P	P	P	R	R	R	R
1975	R	R	R	R	R	R	R	R	R	R	R	R
<u>Norway</u> 1990	U	U	R	R	R	R	R	R	R	R	R	R
1975	R	R	P	R	R	R	R	R	P	R	R	R
<u>Sweden</u> 1990	U	U	R	R	R	R	R	R	R	R	R	R
1975	R	R	P	R	R	R	R	R	P	R	R	R
<u>Switzerland</u> 1990	U	U	R	R	R	R	R	R	R	R	R	R
1975	U	P	R	R	R	R	R	R	R	R	R	R
<u>Turkey</u> 1990	U	U	R	R	R	R	R	R	U	R	U	R
1975	P	U	R	R	R	R	R	R	U	R	U	R

All natural gas is imported from Norway

Table 19
Sales of public assets in OECD countries (a) (b)

Country	Utilities	Industrials and other	
United States	Conrail	Continental Illinois	Financial Claims
Japan	Nippon Telegraph & Telephone Japan National Railways Japan Airlines	Japan Tobacco Corporation	
Germany	I.V.G.	Veba Viel Volkswagen Deutsche Pfandbriefanstalt Deutsche Siedlungs und Landes- rentenbank	Deutsche Industrieanlagen Salzgitter Deutsche Lufthansa Schenker & Co. ^P Deutsche Verkehrskreditbank ^P Treuhand
France	TFI COCT	Elf-Aquitaine St. Gobain Paribas Dassault SOGENAL STP BIMF CCF BNP	Mutuelle Générale Française Caisse Nationale de Crédit Agricole Matra Naves CGE Suez Société Générale
Italy	Alitalia ^P	Aeritalia Sirti Selenia Alfa Romeo Banco Nazionale del Lavoro ^P	
United Kingdom	Associated British Ports British Gas British Telecom Sea Link National Bus Company British Airways British Airports Authority British Steel Water (England and Wales) Electricity (England and Wales) ^P North of Scotland Hydro-Electric Board ^P South of Scotland Electric Board ^P	British Petroleum Cable Wireless Britoil Enterprise Oil British Aerospace Jaguar Inmos Land International Aeradio British Shipbuilders (Merchant) ^P British Sugar Corp. Fairley Engineering Ferranti ICL Witch Farm Scott Lithgow Vespene Thornycroft Vickers Shipbuilding Yarrow Shipbuilders Leyland Bus Company BA Helicopters Swan Hunter	British Rail Hotel Uniparts ^P Shorts ^P Rolls-Royce Royal Ordnance North Sea Oil Licence Amersham International Council House Girobank ^P Miscellaneous Istel Rover Group National Freight Company British Shipbuilders (Warships) Plant Building Institute National Enterprise Board Holdings General Practice Finance Corp. DAB Forestry Commission Scottish Bus Group

a) In some cases initial public sector shareholdings were less than 100 per cent. Some sales of public assets were only partial sales and are not full privatisations.

b) A superscript "p" refers to a prospective sale.

Table 19 continued

Country	Utilities	Industrials and other	
Canada	Northern Transportation Pacific Western Airlines (Alberta) Quebecair (Quebec) Teleglobe	Canadair de Havilland Canadian Arsenal Canada Development Corp. Urban Transport Development Corporation (Ontario)	Manisivik Mines Cambior (Quebec) Eldorado Nuclear Donohue (Quebec) Petro Canada ^P Telestat ^P
Austria	Gras-Koflacher Eisenbahn ^P und Bergbau GmbH ^P GNY ^P	Bayou Steel Co. Fepia-Wirsch GmbH ^P Futurit Werk AG ^P	
Denmark		Kryolitselskabet	
Netherlands	KLM NMB Postbank	Stoovaart maatschappij Zeeland NMB NV Geofabriek Kongovens	DSM II NIB Vredestein DSM I
New Zealand	Air New Zealand New Zealand Post ^P	Petrocorp Government Printing Office New Zealand Steel Development Finance Corporation Health Computing Service Post Office Bank Limited State Forest Cutting Rights ^P Coal Corporation ^P	Government Property Services Limited ^P Landoorp ^P Rural Bank Shipping Corporation ^P Tourist Hotel Corporation ^P Telecom ^P State Insurance ^P
Norway		Morsk Jernverk	Kongsberg Vapenfabrik
Spain	GEISA Iberia ENDESA	SEAT Secoinsa Textil Tarazona STF ENTURSA Viajes Marsans	MTW ATRYNSA ENCE ENASA Repool
Turkey	Boeopus Bridge Kaban Dam	Turkish Cement Corporation ^P Turkish Fertilizer Corporation ^P Sumerbank ^P	

Table 20
Privatisation proceeds

	Germany (DM million)	France (FF million)	United Kingdom (£ million)	Netherlands (Fl. million)	New Zealand (NZ \$ million)
1979-82	..	..	1 080	..	..
1983-86	1 800	16 800	6 953	388.2	..
1987-89	7 900	63 600 (b)	20 468	4 236.5 (a)	3 962.6 (a)
TOTAL	9 700	80 400	28 501	4 624.7	3 962.6

Memorandum items:					
Δ GFL (c)	287 725	1 165 600	94 858	142 724	-4 275.9
(Average proceeds)/ Average govern- ment revenue (d)	0.002	0.004	0.021	0.003	0.052

a) This figure includes proceeds from sales that occurred in 1990.

b) Proceeds are only for 1987.

c) Change in gross debt of general government over the relevant period, i.e. for the United Kingdom, average over 1979-89; for Germany, the Netherlands and France, average over 1983-89; for New Zealand, average over 1987-89.

d) Ratio of average proceeds to average government revenue over the relevant period.

Sources: United Kingdom, HMSO, "The Government's Expenditure Plans" (1990, Table 21.5.13);

Germany, OECD Economic surveys (1990), Table 14;

Netherlands, Ministry of Finance;

New Zealand, Reserve Bank;

France, Mauro Maré, "Le Privatizzazioni tra ricerca dell'efficienza e risanamento della finanza pubblica", Pavia, 12 Ottobre 1989.

Table 21

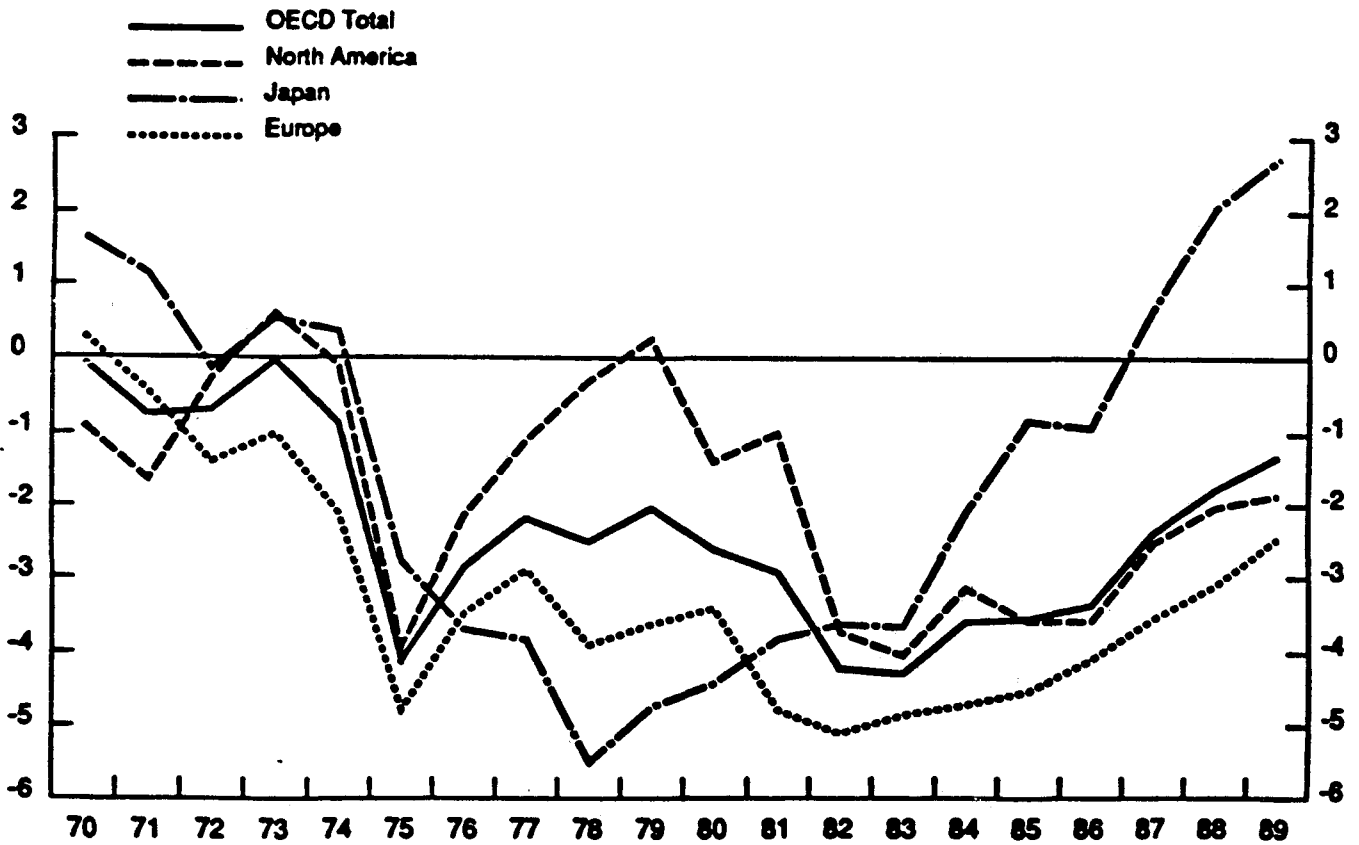
Productivity trends in the Swedish public sector, 1970 to 1980
 (Annual percentage averages)

	1970-75	1975-80	1970-80
General administration and external affairs	-5.5	4.5	-0.6
Public order and safety	-6.3	3.1	-1.6
Defence	-0.1	-1.0	-0.6
Education	0.3	-3.2	-1.5
Health	-1.4	-2.2	-1.8
Social insurance	-4.8	-0.2	-2.5
Social welfare	-2.8	-0.4	-1.6
Housing and community planning	0.2	-8.9	-4.5
Recreational and cultural services	0.7	-5.5	-2.4
Support to private industries	0.1	0.4	0.2
Entire public sector	-1.4	-1.6	-1.5

Source: Public Services - A Searchlight on Productivity and Users. Swedish Ministry of Finance, 1986.

Chart A

GENERAL GOVERNMENT NET LENDING
Per cent of GDP/GNP

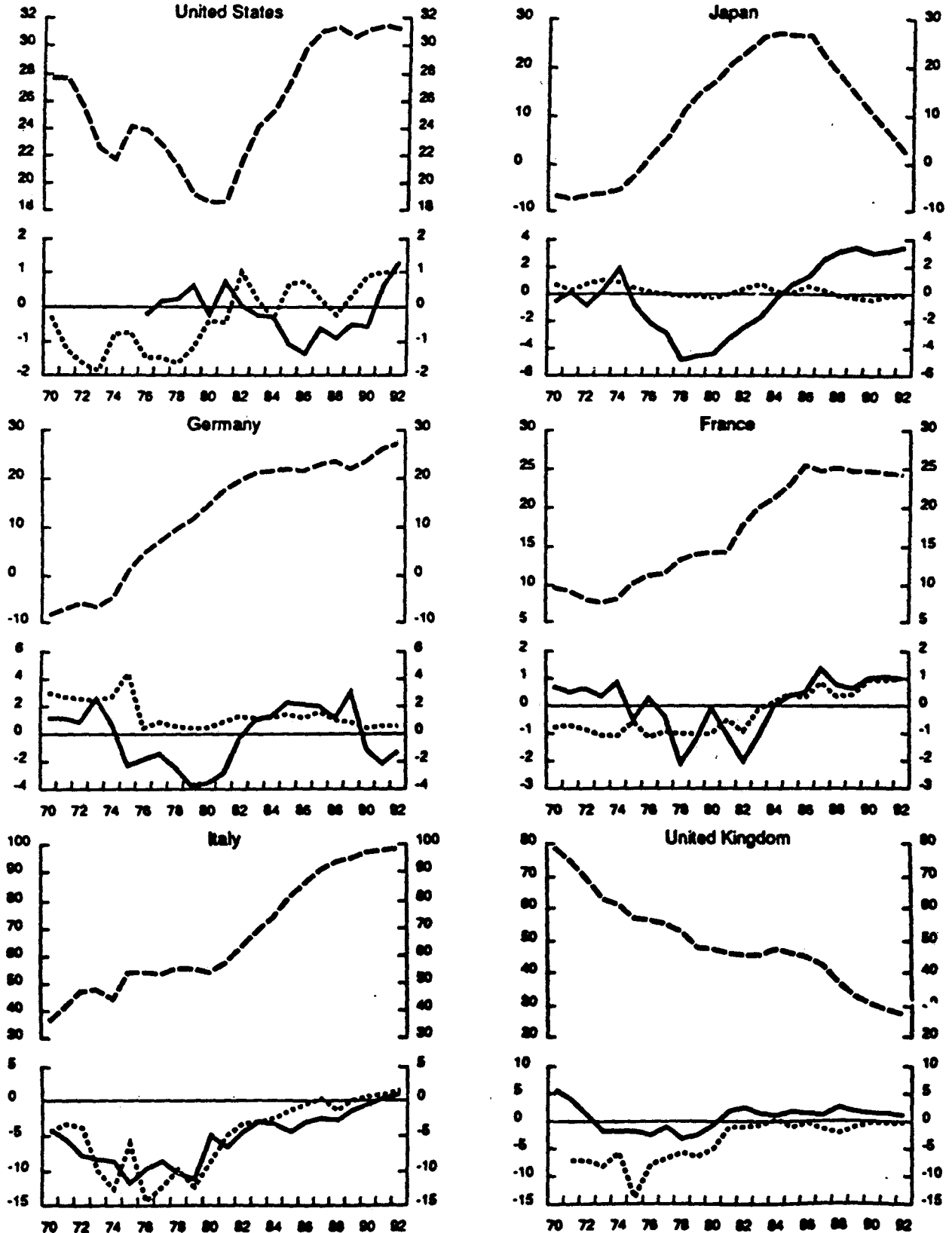


Source: OECD.

Chart B

NET PUBLIC DEBT AND PRIMARY BUDGET BALANCE (As a percentage of nominal GNP/GDP)

- - - Net debt
 ······ Cyclically-adjusted primary surplus or deficit (a)
 ——— Debt-stabilising primary surplus or deficit (a)



a) The debt stabilising primary balance is the primary surplus (deficit) needed in each period to finance interest payments (receipts) on public debt (see *OECD Economic Outlook 47*).

Chart B (continued)

NET PUBLIC DEBT AND PRIMARY BUDGET BALANCE
(As a percentage of nominal GNP/GDP)

- Net debt
- Cyclically-adjusted primary surplus or deficit (a)
- Debt-stabilising primary surplus or deficit (a)

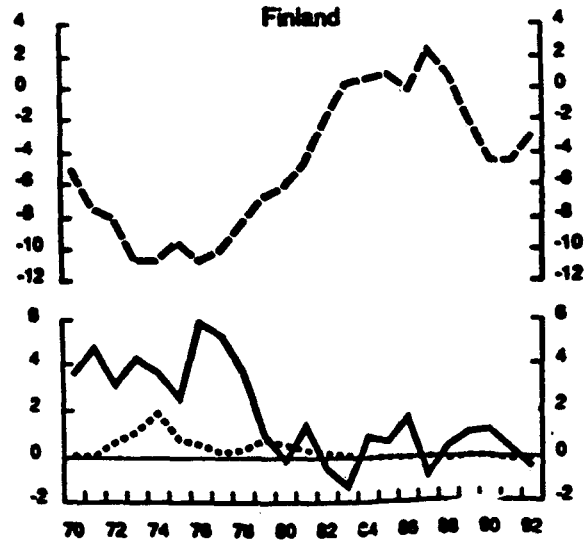
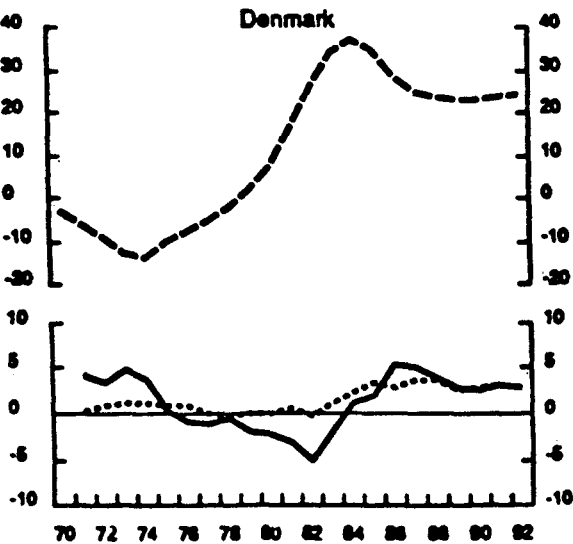
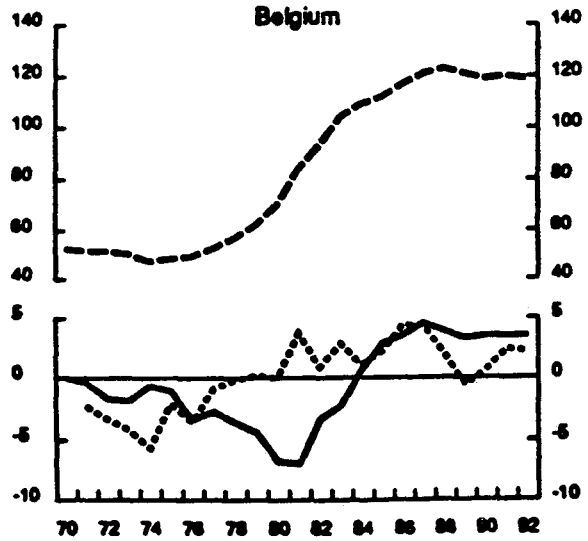
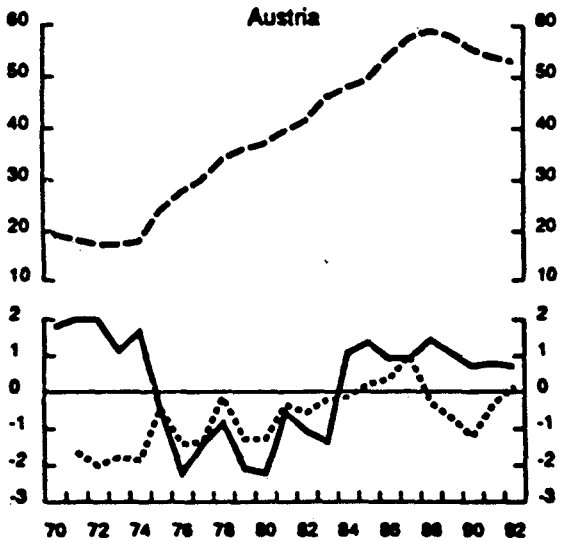
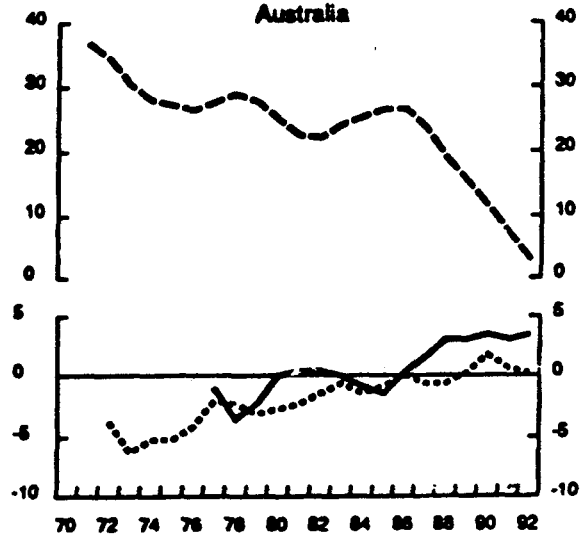
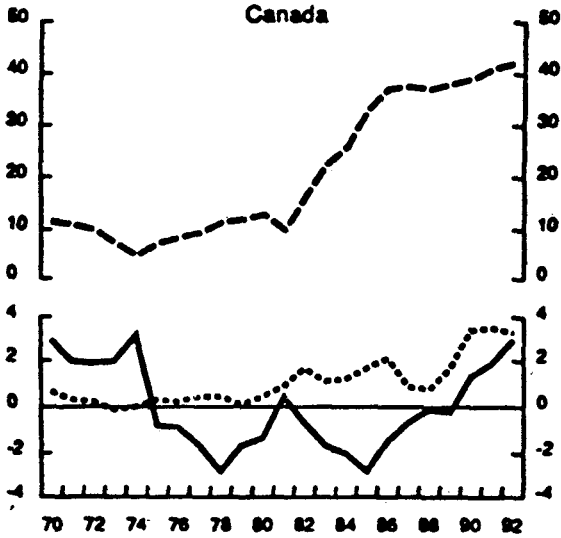


Chart B (continued)

NET PUBLIC DEBT AND PRIMARY BUDGET BALANCE
 (As a percentage of nominal GNP/GDP)

- Net debt
- Cyclically-adjusted primary surplus or deficit (a)
- Debt-stabilising primary surplus or deficit (a)

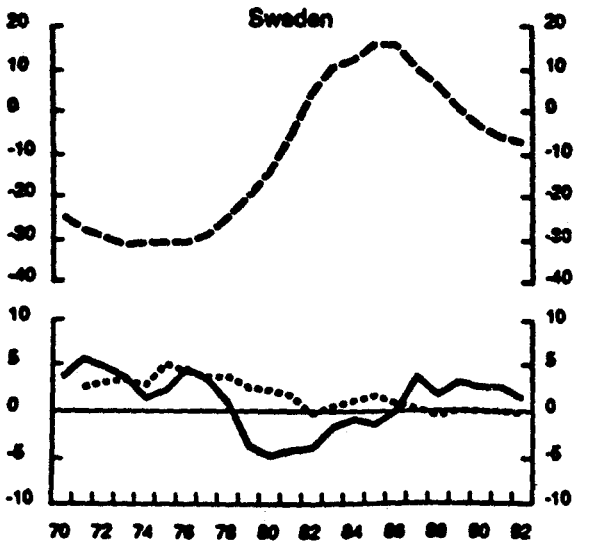
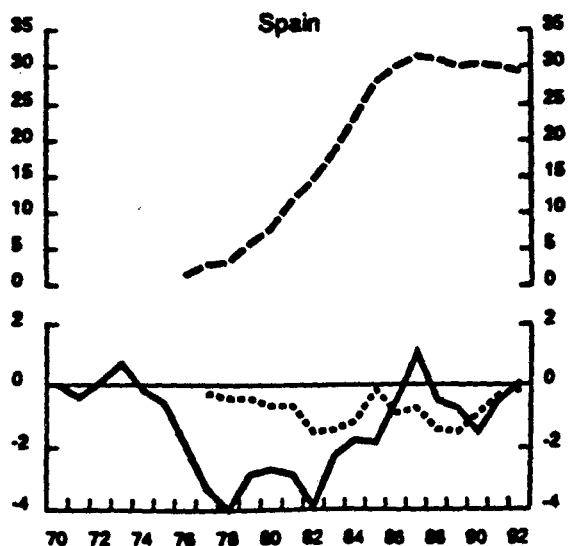
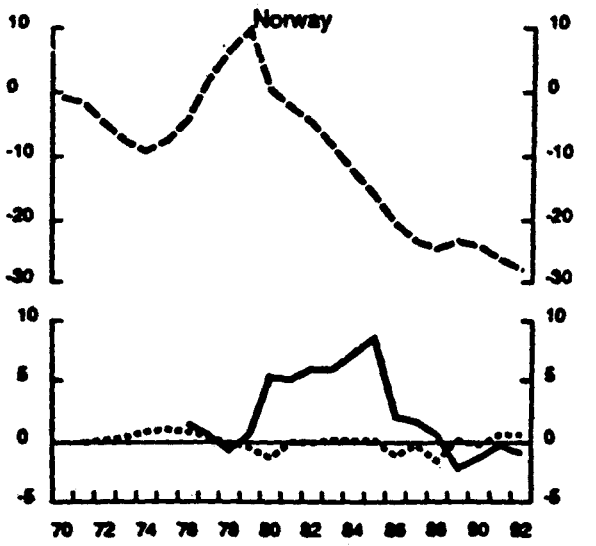
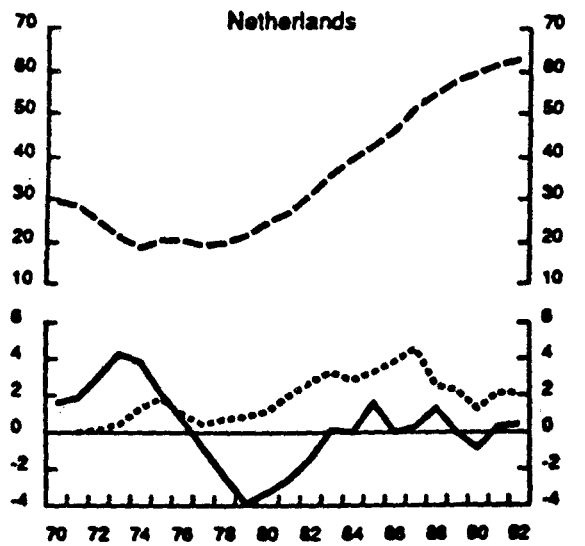
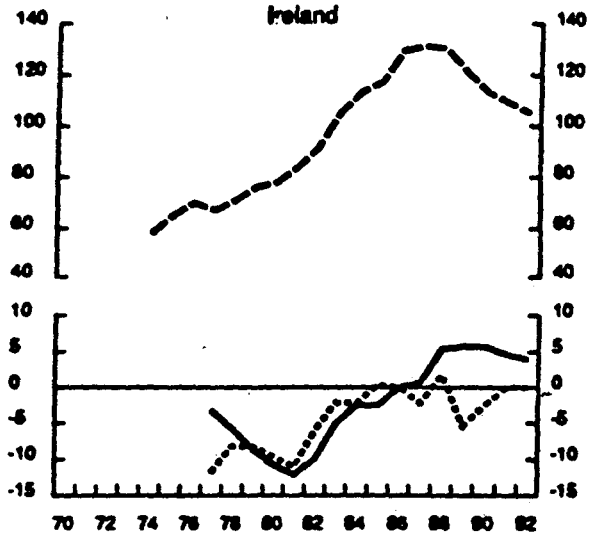
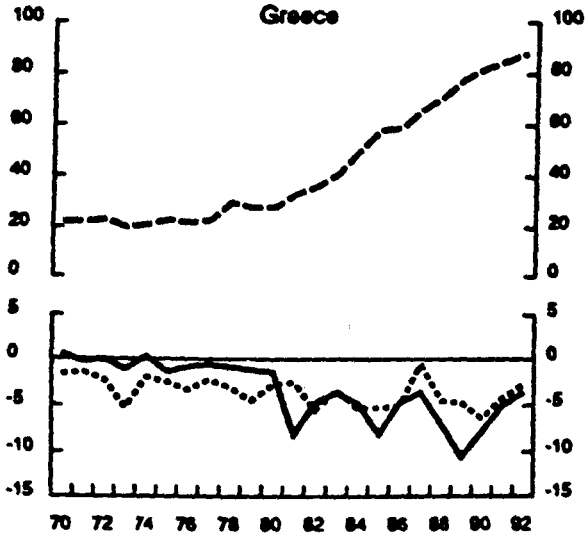
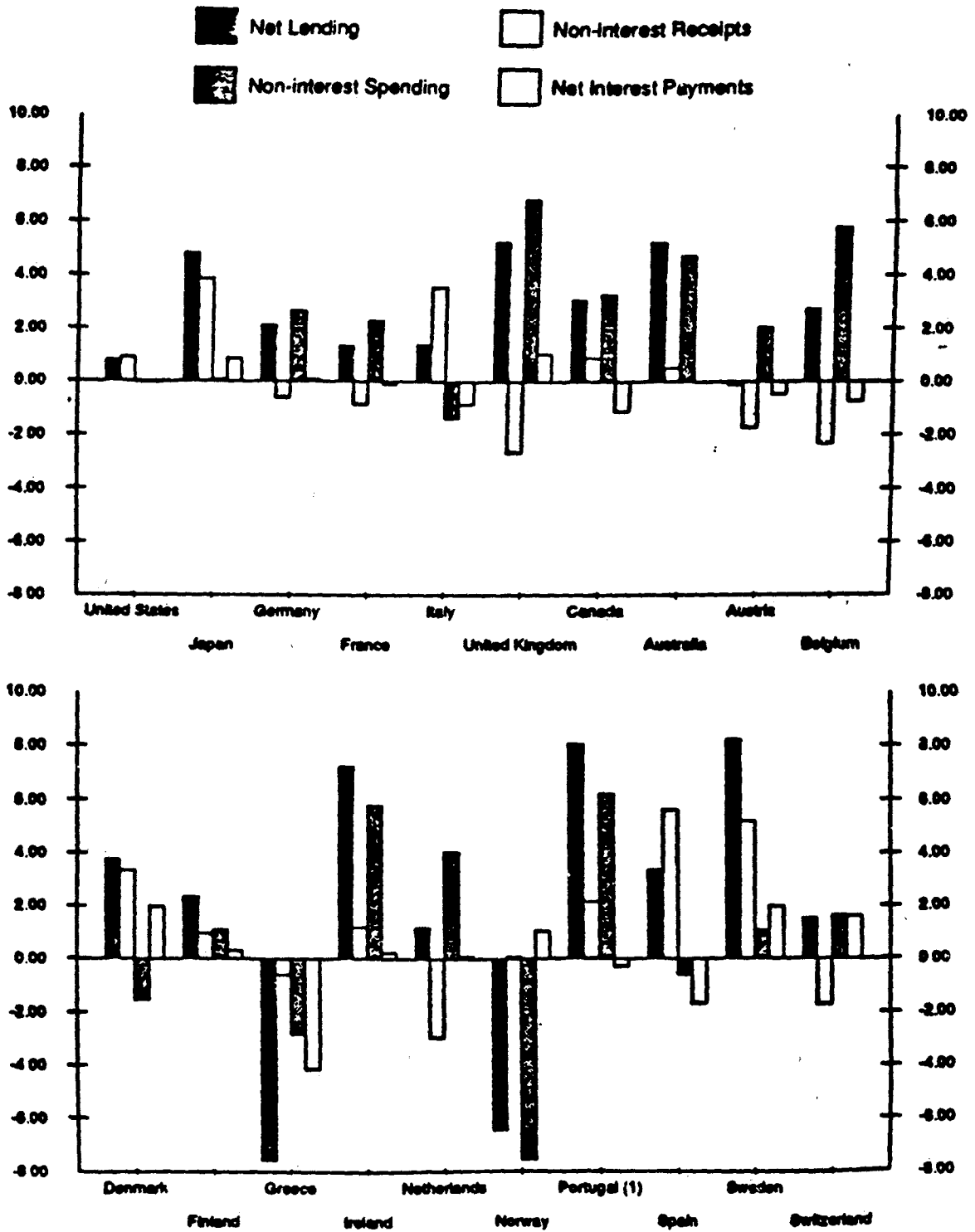


Chart C
Contribution to Budget Consolidation
 Changes in the ratio between 1984 and 1989
 Percentage of nominal GNP/GDP

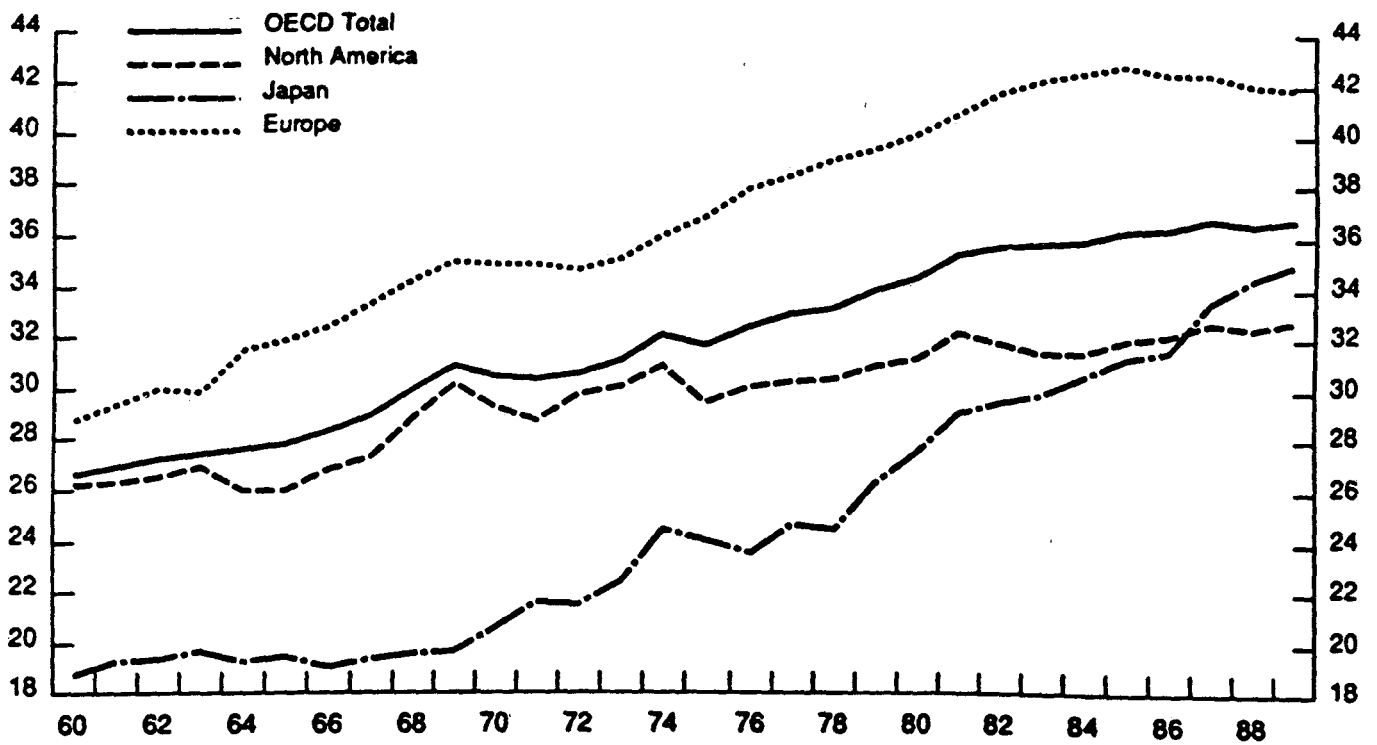


1. For Portugal, the spending component shown is less net interest payments. Receipts include interest received.

Source: OECD.

Chart D

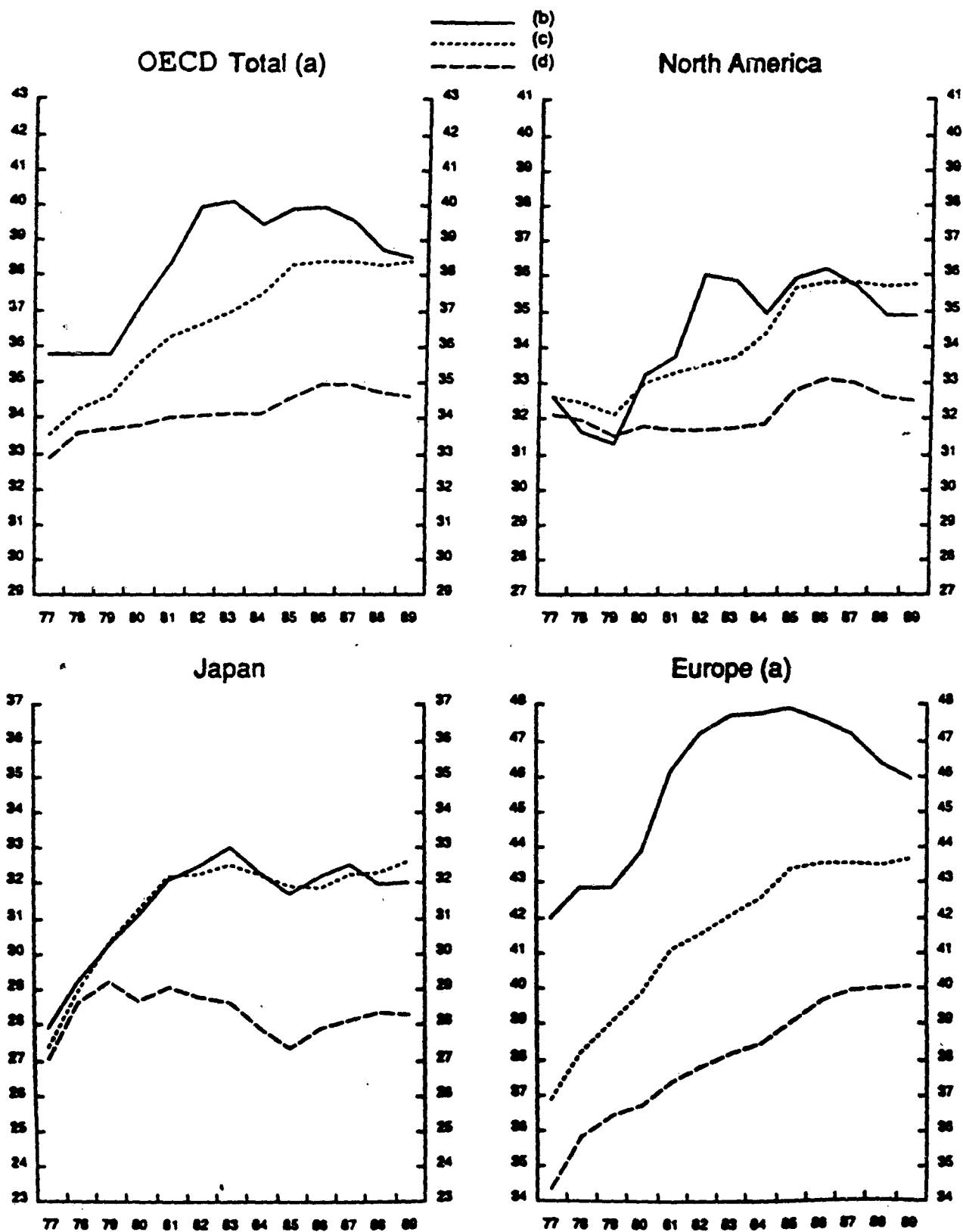
GENERAL GOVERNMENT RECEIPTS
Per cent of GDP/GNP



Source: OECD.

Chart E

Spending Adjusted for Cyclical Factors
and Relative Price Movements

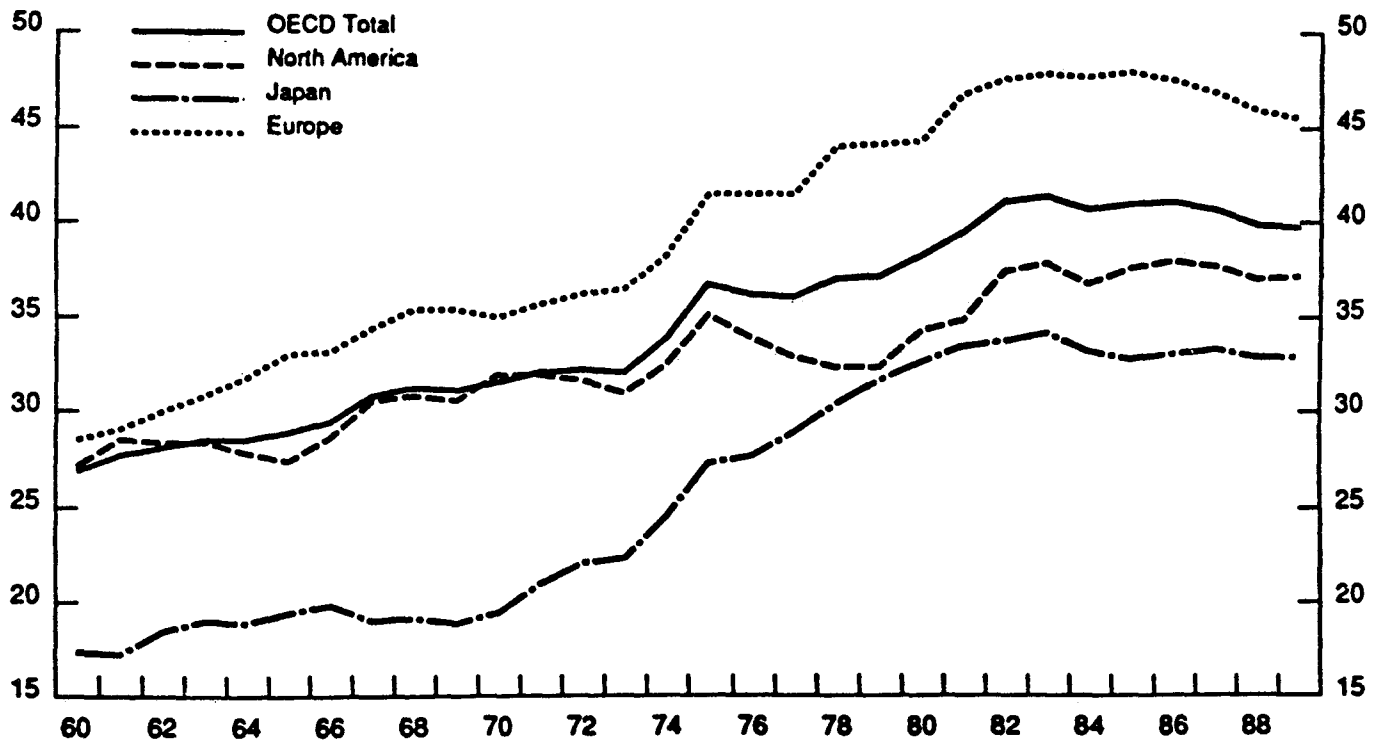


- (a) Excluding Belgium, Iceland, Ireland and Turkey.
- (b) Total government expenditure / GDP ratio.
- (c) Expenditure ratio adjusted for cyclical effects.
- (d) Net-of-interest expenditure ratio, adjusted for cyclical and relative price effects.

Source: OECD.

Chart F

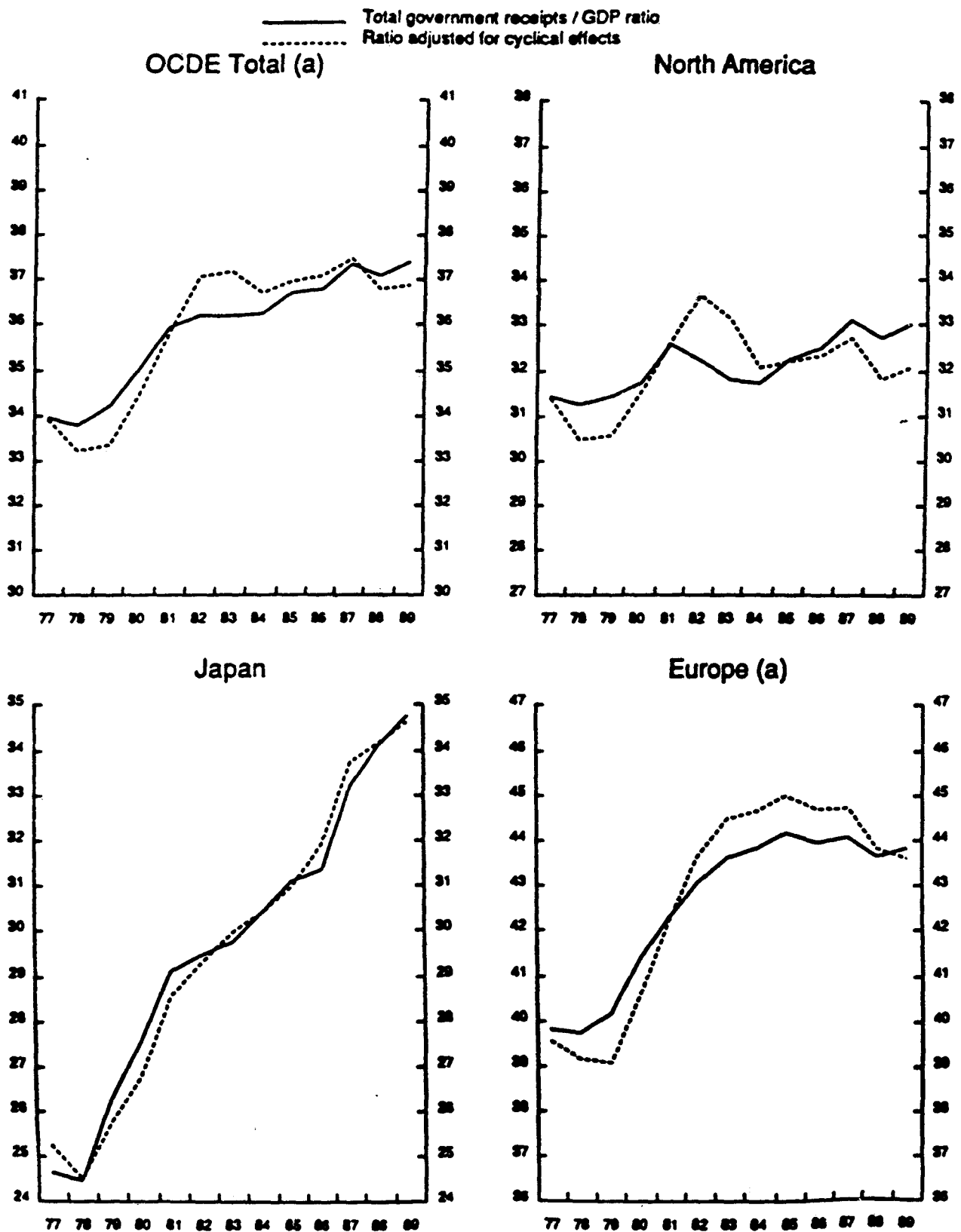
TOTAL PUBLIC EXPENDITURE
Per cent of GDP/GNP



Source: OECD.

Chart G

Receipts Adjusted for Cyclical Factors

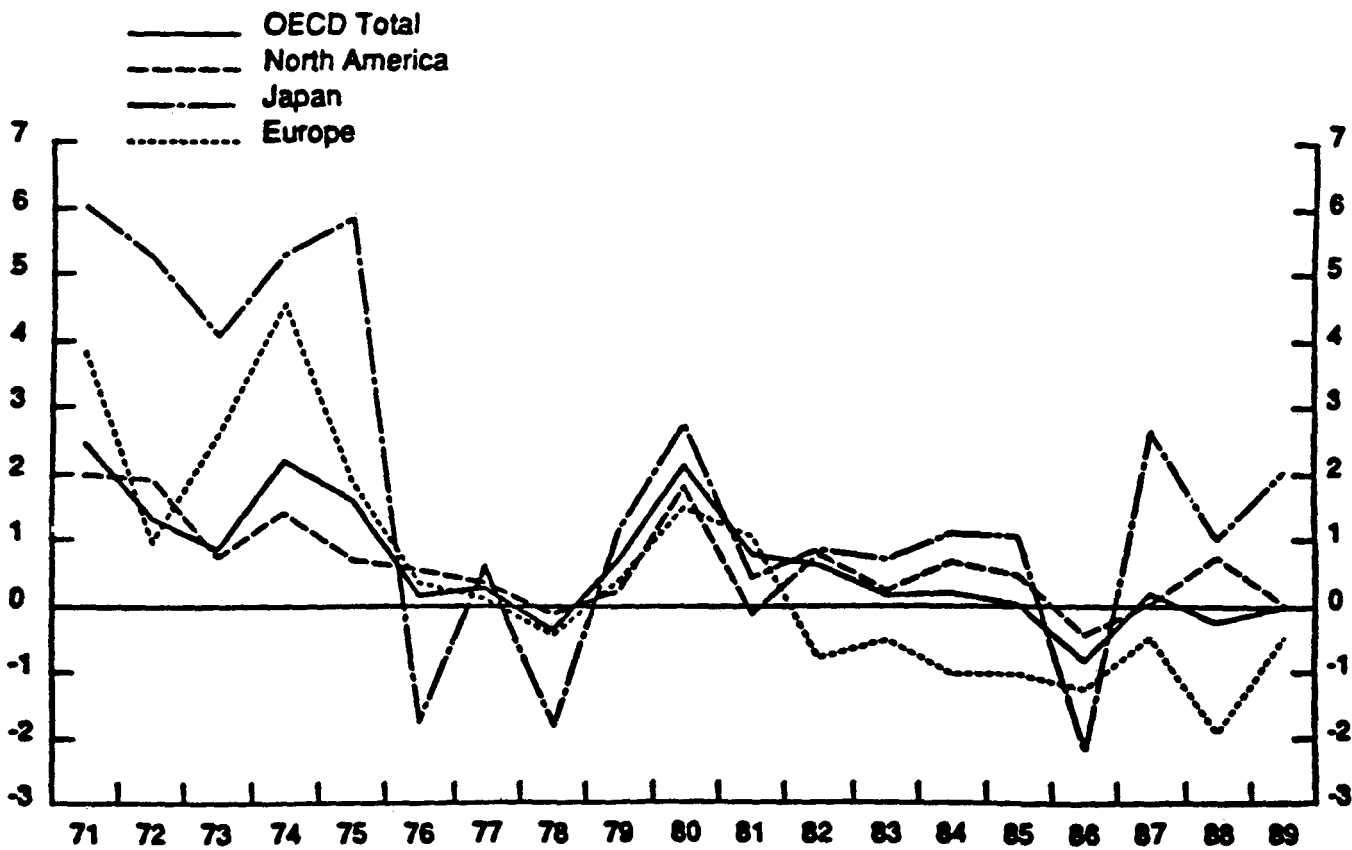


(a) Excluding Iceland, Portugal and Turkey.

Source: OECD.

Chart H

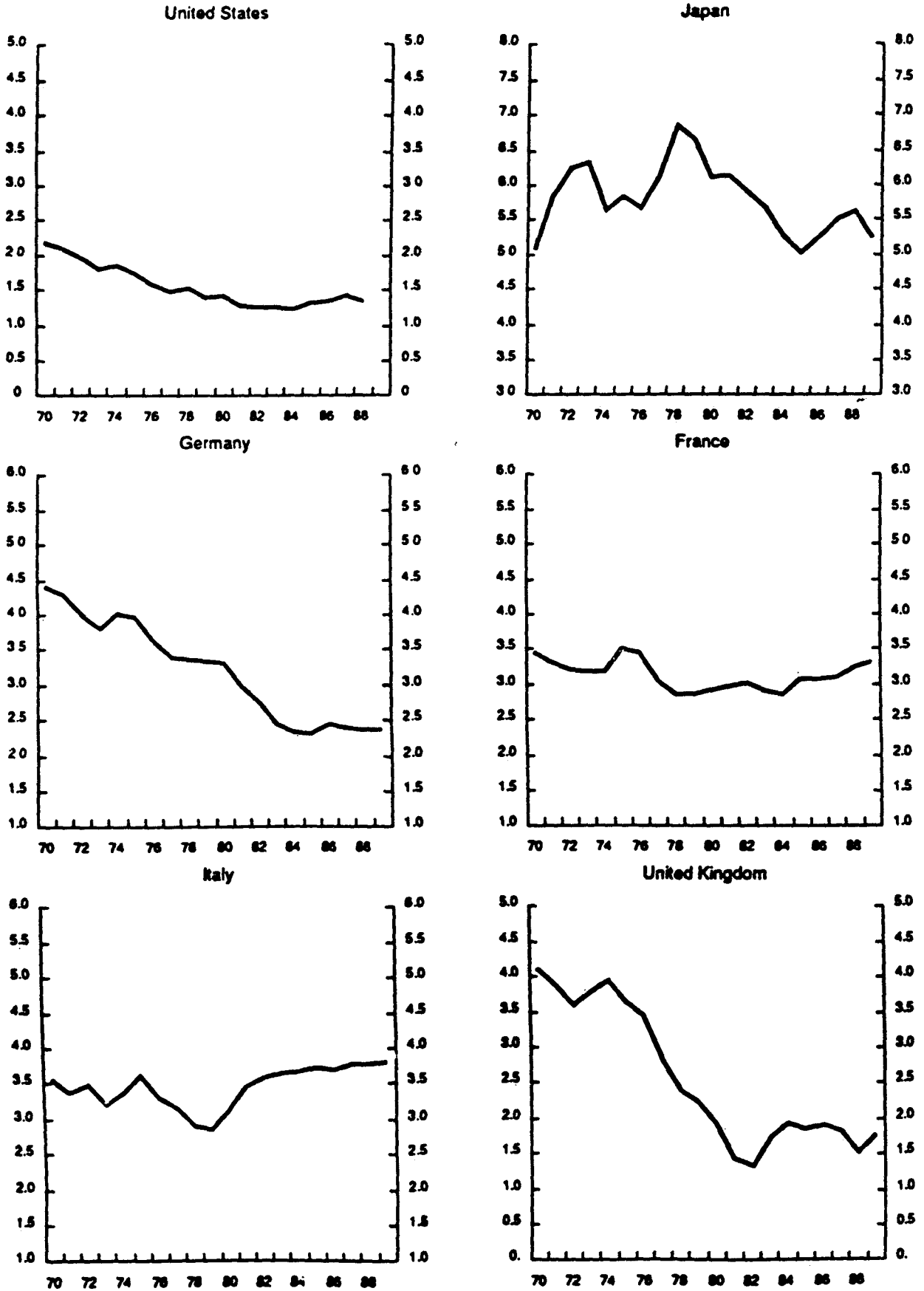
**Growth in the Deflator of Government Expenditure
on Goods and Services Relative to GDP Deflator**



Source: OECD.

Chart I

GENERAL GOVERNMENT INVESTMENT (Percentage of GDP in volumes)



Source: OECD.

Chart I (continued)

GENERAL GOVERNMENT INVESTMENT
(Percentage of GDP in volumes)

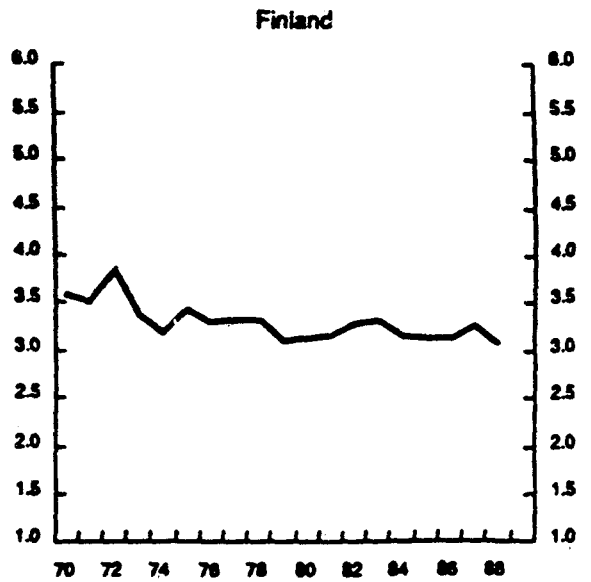
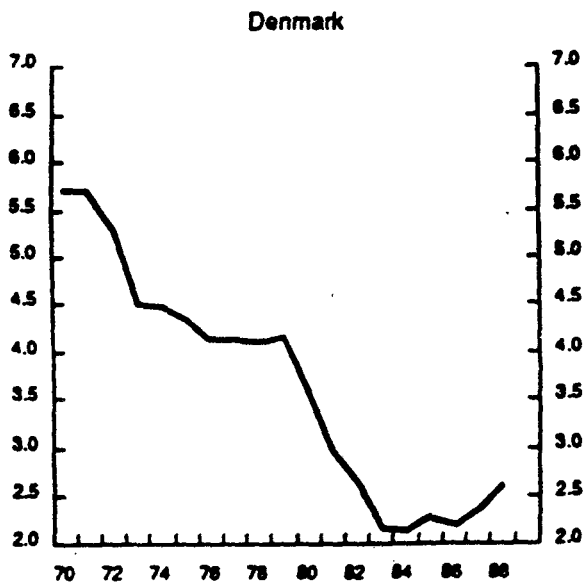
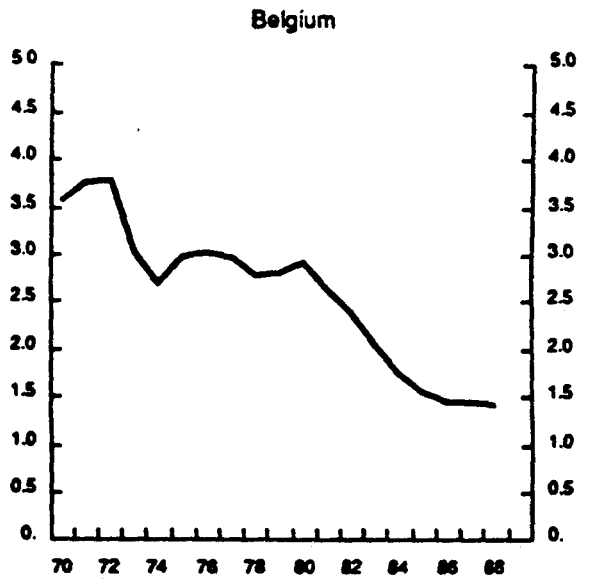
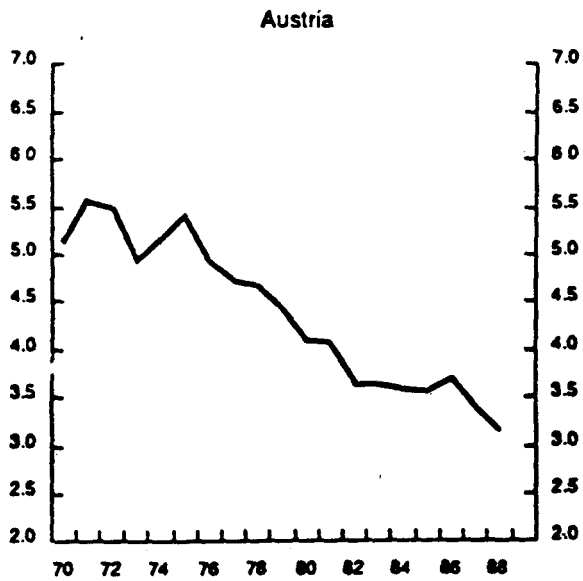
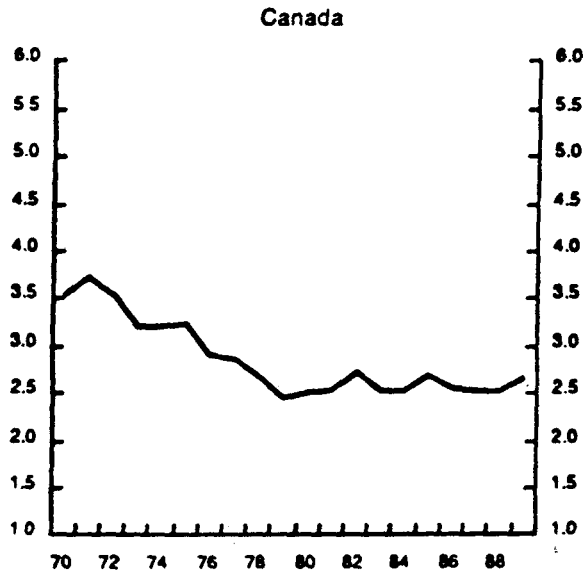


Chart I (continued)
GENERAL GOVERNMENT INVESTMENT
 (Percentage of GDP in volumes)

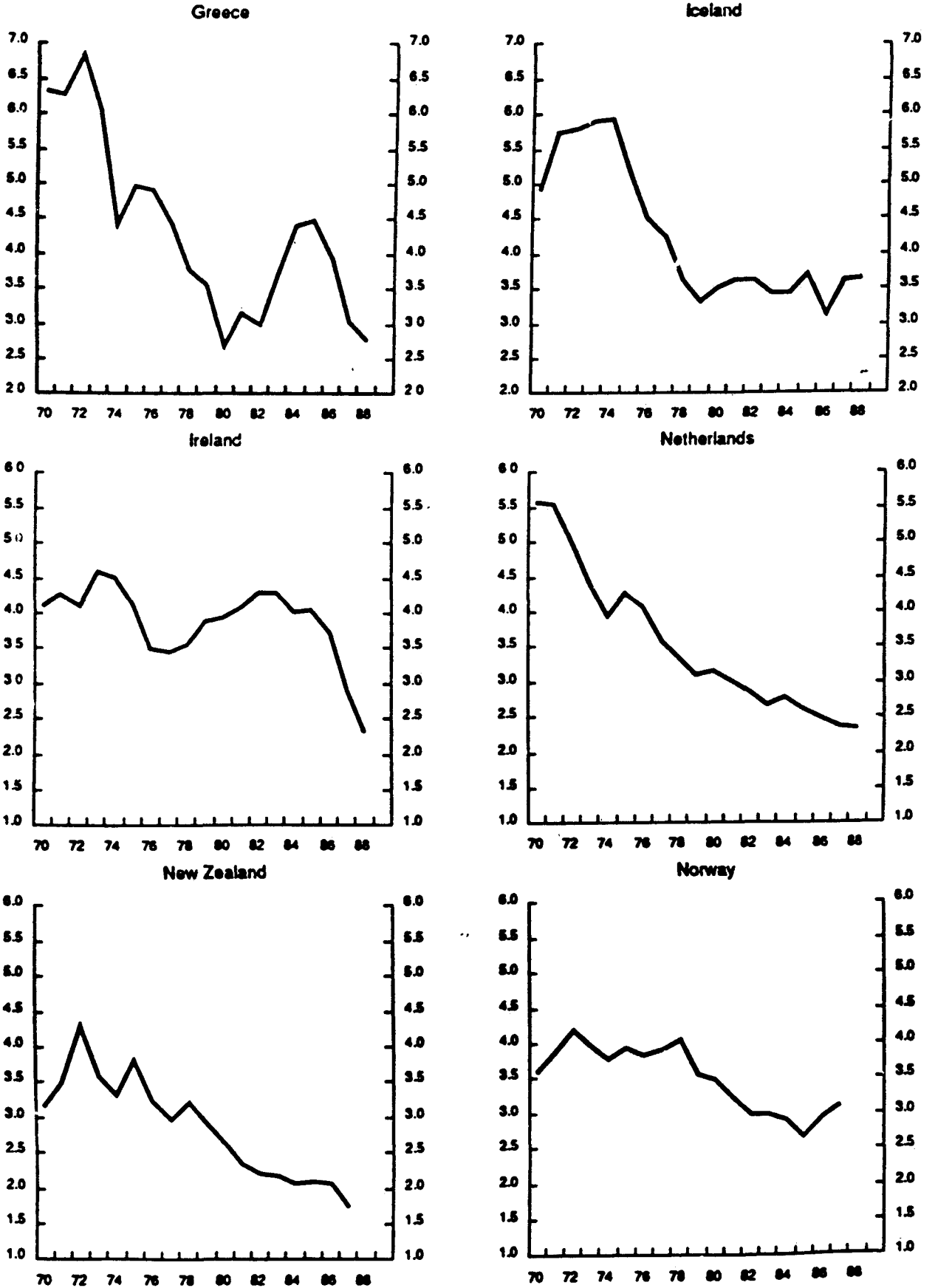


Chart I (continued)

GENERAL GOVERNMENT INVESTMENT
(Percentage of GDP in volumes)

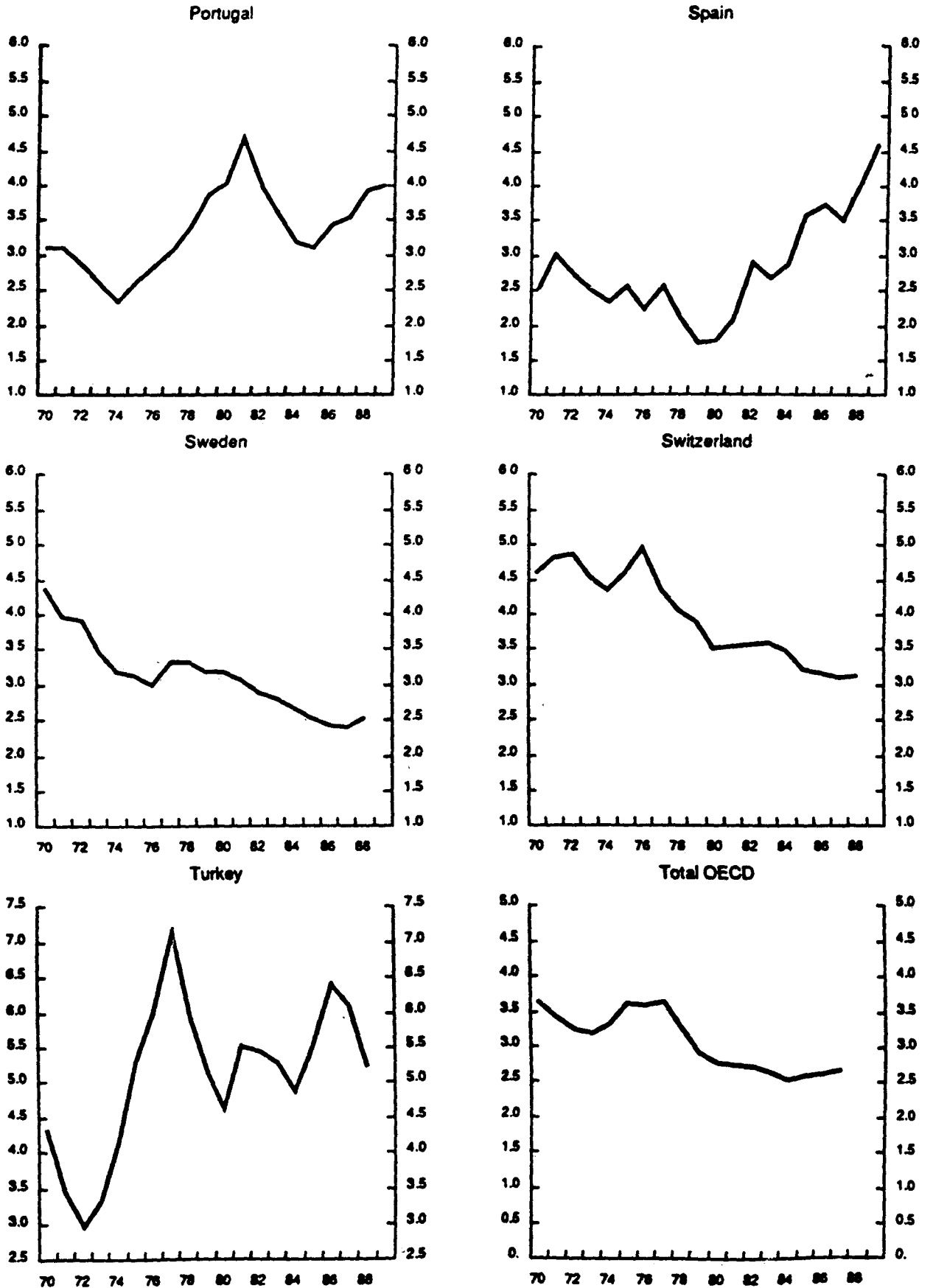
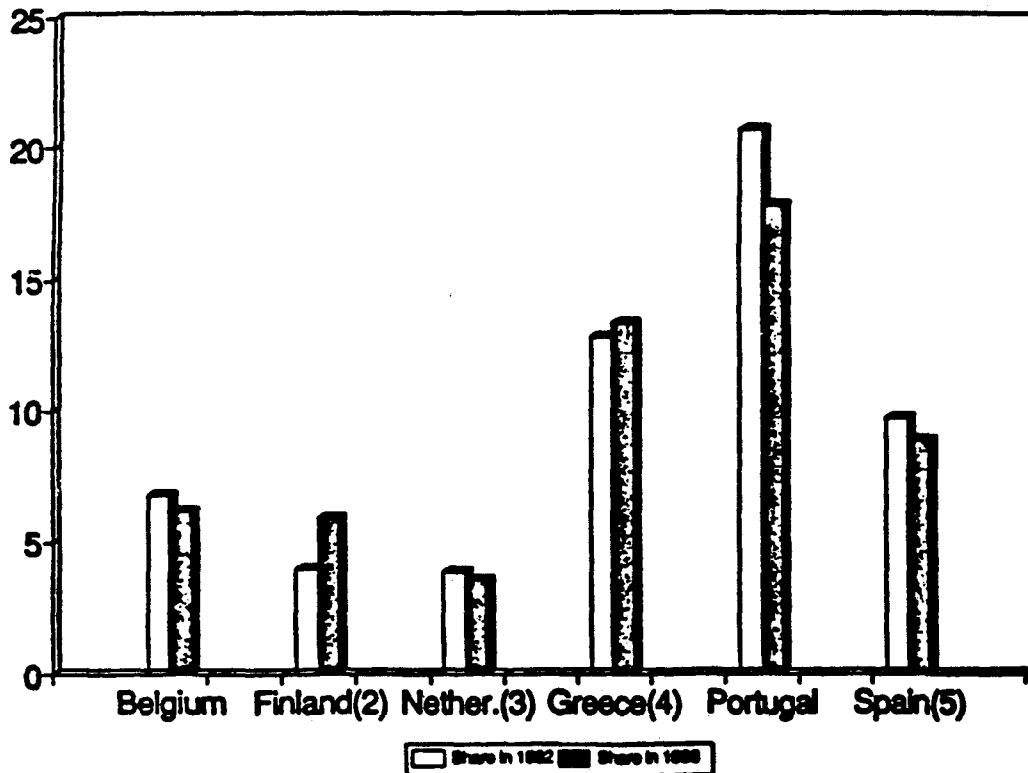
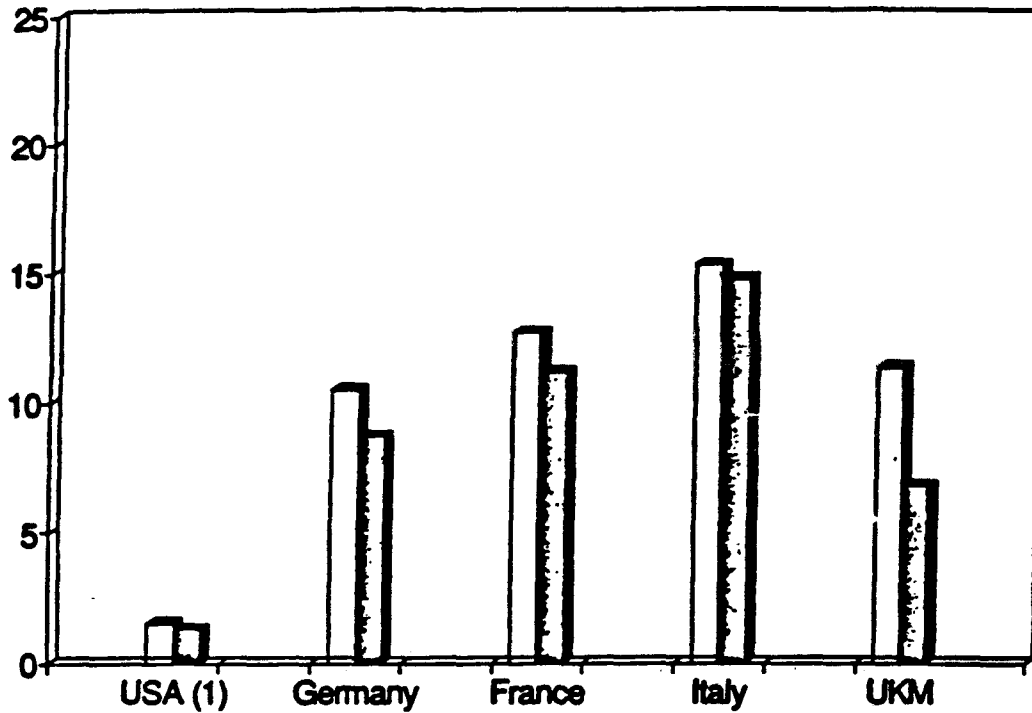


Chart J

RELATIVE SIZE OF PUBLIC ENTERPRISES
As a Percentage of Total Economy
Average of Value-Added, Employment and Gross Capital Formation

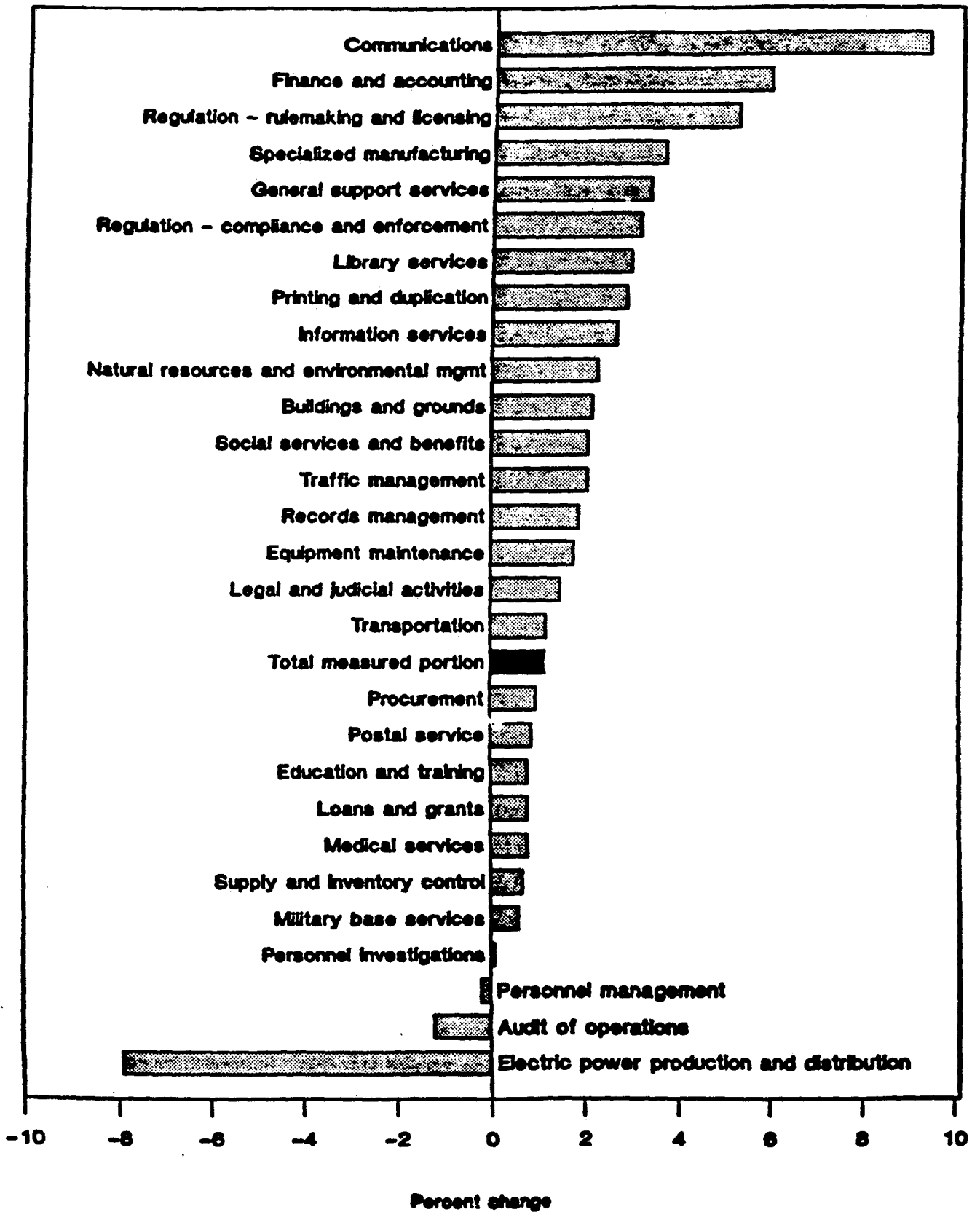


1. Average of value-added and employment.
2. Share in period ending in 1986.
3. Employment only.
4. Average of gross capital formation and employment.
5. Share in period beginning in 1985.

Sources: Europe, Centre Européen de l'Entreprise Publique;
 United States, Survey of Current Business, Table 6.7.B;
 Finland, State Owned Companies in Finland, 1986.

Chart K

AVERAGE ANNUAL RATE OF CHANGE IN OUTPUT PER EMPLOYEE-YEAR, IN THE UNITED STATES BY FUNCTION. FISCAL YEARS 1977-88



Source: Bureau of Labor Statistics, Productivity Statistics for Federal Government Functions, Fiscal Years 1977-88, February, 1990.

ECONOMIC AND STATISTICS DEPARTMENT

WORKING PAPERS

In April 1983, the Economics and Statistics Department initiated a new series of economic studies entitled ESD Working Papers.

The following titles have been circulated:

1. Use of Demand Elasticities in Estimating Energy Demand (out of print)
Utilisation des élasticités de la demande dans l'estimation de la demande de l'énergie

Axel Mittelstädt

2. Capital, Energy and Labour Substitution: The Supply Block in OECD Medium-Term Models
Substitution du capital, de l'énergie et du travail : le bloc de l'offre dans les modèles à moyen terme de l'OCDE (épuisé)

Patrick Artus

3. Wage Formation in France: Sectoral Aspects (out of print)
Formation des salaires en France : aspects sectoriels (épuisé)

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