

**SWP-727**

**Deficits, Debt, and Savings Structure of OECD Countries,  
with Trends from 1965 to 1981**

Leonardo Hakim  
Christine Wallich

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Number 727

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The World Bank  
Washington, D.C., U.S.A.

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First printing March 1985

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This paper was prepared as a background study for Part I of *World Development Report 1984* (New York: Oxford University Press for the World Bank).

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#### **Library of Congress Cataloging in Publication Data**

Hakim, Leonardo.

Deficits, debt, and savings structure of OECD countries, with trends from 1965 to 1981.

(World Bank staff working papers ; no. 727)

Bibliography: p.

1. Finance, Public. 2. Organization for Economic Co-operation and Development. I. Wallich, Christine, 1952- . II. Title. III. Series.  
HJ236.H25 1985 336'.0917'7 85-6288  
ISBN 0-8213-0522-0

## ABSTRACT

Much has been made of the possible impact of OECD macroeconomic policy on financial flows available to developing countries. Specifically, the low domestic savings rates in many countries, together with governments' own demands for funds in credit markets, may have raised the overall cost of funds, "crowding-out" developing countries.

This paper reviews some of the evidence and concludes that the crowding-out hypothesis is not likely. While government budget deficits and borrowing have indeed been large in recent years, revenues and expenditures, when cyclically adjusted, come very close to being in balance. At non-recessionary levels of income, therefore, expenditure and revenue policies are approximately appropriate. Moreover, a close examination of expenditure categories and taxation policies does not reveal a "structural" imbalance, such that future deficits, or growing deficits, are inevitable.

The causes of the decline in OECD savings rates are also examined and are found to lie, to some extent, in disincentives which operate at various levels to discourage savings, but not to structural, or inexorable demographic, causes.

## CONDENSE

On a beaucoup fait état des conséquences que pourrait avoir la politique macroéconomique de l'OCDE sur les flux financiers à la disposition des pays en développement. Plus précisément, la faiblesse des taux d'épargne intérieure observée dans de nombreux pays, et la demande de crédit émanant des gouvernements eux-mêmes, a peut-être fait monter le prix de l'argent, "évinçant" les pays en développement.

Après avoir examiné certains faits, les auteurs de ce document concluent que l'hypothèse de l'éviction est peu probable. En effet, en dépit de l'ampleur des déficits budgétaires et des emprunts des gouvernements ces dernières années, les recettes et les dépenses, corrigées de la conjoncture, sont très près de s'équilibrer. Par conséquent, pour un niveau de revenu ne reflétant pas une situation de récession, les politiques de recettes et de dépenses sont relativement appropriées. De plus, si on examine étroitement les catégories de dépenses et les politiques fiscales, on n'observe pas de déséquilibre "structurel" tel que des déficits, ou l'accroissement des déficits, soient inévitables à l'avenir.

Les auteurs recherchent également les causes du fléchissement des taux d'épargne de l'OCDE et les trouvent en partie dans les facteurs de dissuasion qui interviennent à différents niveaux pour décourager l'épargne, mais non pas dans des phénomènes structurels ou des faits démographiques inexorables.

### EXTRACTO

Mucho se ha dicho acerca de los posibles efectos de las políticas macroeconómicas de la OCDE sobre las corrientes financieras a que tienen acceso los países en desarrollo. Específicamente, es posible que los bajos niveles de ahorro interno en muchos países, junto con la demanda de los propios gobiernos de fondos provenientes de los mercados de crédito, hayan aumentado el costo global de los fondos, desplazando así de ellos a los países en desarrollo.

En este trabajo se examinan algunos de los elementos de juicio y se llega a la conclusión de que la hipótesis de desplazamiento es poco probable. Si bien los déficit presupuestarios y empréstitos de los gobiernos han sido en verdad cuantiosos en los últimos años, los ingresos y gastos, una vez ajustados cíclicamente, llegan muy cerca del punto de equilibrio. Por lo tanto, con niveles de ingresos no recesionarios, las políticas de gastos e ingresos son aproximadamente adecuadas. Por lo demás, un análisis detallado de las categorías de gastos y políticas tributarias no revela un desequilibrio "estructural" que haga inevitables los déficit futuros o el crecimiento de los déficit.

Se examinan también las causas de la disminución del ahorro en los países de la OCDE y se concluye que ellas yacen, en cierta medida, en los desincentivos que actúan en diversos niveles y desalientan el ahorro; no se pueden atribuir a razones estructurales o de índole demográfica inexorable.



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## Introduction

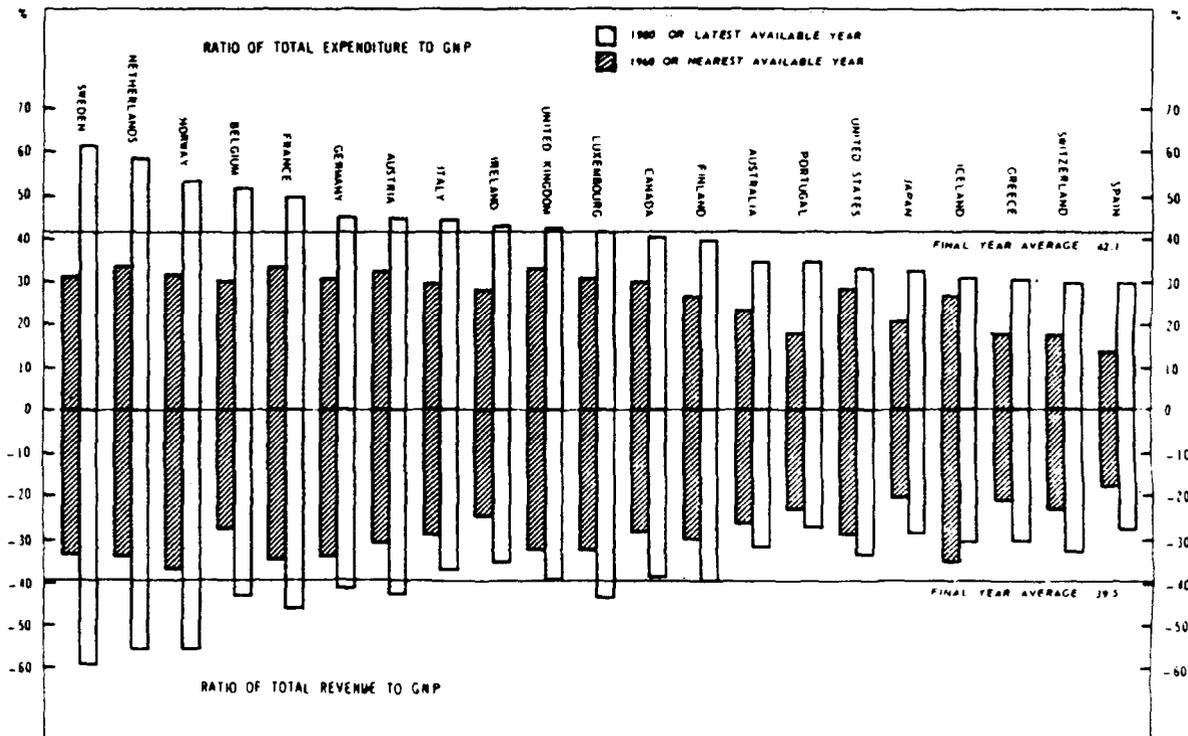
This Paper surveys the role of the public sector revenues expenditures, budget deficits and debt in the context of trends in national savings, to provide some quantification of the likely crowding out of private investment if current trends in deficits and savings continue.

Section I outlines revenue trends, Section II those in public expenditures, Section III the resulting trends in budget deficits, Section IV those in national savings, and the final section looks at the relationships of projected deficits to trends in savings.

Trends in Government Revenues

Trends in OECD central government revenues show that the share of income taken by the central government has risen substantially in the past period. Chart 1 outlines the trends for individual OECD countries since 1960. Dramatic increases have taken place across the board. Overall for OECD countries taken together, the government's current revenues as a percentage of GDP were only 28.3% in 1960. However, since then, this share, which includes social security taxes and contributions, has risen from 31.9% in 1970 to 37.2% in 1982.

Diagram 1  
RATIO OF GENERAL GOVERNMENT EXPENDITURE AND REVENUE TO GNP



Source: OECD Annual National Accounts - Economic Outlook II, Tables RM, R9

Table III.1 outlines the trends in the composition of government current receipts. The role played by direct taxes (personal and corporate incomes taxes plus social security taxes) increased from 16.8% of GDP in 1965 to almost 24.6% of GNP in 1982. As a result, the fraction direct taxes contributed rose from 57% of total government current revenues in 1965 to over 65% of government revenues in 1982. Meanwhile, indirect tax burden decreased, from 13.0% of GDP in 1965 to 10.5% of GDP in 1982. While the share of government revenues has increased as a portion of GDP, the increase in government revenues has not been sufficient to match the growth in government expenditures. This, as well as the differential growth rates of the various revenue components away from indirect towards direct taxes, especially personal income taxes and social security charges, has had political repercussions and has made the job of fiscal policy much harder.

Table III.1: THE COMPOSITION OF GENERAL GOVERNMENT REVENUES AS % OF GDP

	<u>1965</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
<u>Receipts</u>														
Direct Taxes	11.2	12.1	12.0	12.3	12.5	13.4	12.6	13.0	13.4	13.4	13.6	13.9	14.1	13.8
Indirect Taxes	13.0	10.9	10.9	10.7	10.5	10.3	10.1	10.1	10.2	10.0	10.0	10.3	10.6	10.5
Social Security														
Contributions	5.6	7.5	7.7	7.9	8.3	8.8	9.3	9.5	9.7	9.7	10.0	10.2	10.5	10.8
Other Receipts	1.5	2.5	2.5	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.0	3.3	3.5	3.8
<u>Current Receipts</u>														
Total	29.2	31.9	31.8	32.2	32.7	33.9	33.7	34.5	34.9	34.9	35.7	36.6	37.1	37.2

NOTE: Totals may not add due to rounding.

Source: OECD National Accounts, Table 9, and Price and Chouraqui, op.cit.

The reason for this changing composition was the shrinking buoyancy of indirect taxes, which in many countries, grew less rapidly than GDP, and the greater buoyancy of direct taxes. Taxes on households rose faster than other types of direct taxes, implying a decline in direct corporate taxes. Social security taxes grew even more rapidly than other direct taxes.

Where indirect taxes have shown buoyancy, this has in many countries, been due to the introduction of energy taxes in the 1970's. Both oil exporters and oil importing countries have introduced energy tax or royalties. For example, energy taxes are the primary indirect tax in the UK, contributing 2.1% of GDP to the UK government receipts in 1981. Other countries have also introduced energy taxes, notably, the US, where their contribution was 1.3% of GDP, the Netherlands (3.6%) and Norway (4.0%).<sup>1/</sup> It is probably valid to say that, in the absence of these energy taxes, the overall burden of direct taxes would have been higher still.

#### Concern Over Growth in Public Sector Revenues

With the rising tax burden, there is now an increasing reluctance among a number of OECD governments to garner additional revenues through "fiscal drag".<sup>2/</sup> In some ten of the 21 OECD countries, including the UK, France and the Netherlands, there is now explicit indexing of the personal

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<sup>1/</sup> OECD Working Paper CPE/WPI(83)1.

<sup>2/</sup> See Price and Chouraqui, op. cit.

income tax. In three others, Belgium, Spain and Switzerland, indexing exists in a de facto manner, although it is not always applied. In the U.S., indexing is expected to be introduced in 1985, barring policy changes. This would leave only eight countries (including Japan and Germany) un-indexed. These trends suggest that, in general, the prospects of increased responsiveness of tax revenues to GNP is reduced. It has been estimated that the elasticity of revenues to GNP, once full indexation of income taxes takes place, could reduce the tax elasticity to less than one. Coupled with this concern over direct taxes, there is substantial resistance to increasing indirect taxes, because of their inflationary impact, especially when inflationary expectations are latent.

To summarize, there appears to have been a secular change in both the level and composition of government receipts in the seventies and also in the responsiveness of revenues to GDP growth as a result of indexation provisions on direct taxes, and inflationary concerns preventing increases in indirect taxes. As a result, concerns are surfacing over a possible "tax threshold."<sup>3/</sup>

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<sup>3/</sup> State and local taxes have not been included in the discussion. The conclusion becomes stronger, if they are.

## II. Expenditures and Expenditure Trends

This section analyses trends in general government public expenditure. The section begins by examining the changes over time in the overall level of public expenditures relative to GNP. Then the changes which have taken place in the composition of expenditures, disaggregating expenditures into broad categories of public sector outlays, are examined. The determinants of each of these expenditure levels are analyzed, and an assessment of the extent to which cyclical factors, such as slow growth and unemployment, have contributed to these levels of expenditure as compared to the contribution made by structural factors such as the demographic changes including growth in the non-working population, and programmatic factors such as commitments made to growing benefit levels.

### Level of Expenditures

The level of public expenditures in relation to GDP has risen substantially since the 1960s for most OECD countries, from 28.7% of GDP in 1960 to over 40.6% of GDP in 1982. While this summary statistic obscures the inter-country differences in expenditure levels, the trend of increase has been common across countries. In Sweden, the share of expenditures have risen from 31% of GDP in 1960 to 68% in 1980; in Germany the increase has been from 32.0% of GDP in 1960 to 48% of GNP in 1982. In Japan, where the proportion of government expenditure in GDP was lowest, the level has doubled from 18% of GDP in 1960 to 35.2% in 1982, the same level as the U.S.

Table III.2: SHARES OF TOTAL GENERAL GOVERNMENT EXPENDITURE IN GDP/GNP  
(Percent)

	1960	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981*	1982*
United States	27.8	28.0	32.2	32.2	31.9	31.2	32.9	35.4	34.4	33.5	33.1	32.8	33.2	33.6	35.5
Japan	18.3	18.6	19.3	20.8	21.8	22.1	24.5	27.3	27.9	29.0	31.1	31.6	32.7	33.6	35.2
Germany	32.0	36.3	37.6	38.9	39.7	40.5	43.4	47.1	46.4	46.5	46.5	46.4	46.9	47.9	48.3
France	34.6	38.4	38.9	38.3	38.3	38.5	39.7	43.5	44.0	44.2	45.2	44.7	46.7	49.4	51.3
United Kingdom	32.6	36.4	39.3	38.4	40.0	41.1	45.2	46.9	46.1	44.1	43.7	43.5	45.4	46.4	46.5
Italy	30.1	34.3	34.2	36.6	38.6	37.8	37.9	43.2	42.2	42.5	46.1	45.5	46.1	51.5	54.0
Canada	28.9	29.1	35.7	36.6	37.2	36.0	37.4	40.8	39.6	40.6	41.0	39.3	40.7	41.7	46.4
Total for Major Seven Countries	28.7	30.0	32.6	33.0	33.1	32.9	34.8	38.0	37.2	36.8	37.3	37.5	37.8	38.9	40.6

a/ Weighted averages: calculated from the total GDP and total outlays of general governments for the group of countries, with both aggregates expressed in US dollars at current exchange rates.

Source: Charouqui and Price, op. cit., and National Accounts of OECD Countries and where marked (\*) Secretariate estimates. The data in this table are measured according to the standard definitions of the OECD-United Nations system of accounts, so that they are comparable across countries. Total general government spending is defined as current disbursements (including capital consumption) plus gross investment. It is the sum of lines 23, 28, 29 and 30 less line 26 in Table 9 of National Accounts of OECD Countries, Volume II, 1962-1979.

Changing Composition of Expenditures

In addition to rapid increases in the overall level of public expenditures the higher level has been accompanied by a change in the composition of expenditures as well. Table III.3 shows trends in the components of public expenditure since the early 1950's. Defense expenditures have fallen sharply from their high levels of the 1950's, and presently comprise some 3.4% of GDP. Outlays on social goods, here defined as education, health, housing has risen substantially. Expenditures on education rose from 3.1% of GDP in 1954 to 5.3%, and 5.4% in 1973 and 1980, respectively. The rapid increase in health expenditures is striking, from 1.3% of GDP in 1954 to 3.3% in 1973, and to 4.3% by 1980. Growth in housing expenditures has also taken place, from 0.5% of GDP in 1954 to 1.4% in 1980. Total outlays on social goods have risen from 4.9% of GDP in 1954, to 9.7% in 1973 and 11.1% in 1980.

Income maintenance payments, which includes pensions, sickness, family allowances and unemployment transfer payments have also increased. Pension expenditures have tripled, and now, at 7.6% of GDP represent the largest expenditure category. Sickness expenditures have also risen; Family allowances, by contrast, have not increased, falling from 0.8% of GNP in 1973 to 0.6% in 1980. Unemployment expenditure have undergone a striking rise--now making up 2.6% of GNP.

The final expenditure category--public debt interest has also increased from 1.6% of GNP in 1954, to 1.9% in 1973 to 2.9% in 1980, the latter a 53% increase in 7 years.

Table III.3: GENERAL GOVERNMENT EXPENDITURE AS PERCENT OF GNP  
(Average, Seven Major OECD Countries)

	<u>1954</u>	<u>1973</u>	<u>1980</u>
<u>Total Expenditure</u>	28.5	32.8	37.7
Defense	<u>9.6</u>	<u>4.0</u>	<u>3.3</u>
General Government	<u>4.7</u>	<u>3.5</u>	<u>3.9</u>
<u>Social Goods</u>	4.9	9.7	11.1
Education	3.1	5.3	5.4
Health	1.3	3.3	4.3
Housing	0.5	1.1	1.4
<u>Income Maintenance</u>	<u>5.6</u>	<u>10.0</u>	<u>12.3</u>
Pensions	2.9	6.2	7.6
Sickness	0.3	0.4	1.1
Family Allocations	0.7	0.8	0.6
Unemployment Compensation	0.5	0.4	2.6
Other	1.7	2.2	4.0
<u>Economic Services</u>		<u>6.2</u>	<u>3.7</u>
Capital Transactions	..	3.6	1.6
Subsidies	..	1.7	0.9
Other	..	0.9	1.2
<u>Public Debt Interest</u>	1.6	1.9	2.9

Source: CPE/WPI(82)1, and World Bank Estimates. 1954 from National Accounts of OECD Countries, 1950-1968, supplemented as follows: 1954 welfare state expenditures for European countries from J.F. Dewhurst and Associates, Europe's Needs and Resources, Twentieth Century Fund, New York 1961, p. 313 and 336 for education, p. 383 for medical care, pp. 222 and 235, for housing, p. 391 for pensions, p. 393 for sickness and family payments, p. 386 for unemployment benefits and p. 399 for total transfer payments (including health). Japan 1954 from I. Eml, Government Fiscal Activity and Economic Growth in Japan, 1868-1960, Kinokuniya, Tokyo, 1963, pp. 173 and 179, and I. Ohkawa and M. Shinohara, Patterns of Japanese Economic Development, Yale, 1979, pp. 372 and 378. USA 1954 from The National Income and Product Accounts of the United States, 1929-1974, U.S. Dept. of Commerce, pp. 94, 128 and 131.

Expenditure elasticities are higher than the revenue elasticities<sup>4/</sup>; the overall expenditure elasticity is 1.25, for the 1970-80 period. Defense expenditures have grown, but only about as rapidly as GNP. (This may have increased since 1980). The largest elasticity attaches to "income maintenance programs", and of these, it is the increase in pension expenditures which has been the largest factor. Income maintenance programs have grown almost 40% faster than GNP. Next most rapidly growing have been interest expenditures, with an elasticity of 1.37. This was followed by health expenditures, with an elasticity of 1.3. Education expenditures increased at a faster rate than GNP, some with a 1.14 elasticity.

#### Social Goods Expenditures - Levels and Statistical Profile

Government outlays on "social goods" have grown rapidly in almost all OECD countries. Included in this category are expenditures on: health, education, sickness, and housing. Table III.4 shows the proportion of total expenditures in these 3 areas from 1960-1980, for the major OECD countries. In 1960, education outlays absorbed 12.6% of total government spending, followed by health (6.3). By 1980, these had risen to 15.0, 13.0, respectively. For each country shown in Table III.4, governments' social goods expenditures also increased as a percent of GNP in the period 1960-81. For the major countries, the share nearly doubled, from 6.12% of GDP in 1960 to 12.1% in 1981. Thus, one eighth of all the resources generated in OECD countries are presently being directed towards social goods expenditures. In relation to total public expenditures,

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<sup>4/</sup> CPE/WP1/(82)4

outlays on social goods rose from 20.2 of total public expenditure in 1960 to just under 30% of public expenditure in 1981.

Table III.4: SOCIAL GOODS EXPENDITURE SHARES IN TOTAL PUBLIC OUTLAY  
(PERCENTAGE SHARES IN 1960 AND 1981)

	<u>Year</u>	<u>Education</u>	<u>Health</u>	<u>Sickness</u>	<u>Total Social Goods</u>
U.S.A.	1960	12.8	4.6	0.8	18.2
	1981	16.4	11.7	0.6	28.7
Japan	1960	23.6	8.0	0.9	32.5
	1981	16.5	15.4	1.1	33.0
Germany	1960	7.8	9.8	3.3	20.9
	1981	10.6	13.9	1.3	25.8
Canada	1960	10.4	8.3	n.a.	18.7
	1981	14.8	14.2	n.a.	29.0
France	1960	n.a.	7.1	3.2	10.3
	1981	n.a.	13.2	2.4	15.6
Italy	1960	12.7	9.4	0.6	22.7
	1981	14.1	13.5	1.9	29.5
U.K.	1960	10.5	10.1	1.7	22.3
	1981	13.1	12.0	0.5	25.6
<u>Total:</u>	1960	12.6	6.3	7.3	20.2
	1981	15.0	13.0	1.1	29.1

NOTES: (1) Average for 7 major countries only.

Source: SME/SAIR/SE/83.01, pp. 6-7.

Disaggregating by subperiod, Table III.5 shows the change in overall trends in social goods expenditure since 1960. From 1960-70 public sector social goods expenditure grew at an average rate of 9.9% per annum. Since 1970 to the present, their rate of growth has increased, to closer to 12.6% per annum.

Table III.5: GROWTH RATES OF SOCIAL GOODS EXPENDITURES  
(Percent)

	<u>1960-1970</u>	<u>1970-1980</u>
U.S.	10.9	13.1
Japan	7.0	19.3
Germany	9.9	11.1
France	12.6	16.9
U.K.	10.3	18.6
Italy	13.6	20.7
Canada	<u>13.2</u>	<u>14.7</u>
OECD Average*	9.9	12.6

\*1960, 1970, and 1980 weights were used respectively.

Source: World Bank Estimates; National Accounts  
Statistics, SME/SAIR/SE/83.01

Growth in Transfer and Income Maintenance Programs

Table III.6, derived from an OECD study of social expenditures<sup>5/</sup> summarizes the changed shares of the sub-components of transfer and income maintenance expenditure in the years 1960 and 1981 for the seven major OECD countries. Taking the countries together, the following picture emerges for transfer expenditure in this period. In 1960, pension expenditure was the largest sub-component of total expenditure (16%). Family benefits absorbed 2.1% of total expenditure, with unemployment taking the smallest share, 2.0%. The ordering has changed little since then, although the percentage shares of some of the sub-component has. The pension share has risen slightly to 20.7% of social expenditures, followed by expenditure on family allowances (2.8) and unemployment at 2.4% of public expenditure.

<sup>5/</sup> SME/SAIR/SE/83.09

Table III.6: TRANSFER AND INCOME MAINTENANCE EXPENDITURES  
(as Percent of of Total Public Expenditure)

	<u>Year</u>	<u>Pension</u>	<u>Unemployment</u>	<u>Family</u>	<u>Others</u>	<u>Total</u>
U.S.A.	1960	15.1	2.3	0.8	2.7	20.9
	1981	20.5	1.8	1.2	5.9	29.4
Japan	1960	13.7	1.4	0.0	4.2	19.3
	1981	16.5	1.1	5.7	0.6	23.9
Germany	1960	31.3	1.3	0.7	11.1	44.4
	1981	26.4	3.3	2.6	7.9	40.2
Canada	1960	9.5	5.0	4.6	3.7	22.8
	1981	11.1	5.8	1.6	5.3	23.8
France	1960	17.5	0.4	11.1	0.4	29.4
	1981	24.4	3.9	4.4	0.5	33.2
Italy	1960	16.0	0.6	8.3	12.7	37.6
	1981	28.9	1.3	2.6	1.9	34.7
U.K.	1960	12.2	0.8	1.7	4.6	19.3
	1981	16.4	3.3	3.3	6.0	29.0
<u>TOTAL:</u>	1960	16.1	2.0	2.1	4.0	44.4
	1981	20.7	2.3	2.8	4.4	59.3

Note: (1) Average for 7 major countries only.

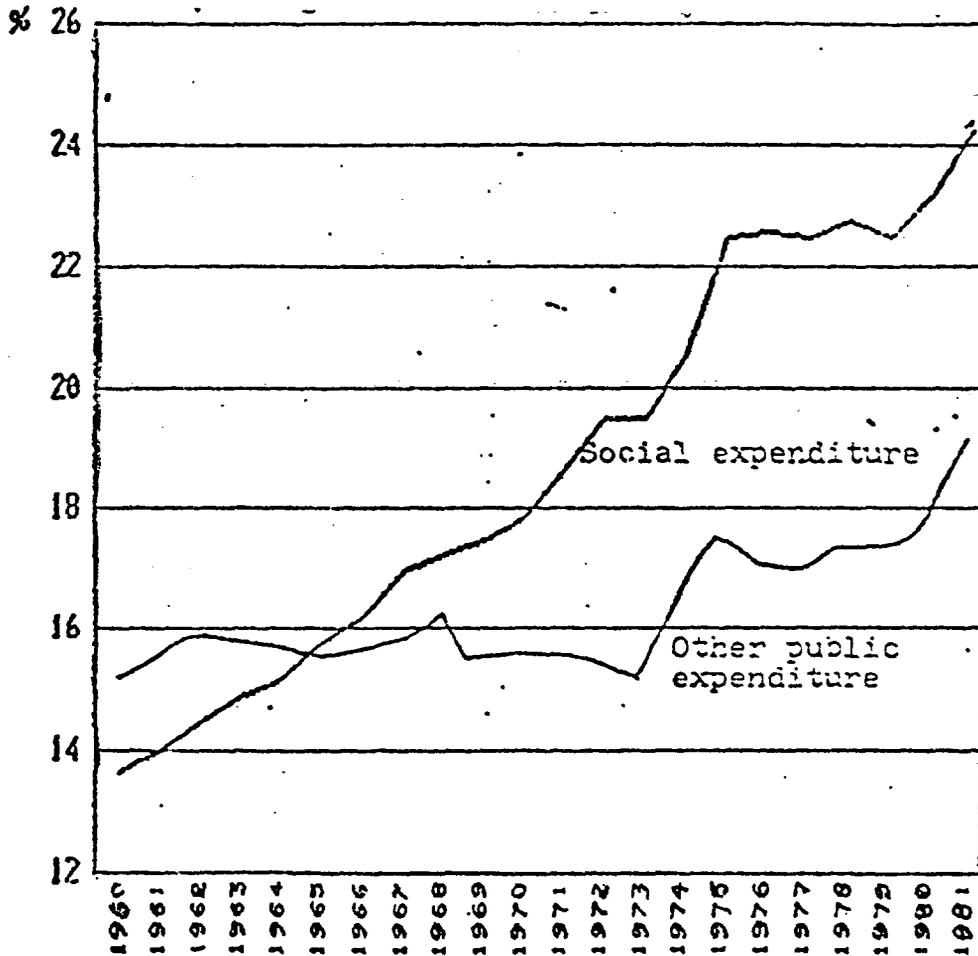
Source: SME/SAIR/SE/83.01, pp. 6-7.

Combining social goods outlays, and transfers, the share rose from 44.3% (1960) to 60% (1981) of total expenditures. These trends are outlined in the attached chart.

CHART III.2

The Growth of Social Expenditure and  
Other Public Expenditure: 1960-81

(Averages for the Seven Major OECD Countries)



Source: SME/SAIR/SE/83.

Determinants of Social and Income Maintenance Expenditures

The specific determinants of expenditure levels in each of the subcomponents discussed earlier vary by country. However, there are strategic factors common to all countries, which together determine expenditure levels. These include: demographic factors, levels of eligibility and coverage, demand or takeup of benefits, levels of benefits, and economic conditions. Inflation is an important determinant of expenditures, as are improvements in technology. The magnitude of these elements have been quantified in an OECD study<sup>6/</sup> (see Table III.7). In both periods, the primary contributor to increased social goods expenditures as well as transfers was increased benefit levels. Moreover, real increases in benefit levels were more important than the effects of increases in prices on benefit levels.

In the 1960-75 period, eligibility growth or increases in coverage, and demographic change equally contributed just over 40% of the increase of total expenditure up to 1975 and higher benefit levels contributed 60%. In the past 6 years, 1975-81, demographic factors contributed about 18% to increases in social expenditure; eligibility factors only 5%, and increased average benefit levels about 73%.

The relative impact of these factors of course varies according to the program. The following sections seek to analyze the factors contributing to growth in individual expenditure programs. Finally, some prognosis is made to trends to 1990, given past patterns, assumptions about future demographic trends, and finally, political and managerial changes which might affect future levels.

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<sup>6/</sup> SME/SAIR/SE/83.01

Table III. 7: THE DETERMINANTS OF GROWTH IN SOCIAL AND TRANSFER EXPENDITURE

Four Main Programs in the Seven Larger Economies  
Average Annual Growth Rates at Constant Prices

Program	Percent of GDP	Total Changes in Real Expenditure	Total Changes in Nominal Expenditure	Real Increases, of which:				
				Demographic change	Eligibility	Benefit Levels	Relative Prices	Real Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	1960			Growth Rates - 1960 to 1975				
<u>Social Goods</u>								
Education	4.2	6.1	14.7	0.29	1.90	3.83	2.19	1.60
Health	2.7	9.6	17.1	1.03	0.60	7.83	2.19	5.52
<u>Income Maintenance</u>								
Pensions	4.5	8.4	14.3	2.23	1.62	4.35	0.00	4.35
Unemployment	0.4	12.0	18.2	5.08	0.00	6.60	0.00	6.60
Other	2.5	7.7	13.5	-	-	-	-	-
Total Social and Income Maintenance Expenditure	14.3	8.0	14.6	1.36	1.43	5.03	1.28	3.71
	1975			Growth Rates - 1975 to 1981				
<u>Social Goods</u>								
Education	5.1	1.8	12.9	-1.74	0.20	3.40	1.28	2.00
Health	5.1	3.1	14.2	0.26	0.00	3.10	1.28	1.80
<u>Income Maintenance</u>								
Pensions	7.3	6.6	17.0	1.77	0.78	3.94	0.00	3.94
Unemployment	1.1	6.4	15.7	7.84	-2.30	1.00	0.00	1.00
Other	3.4	3.6	13.6	-	-	-	-	-
Total Social and Income Maintenance Expenditure	22.0	4.2	-	0.75	0.22	3.38	0.70	2.65

Source: SME/SAIR/SE/83.01/ pg. 19 and, SME/SAIR/SE/83.9 pg. 35, and based on unweighted averages for the seven larger economies: U.S.A., Japan, Germany, France, United Kingdom, and Italy. Data are taken from Statistical and Technical Annex and from the corresponding papers on Health, Education, Old-Age Pensions and Unemployment Insurance. The estimates above should be read as an approximate breakdown only of the main changes in the two periods 1960 to 1975 and 1975 to 1981.

Determinants of Expenditures on Social Goods: Health expenditures

Three principal features of the development of overall expenditures health services have been (1) rapid growth of expenditure by individuals, (2) changes in the way health expenditure have been financed, leading to a substantial increase in the share financed by government, (3) rapid improvement in technology.<sup>7/</sup>

The rapid growth in expenditures, as Table III.7 illustrated, has had most to do with increases in "benefit levels", i.e., health expenditures per person. In the 1960-75 period, real average benefits grew at over 5.5% per annum, in 1975-81, of 1.8%, accounting for 55% of the increase in health expenditures. At the same time, the price of health care increased relative to other prices (the increases in health care costs were 50% greater than the overall expenditure deflator), so that a fraction of these higher expenditures were compensating for higher costs (or higher quality and standards) of health care. In both periods the importance of demographic factors was very small (less than 10%).

Technical change has increasingly been associated with greater hospital use and hospitals now account for over 50% of total health care costs and 40% of public-financed costs, and specialization of secondary personnel. In many OECD countries, all this has developed in a cost vacuum, with little thought given to the costliness of procedure, and little political thought has been directed to the "screening" of access to

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<sup>7/</sup> SME/SAIR/SE/83.09

health procedures.<sup>8/</sup> The result has been increasing concentration of health services, with an estimated 50% of total health expenditure consumed by 3-4%<sup>9/</sup> of the total population. This unwillingness to decide who shall receive publically-paid-for care, instead, allowing access of all, has contributed significantly to the uncontrolled expansion of per-individual health care costs. Coupled with this, have been the proclivities of the health care profession, who also encouraged "best practice" medicine to be the standard which patients demand without any consideration of costs. Table III.8 outlines the components of real expenditure on health since 1960.

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<sup>8/</sup> In this context, it is interesting to note that improved access has been reflected in both greater numbers of hospital admissions and longer stay per admission: This is so in spite of higher incomes and "better health" since 1960. The footnote table makes this clear:

TRENDS IN HOSPITAL UTILIZATION 1960-1980  
(Average for Seven Major OECD Countries)

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	<u>1960</u>	<u>1975</u>	<u>1980</u>
Admission rates (admissions per 1000 population)	9.5	13.1	13.5
Average length of stay (days per admission)	15.1	19.6	18.6

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Source: SME/SAIR/SE/83.04

<sup>9/</sup> SME/SAIR/SE/83.09, Pg. 16.

Table III.8: THE GROWTH OF REAL EXPENDITURE ON HEALTH CARE: 1960-1980  
(Average for six major OECD countries a/)

	Percent Composition in 1980	Percent Per Annum	
		1960 -to- 1975	1975 -to- 1980
Private expenditure	24.3	4.1	3.2
Public Expenditure of which	75.7	9.6	4.2
Hospital Services	37.9	7.2	3.4
Ambulatory Care	17.3	7.2	3.4
Pharmaceuticals	7.6	10.1	6.1
Other	12.9		
Total Expenditure	100.0	7.6	4.0

a/ The six countries concerned are Canada, France, Germany, Italy, United Kingdom, United States.

Source: SME/SAIR/SE/83.09, pg. 39, and Expenditure on Health Under Economic Constraints; Part II Estimates of Expenditure; Costs and Selected Indicators. OECD 1983: MAS(83)4.

Pharmaceutical costs have risen the most rapidly, with large drug costs in part the result of capitalization of enormous R&D expenditures into drug prices and into the prices of medical machinery, followed by growth of hospital services next. Increases in eligibility contributed less to increased expenditure in the 1970s; largely because desired coverage had been achieved in most OECD countries by the end of the 1960s, a period in which rapid extension of coverage took place, with the introduction of public programs in a number of countries. By the 1970s, either employment linked private insurance, or universal access health services covered the bulk of the OECD population.

However, demographic factors contribute about 10% of total growth of health care expenditure, and the proportion of health care expenditure following on demographic change is expected to rise in the future. Table III.9 outlines the relative public expenditure on the aged, as a percent of expenditure on the population under 65.

Table III.9: RELATIVE PER CAPITA PUBLIC EXPENDITURE ON THE AGED IN OECD COUNTRIES, LATE 1970s  
(Ratio of Expenditure, People 65+ to Population 0-64)

		<u>Hospital</u>	<u>Ambulatory Care</u>	<u>Medicines</u>
Canada	(1978)	7	2	n.a.
Finland	(1976)	5	2	n.a.
France	(1978)	5	2	4
Japan	(1979)	4	n.a.	n.a.
United Kingdom	(1978)	4	1	3
United States	(1978)	8	9	6

Sources: SME/SAIR/SE/83.04, pg. 19, and Surveys quoted in the document for the Ad Hoc Experts Group on Health Policy and Health Systems in March 1982 (SME/SAIR/HI/81.03).

As Table III.9 indicates, expenditures on aged population are some 4-8 times greater than expenditure on under 64 population for hospital care, and for ambulatory care, they are twice as great, on average. With average old age population growing in OECD countries by about 1/2% p.a. (far less than population growth), the potential upwards pressure in public health expenditure is sizeable, unless changes on health care delivery are made.

The table also shows a striking variance in expenditures across countries. Notably, expenditures in the U.S. on the aged are some two

times higher than the average for the other countries, whether on hospital care, ambulatory care or medicines. While some of this may be due to "quality" of care, it also has to do with cost-structures and pricing of health care. The variance suggests that there is scope for containing this category of expenditure, without compromising quality.

Determinants of Social Goods Expenditure: Education

In virtually all OECD countries, the proportion of the populace of educable age is shrinking. In the past, growth of expenditure on education increased at 6.1% per annum, but since 1975, expenditure on education has decelerated substantially, growing at only 1.8% per annum. As with health expenditure, education benefit levels--or increases in real expenditure per pupil--were the primary cause of this increase. The difference before and after 1975 was that in the recent period, demographic factors, such as the decline in births and school age population, reduced by half the impact of the increases in benefit levels on overall education expenditures.

Determinants of Income Maintenance and Transfer Expenditures: Pensions and Social Insurance

Expenditure on pensions and social security is both the largest sub-component of OECD governments' expenditure, and also the fastest growing. As a percent of public sector expenditure in OECD countries, pensions now absorb 19.4% (8.8% of GDP), and have increased at a rate of over 6% in real terms since 1975.

Social security expenditure is largely a function of the number of beneficiaries and the level of pension paid them. The former, in turn, is related to the number of the aged population, and those aged who are eligible for this transfer program. In accounting for increased expenditure levels, it is clear from Table III.10 that the bulk of increased expenditure is due to rapid growth in benefit levels, i.e., in the real value of pensions paid, which may be a function of past earnings and labor participation (in semi-insurance systems) or some publicly determined pension level (in the universal schemes). In either case, pensions are frequently related to or tied to previous earnings, the so-called "replacement ratio". Table III.10 shows how replacement ratios have risen since 1965. The increase has averaged 50% over the 15-year period, or 4% increase in real terms per annum. In a number of countries, this was due to advantageous changes in the pension indexation formula, or in the earnings base used to calculate previous earnings levels (France, Japan, UK, Italy). In others, it has been the result of the introduction of new schemes (Sweden). In two countries (Denmark and Japan), there has been an erosion of pension level since 1965, and in Germany since 1969. It is interesting to note that social security benefit levels were entirely protected from inflation; on average, changes in relative prices did not adversely affect real benefit levels.

Table III.10: REPLACEMENT RATES FOR SOCIAL SECURITY PENSIONS  
(Single Person, % of Past Income)

	<u>1965</u>	<u>1969</u>	<u>1975</u>	<u>1980</u>	<u>Index 1965=100</u>
Canada	21	24	33	34	161
Denmark	35	31	29	29	83
Sweden	31	42	57	68	219
France	49	41	60	66	135
Germany	48	55	51	49	102
Italy	60	62	61	69	115
Japan	-	29	37	54	86*
Netherlands	35	43	43	44	126
United Kingdom	23	27	31	31	135
United States	29	30	38	44	152

Note: See the sources for more details of the replacement rate computation.

\* 1960 = 100

Sources: SME/SAIR/SE/83.06, pg. 4, and Haanes-Olsen (1978) and Aldrich (1982), and World Bank Estimates.

Demographic changes also had an impact on growth in social security expenditure, accounting for just under 30% of the increase in social security expenditure. The proportion of overall growth due to demographic factors was slightly greater in the latter period, this though differs substantially by country. In a number of OECD countries, (Australia, New Zealand, Italy) there is virtually no aging of the population. In future years, after 2000, demographic factors will be the most important factor contributing to overall pension expenditure levels.

Increases in eligibility have contributed least to growth in social security expenditures in the latter 1975-81 period. This reflects the fact that increases in coverage, introduction of new schemes, reduction

in pensionable age and provisions of early retirement had, in most OECD countries, all been introduced by 1975.

The implications of this for future levels of social security expenditure are outlined at the end of this section. Briefly, however, with social security expenditure the largest percentage of public social expenditure, and the fastest growing, the demographic changes overtaking OECD countries suggest that social security expenditure may at some point have to be constrained. This burden will not develop in the near future, as the demographic component of social security expenditure, over the next 10-20 years, will remain relatively stable. The major growth is expected after the turn of the century. Only in Japan is an aging population already a reality. Table III.11 shows the proportion of the population expected to be in the 65+ age group in the present and in the years 2000 and 2020 rising from 11.3% in 1980 to 16.5% in 2020.

Table III.11: AGE DISTRIBUTION OF TOTAL POPULATION (%)  
SEVEN MAJOR OECD COUNTRIES

Age Group	1980	2000	2020
0 - 19	31.6	27.0	26.0
19 - 64	57.1	58.7	57.5
Over 65	11.3	13.4	16.5

Source: "Short-term population projection, 1980-2020, and long-term projection, 2000 to stationary stage, by age and sex for all countries of the World." Prepared by PHN, World Bank, August 1983.

Attempts to reduce pension expenditure have revolved around two measures: the first is increases in retirement age (i.e., reduction of eligibility) or adjustments to pensions which provide incentives to retire later (normally, the trend has been the opposite: towards a lowering of the retirement age. In the US the present plan is to raise the retirement age to 66 in the year 2000. This type of adjustment will not have a major effect in the short run. Another measure is reduction in the rate of increase of benefits. Typically this would take place via a change in the indexation formula. Germany, the U.S., the U.K. have done this; the former two countries have corrected for past overindexation.

Determinants of Transfer Payments: Unemployment Compensation and Insurance

Unemployment insurance expenditure make up a relatively small, but growing share of GNP. In 1960, unemployment expenditure made up 0.4 percent of GDP; by 1975, it had almost tripled to 1.1%. In the period to 1975, it was thus the fastest growing sub-component of social expenditures, growing at 12% per annum. From 1975 to 1981, expenditure growth was less rapid, although in the 1982-83 period, it has again increased.

Contributing to the rapid growth to 1975 were, almost equally, increased benefit levels and demographic changes. In the recent period, demographic changes--i.e., growth in the labor force, have been the primary force behind growth in expenditures.

Also striking from Table III.7 is the negative impact on expenditures due to reduced eligibility in the post-1975 period, as growing numbers of workers became unemployed for longer periods and benefits ran out.

Social Goods and Transfer Expenditures" Controlling Future Growth

Equity Impact of Social Expenditures

The general consensus on the impact the "welfare state" has had in reducing poverty and income inequality would clearly be that the old, the poor, are better off. There is, however, evidence that the increasing expenditure in the 1960's and 1970's has not been accompanied by the equity gains one might expect, as reflected in, for example, lower morbidity rates, lower mortality rates or increased equality in the distribution of income.<sup>10/</sup> It appears that the underlying inequities in the distribution of income and wealth are stubborn and that redistributive social programs have limited ability to reduce or change them. In sum, the consensus seems to be that government involvement of a more limited sort, at far lesser cost could have achieved very nearly the same results.

Efficiency

One point which has repeatedly been made is that the gross costs of social programs are substantially greater than the net benefits to recipients. The table below outlines the gross expenditures and net benefits flowing to different levels of the income distribution. What is clear is that social goods expenditures and transfer payments assist not only the very poor, or even the fairly poor, but that much of the benefit actually goes to those middle classes whose taxes finance the

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<sup>10/</sup> See, for example, discussion in SME/SAIR/SE/83.3, and EEC Poverty Report, 1981; Public Expenditure on Income Maintenance Programs, OECD, 1976; W Beckerman, Income Maintenance Programs and Their Impact on Poverty, ILO, 1979; among others.

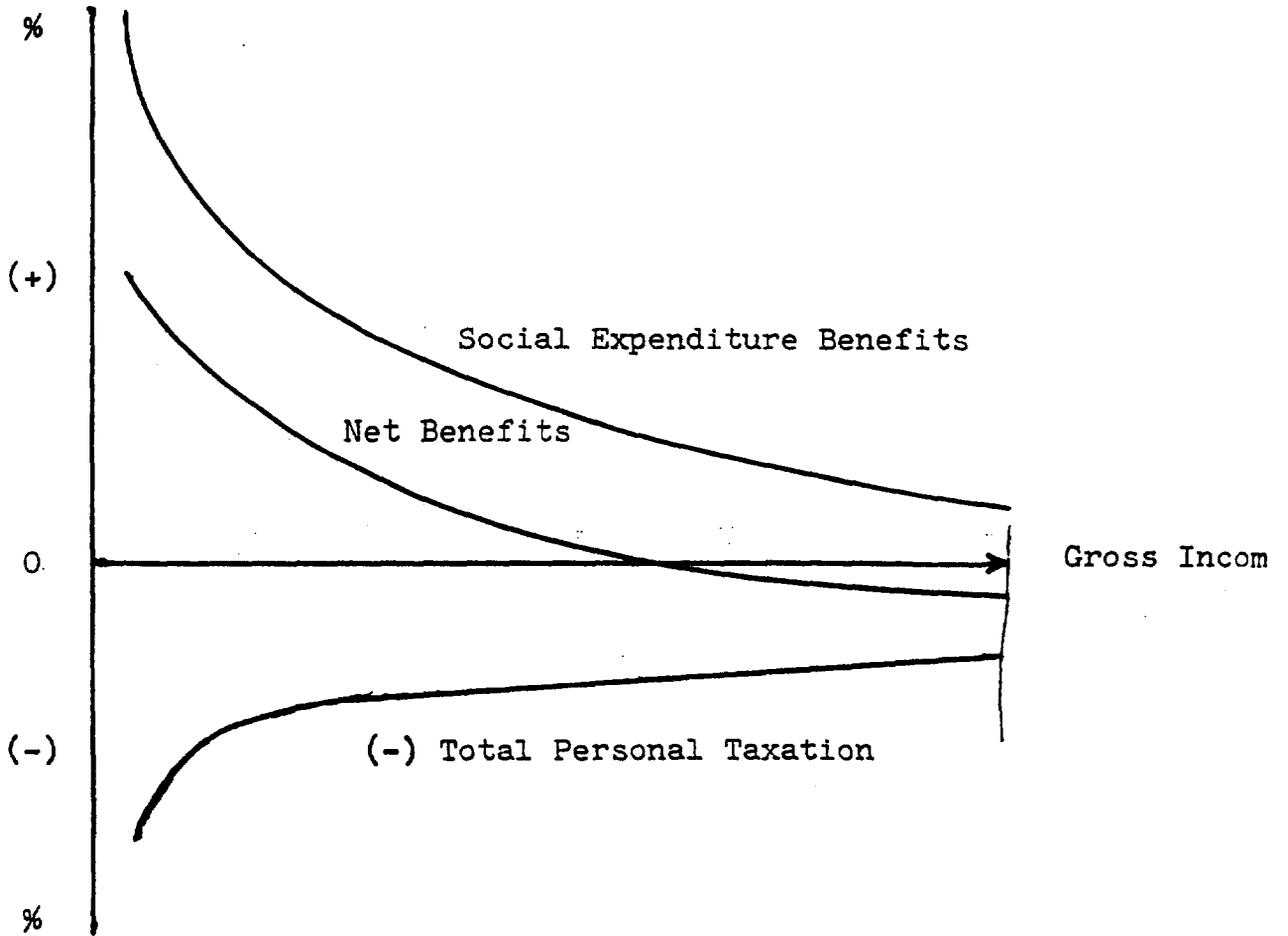
expenditure.<sup>11/</sup> This is true of pensions, education, and health, but also of unemployment benefits. This pattern has been quite firmly established in a variety of OECD countries, including Canada, the U.S., and the UK.

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<sup>11/</sup> SME/SAIR/SE/83.3, pp. 6-7

CHART III.3

Social Expenditure Benefits, Total Personal Taxation and  
Net Benefits as a Percentage of Gross Income  
(Averages for the seven major OECD countries)



SOURCE: SME/SAIR/SE/83.09, pg. 48

What the chart shows is that, in principle, the same redistribution (net flow) could be achieved with much reduced gross flows. What makes any shift in redistribution difficult, however, is precisely that across almost all levels of the income distribution, there is dependency on these social programs and these constituencies are important. As our OECD study points out, income-support benefits are often extended to the non-poor, so as to avoid high marginal tax rates and accompanying disincentives implied by rapid withdrawal of benefits as incomes rise. Stigler<sup>12/</sup> has concluded that this sort of "churning" of resources is necessary if a political consensus in favor of redistribution policy is to evolve. The middle class will not continue paying for social programs if they, too, do not have some access. This may explain the absence of "tax revolt" in many European countries where access to public social services is broad based, by contrast to the US, where health programs, higher education grants and medicare are limited to those satisfying fairly strict eligibility criteria.

These inefficiencies have highlighted another concern, namely the "excess burden" inefficiencies which social programs generate. The behavioral changes on the part of recipients which result from government intervention, in turn often feed back on higher costs. These inefficiencies are most often pointed out in the case of health care, where service may be over-consumed as the user's perception of the value of the service is divorced from the cost of providing it,<sup>13/</sup> in unemployment

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<sup>12/</sup> G.J. Stigler, "Directors' Law of Public Income Redistribution" Journal of Law and Economics, 13, 1970.

<sup>13/</sup> An OECD study SME/SAIR/SE/83.04 offers the example of sending children to hospital because taking them to a doctor interferes with parents' work time.

insurance which has been alleged <sup>14/</sup> to induce the unemployed to increase their job search time and their period of unemployment, and in the case of pensions, have induced a trend to earlier retirement. In each case, these behavioral changes increase the costs and extension of the publicly financed programs.

#### Outlook to 1990 and Beyond

Growth of social and transfer expenditure in the 1980's and 1990's, and the pressures this growth will engender, will be a function of policy changes, economic conditions and demographic changes. The former determine both the economic base which will be available to generate the resources required, as well as the rate at which (indexed) expenditures grow. The latter determine the structural changes in the level of demand for committed benefits which may be expected.

Drawing on OECD studies, this section discusses the outlook to 1990 for the level of social and transfer expenditures in OECD countries, given certain assumptions about economic growth and demographic change. The economic outlook is detailed in the footnote below. Footnote 2 outlines demographic assumptions. The outcomes are presented in Table III.13.

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<sup>14/</sup> Feldstein .....

Footnote 1:

Economic Climate: 1960-1990  
(Weighted average for seven major OECD countries)

Growth Rate of (%)	1960-75	1975-82	1982-90 Pessimistic Scenario	1982-90 Optimistic Scenario
Real GDP	4.25	2.67	2.80	3.70
Employment	0.94	1.03	0.84	1.31
Productivity	3.28	1.63	2.00	2.35
Unemployment Rate at End of Period	5.30	8.00	8.00	5.60

Source: SME/SAIR/SE/83.02

Footnote 2:

Demographic Changes: 1950-2000

Industrialized Countries

Year	Dependency Ratio	of which:	
		≤ 14	≥ 65
1950	35.4	27.8	7.6
1979	44.3	40.5	3.8
2000	34.6	34.2	13.1

Source: U.N. (ESA/P/WP.6J, Jan 1980)

The study assumes that the level of social and transfer expenditure relative to GNP (22.8% in major OECD countries in 1982) has reached a threshold level and will not be increased. <sup>15/</sup> It also assumes that there will be no increased coverage and that eligibility will not increase, as the extension of most social programs in OECD countries is already large. Demographic changes, however, are incorporated, as are

<sup>15/</sup> SME/SAIR/SE/83.01

increases in the relative prices of social expenditure (especially health and education), which are assumed to increase 1% more rapidly than the general price level.

Social and Transfer Expenditures in 1990

Table III.12: IMPLICATIONS OF THE ECONOMIC SCENARIOS  
(Averages for the seven major OECD countries)

	Percent of GDP	Change in Relative Prices	Total Change in Real Expenditure	Demographic Change	of which: Eligibility	Benefit Levels
Programme	(1)	(2)	(3)	(4)	(5)	(6)
1982 Growth Rates - Optimistic Scenario: 3.7 per cent GDP Growth						
<u>Social Expenditure</u>						
Education	4.8	1.0	3.4	- 0.51	-	3.9
Health	5.2	1.0	4.2	0.25	-	3.9
<u>Income Maintenance</u>						
Pensions	8.8	0.0	4.4	1.42	-	2.9
Unemployment	1.2	0.0	- 2.7	- 5.70	-	2.9
Total Social and Transfer Expenditure	22.8	0.5	3.7	0.22	-	3.5
1982 Growth Rates - Pessimistic Scenario 2.8 per cent GDP Growth						
<u>Social Expenditures</u>						
Education	4.8	1.0	2.2	- 0.51	-	2.7
Health	5.2	1.0	3.0	0.25	-	2.7
<u>Income Maintenance</u>						
Pensions	8.8	0.0	3.1	1.42	-	1.7
Unemployment	1.2	0.0	1.7	0.03	-	1.7
Total Social and Transfer Expenditure	22.8	0.5	2.8	0.56	-	2.2

Source: Secretariate estimates, SME/SAIR/SE/83.01

Because demographic changes and movements in relative prices are adverse, holding the ratio of social and transfer expenditure to GNP constant implies a decline in the rate of increase of real benefits (Column 6) relative to GNP. In the scenario which is optimistic about growth (the scenario with lower unemployment, higher productivity growth and GNP growth 1% higher than under pessimistic scenario), the decline in real benefit growth is of the order of 0.2% per annum. In other words, real benefit levels grow 3.5% per annum while GDP grows 3.7% per annum. Historical growth of real average benefit levels in from 1960-75 was 3.7%, from 1975-81, 2.65% per annum. In the pessimistic scenario (unemployment at 1982 levels, GNP growth at 1980-82 rates) the growth of real benefit levels, given a constant share of social expenditure to GNP, and given demographic change, is 0.6% per annum less than the growth of GDP. That is, real benefit levels grow 2.2% per annum, while GDP grows at 2.8%. Most likely these slower rates of growth would be achieved by an (under) indexing of benefits to less than real earnings growth. As the OECD study points out, these figures are broad averages across all social and transfer programs, and across countries. The actual changes in expenditure levels which take place are likely to vary by country and by program, in line with each country's priorities and constraints. The conclusion, however, that only a small reduction in the real growth of benefit levels can achieve a stabilization of expenditures relative to GNP is encouraging. Expenditure growth at a rate which implied real benefit growth at the same rate as GNP, on the other hand, would imply a 25% share in GDP by 1990. This share would be greater still if governments desired to increase coverage or eligibility.

There are two important caveats to this conclusion. The first is that there may in fact be substantial increases in demand for these social goods from new sectors of the population who have previously not had access, or not had adequate access. The analysis hence has assumed that these demands can be contained and that there will be no increases in coverage or eligibility. (Alternatively, through better targetting, these demands could be met with no increases in costs.) The second caveat is that the analysis refers to a "steady state" scenario. If for example, there is a sharp supply-side shock to the system, and income falls, expenditure levels will probably remain nearly constant, and their share will rise in consequence.

The previous example assumed that the ratio of social expenditure to GNP would remain constant at its 1982 level. A more stringent set of measures implemented by governments wishing to constrain social expenditures might place the burden of budgetary adjustment on social expenditures. The table below indicates the cut in social expenditure required to balance overall OECD budgets.

Table III.13: BALANCING THE BUDGET: SOCIAL AND TRANSFER EXPENDITURES

<u>Year</u>	<u>Government Deficit % of GDP</u>	<u>Social and Transfer Expenditures % of GDP</u>	<u>Deficit as % of Soc. Exp.</u>	<u>Social Exp. as % GDP to Balance Budget</u>
1982	-4.2 <sup>a/</sup>	22.8	18.0	18.6
1981	-2.8	22.8 <sup>b/</sup>	12.0	20.0
1980	-2.5	22.8 <sup>b/</sup>	11.0	20.3
1979	-1.9	22.8 <sup>b/</sup>	8.3	20.9

<sup>a/</sup> Source: Table 28  
<sup>b/</sup> World Bank Estimates.

If the burden of budgetary adjustment were to be put on social and transfer expenditures, a decline of some 18% would be required in the social expenditure category, from 22.8% of GDP to 18% of GDP. The question of course is whether budgetary policy can be made by full adjustment on the expenditure side.

Yet another alternative is to examine the implication of a zero real increase in benefit levels (i.e., constant benefit levels). In this instance, benefit levels would be adjusted to any increase in relative prices and overall expenditure would also rise in line with demographic movements. However, there would be no real increase in benefits levels. Again, no increases in coverage are assumed. Table III.14 outlines the implications for social expenditure as a share of GDP.

Table III.14: ALTERNATIVE SCENARIOS TO 1990

Four Main Programs in the Seven Larger Economies  
Average Annual Growth Rates at Constant Prices

Program	Percent of GDP	Growth of total real expenditures to 1990	of which:				
			Nominal			of which:	
			Demographic change	Eligibility	Benefit Levels	Relative Prices	Real Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
1990		Optimistic Scenario: 3.7% GDP Growth					
<u>Social Goods</u>							
Education	3.7	0.50	-0.51	-	1.0	1.0	0.0
Health	4.3	1.25	0.25	-	1.0	1.0	0.0
<u>Transfer Payment</u>							
Pensions	7.3	1.42	1.42	-	0.0	0.0	0.0
Unemployment	0.6	-5.70	-5.70	-	0.0	0.0	0.0
Total Social Expenditure	17.1	0.7?	0.22	-	0.5	0.5	0.0
1990		Pessimistic Scenario: 2.8% GDP Growth					
<u>Social Goods</u>							
Education	4.0	0.05	-0.51	-	1.0	1.0	0.0
Health	4.6	1.25	0.25	-	1.0	1.0	0.0
<u>Transfer Payments</u>							
Pensions	7.9	1.42	1.42	-	0.0	0.0	0.0
Unemployment	0.7	+0.30	0.03	-	0.0	0.0	0.0
Total Social Expenditure	18.5	1.06	0.56	-	0.5	0.5	0.0

Source: World Bank Estimates

If no real increase in average benefit levels takes place, social expenditure could be reduced to some 17% of GNP by 1990, on the demographic assumptions outlined earlier, and given the optimistic GNP growth of 3.7%. If average real benefit levels are not permitted to grow and expenditures rise only to cover demographic changes and relative price increases, but GDP grows at the slower rate of 2.8%, the share will fall to 18.5% of GDP.

### Conclusions

In sum, it appears that there is some slack in social and transfer expenditure programs. If real benefit levels remain constant in real terms, the social expenditure burden can be substantially reduced. If the share remains constant, real average benefits can grow by 3.5%, only 0.2% less than the rate of growth of real earnings implying that recipients do share in the fruits of economic growth. What will be required is political will, and development of policy alternatives, especially better targetting. All these elements will be required, because such a shift will imply a change from past trends in benefit growth and in people's expectations of entitlements. Implied in the optimistic scenario is a growth of real benefit levels of 3.5%, compared with a growth rate in 1960-75 of 3.7%. Nonetheless, the optimistic scenario implies faster growth in benefit levels (2.8%) than actually took place in 1975-81.

The more restrictive scenarios imply a more radical change from past trends, i.e., the zero real benefit increase represents quite a departure even from the 2.8% growth rate of benefits from 1975-81.

The feasibility of this rests, as noted earlier, on two crucial assumptions, namely (i) that new entitlements are not granted (or if they are, that targetting compensates for any such changes). No increases in coverage or If governments find this impossible to stick with, then the future augurs much less well for containing budget deficits through expenditures policy. And (ii) no further supply shocks take place.

The following section completes the examination of OECD expenditure trends with a discussion of trends in interest payments.

#### Debt Interest

Table 6 indicated the share of government debt interest payments in total government expenditure. After government expenditure on the very broad category of "social goods and transfers", the largest share of public outlays goes to debt interest. The overall OECD average is close to equalling outlays on defense expenditure for many countries. This is a tremendous change from the not too recent past, when interest on the public debt was generally half its present level. Table 18 shows this trend since 1970. <sup>16/</sup> For major OECD countries, the share of interest in government expenditure rose 56%, from 4.9% of expenditure to 8.8% of expenditure. For some countries, such as Japan, the UK, and Australia, was about half again as high, and in a few countries (Canada, Belgium, Italy) the proportion approached 18% in 1982.

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<sup>16/</sup> Chouraqui and Price, op. cit.

Table III.15: SHARE OF GENERAL GOVERNMENT DEBT INTEREST PAYMENTS  
IN TOTAL GOVERNMENT SPENDING

	Percent												
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
United States	3.8	3.6	3.3	3.8	3.5	3.5	3.9	3.8	4.0	3.8	4.2	5.3	5.8
Japan	4.9	4.5	5.0	5.8	5.3	5.8	7.2	8.7	9.8	11.1	12.6	13.6	14.8
Germany	3.0	2.9	2.9	3.1	3.2	3.2	3.6	4.0	3.9	4.1	4.5	5.2	6.1
France	3.3	3.0	2.6	2.4	2.6	3.3	3.1	3.3	3.4	3.7	3.8	4.7	4.5
United Kingdom	12.3	11.4	10.8	11.2	11.5	10.1	11.0	11.5	11.4	12.0	12.3	12.3	12.2
Italy	5.4	5.6	5.9	6.7	7.9	10.4	11.7	12.7	14.0	14.1	15.0	15.5	17.2
Canada	11.6	11.7	11.7	11.9	10.9	10.7	11.7	11.9	12.9	14.1	14.1	15.6	16.6
Total Major Seven Countries	4.9	4.7	4.6	5.0	4.9	5.0	5.7	6.1	6.4	6.7	7.3	8.2	8.8

Source: Chouraqui and Price, op. cit.

Table III.16: DEBT TO GNP RATIOS - OECD

	Central Government Debt					Total Public Debt	
	1960	1965	1970	1975	1980 (1)	1975	1980 (1)
Australia	59.8	49.7	39.6	24.7	-	-	-
Austria	-	-	9.1	10.5	19.1	24.1	33.4
Belgium	70.2	58.5	48.9	40.7	57.9	50.4	71.8
Canada	44.6	36.7	29.2	22.6	28.4	-	-
Denmark	23.3	12.6	7.2	-	-	15.6	44.1
Finland	8.9	11.4	8.4	3.0	9.2	-	-
France	28.4	17.4	12.6	8.9	10.1	15.0	14.0
Germany	7.4	7.2	7.0	10.5	15.6	24.8	31.4
Ireland	61.0	72.6	67.1	71.4	-	72.7	89.5
Italy	37.0	32.3	35.9	53.7	60.8	58.4	49.5
Japan	6.0	4.3	6.8	10.4	24.6	17.8	41.9
Netherlands	44.0	31.9	28.6	22.3	31.5	40.7	48.9
Norway	28.4	22.8	23.7	27.9	-	35.7	48.6
Spain	-	-	11.4	7.8	7.7	-	-
Sweden	31.5	19.2	21.2	24.4	34.1	35.4	53.2
Switzerland	15.5	7.9	5.7	7.3	8.0	28.3	26.6
United Kingdom	-	-	52.9	42.9	40.1	68.3	57.2
United States	46.6	37.6	29.3	28.1	28.0	49.1	47.4
Mean	34.2	28.1	24.7	24.5	26.8	37.1	45.1

Source: CPE/WP1/(82)4, pg. 58 and IMF International Financial Statistics-Central Government and Bundesministerium Der Finanzen, Finanzbericht, 1982-General Government

This rapid growth was a function of 3 factors: (i) rapid growth of government deficits financed by borrowing, (ii) increases in nominal interest rates during the period, and (iii) declining inflation which has resulted in higher real interest rates. The discussion which follows draws on OECD studies of this area. <sup>17/</sup>

### Public Debt

The first factor is perhaps the most important. OECD debt and deficits are discussed in greater detail in Section D. Briefly, however, the growth of outstanding debt has been rapid in recent years. Table 19 shows the ratios of central government debt to GDP, from 1960-1980, and total government debt for the years 1975 and 1981. Central government debt to GDP ratios decreased from 1960 to 1970, largely because of the erosion of real debt levels due to inflation, and then increased between 1975 and 1980. (See also Table 21).

Most countries shown experienced an increase in their central government debt/GNP ratios between 1975 and 1981. Total government debt to GNP ratios have also risen in the past 5 years. Likely future growth in this ratio is a function of future growth in government deficits and the manner in which governments chose to finance them, and future inflation. The alternatives and likely trends are discussed further in Section D on trends in OECD deficits.

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<sup>17/</sup> Charouqui and Price, op. cit., CPE/WP1/(82)4, and CPE/WP1/(81)1.

Nominal Interest Rates

As a result of the higher nominal interest rates prevalent in OECD in the recent past, the interest burden component of government expenditure rose substantially. Table III.17 shows trends in the long-term bond rate of major OECD countries. With the exception of countries such as Germany and Japan, these have tripled, or doubled, between 1965 and 1982.

Table III.17: NOMINAL LONG-TERM INTEREST RATES  
1965-82

<u>Year</u>	<u>Canada</u>	<u>France</u>	<u>Germany</u>	<u>Italy</u>	<u>Japan</u>	<u>United Kingdom</u>	<u>United States</u>
1965	5.21	5.270	7.100	6.940		6.560	4.270
1966	5.69	5.400	8.100	6.540	6.860	6.940	4.770
1967	5.94	5.660	7.000	6.610	6.910	6.800	5.010
1968	6.75	5.860	6.500	6.700	7.030	7.550	5.460
1969	7.58	7.640	6.800	6.850	7.090	9.040	6.330
1970	7.91	8.060	8.300	9.010	7.190	9.220	6.860
1971	6.95	7.740	8.000	8.340	7.280	8.900	6.120
1972	7.23	7.350	7.900	7.470	6.700	8.910	6.010
1973	7.56	8.250	9.300	7.420	7.260	10.720	7.120
1974	8.90	10.490	10.400	9.870	9.260	14.770	8.060
1975	9.04	9.490	8.500	11.540	9.200	14.390	8.190
1976	9.18	9.160	7.800	13.080	8.720	14.430	7.870
1977	8.70	9.610	6.200	14.620	7.330	12.730	7.670
1978	9.30	8.960	5.800	13.700	6.090	12.470	8.490
1979	10.26	9.480	7.400	14.050	7.690	12.990	9.330
1980	12.49	12.990	8.500	16.110	9.220	13.790	11.390
1981	15.22	15.663	10.383	20.578	8.660	14.742	13.718
1982	14.76	15.561	8.950	20.895	8.055	12.880	12.917

Source: IFS, Long-term bond yields.

The higher real interest rates which have been required recently for the government to raise debt are due to a variety of factors. Because inflationary expectations are still high inspite of the restrictive monetary environment, bond holders require higher real yields for the risk they take on. This insistence on higher real yields is reinforced by the fact of growing government debt which carries with it fears that the debt will be monetized, causing higher inflation. In sum, new debt is issued, and refinanced debt is rolled over, at higher real rates and is now beginning to put pressure on even low inflation countries such as Japan, Germany and Austria. Moreover, as real interest rates rise and the interest burden is financed, it is capitalized into outstanding debt, and the effect rapidly becomes cumulative.

OECD has carried out a study estimating the contribution to the growth of the debt, made by these factors. <sup>18/</sup> The components are outlined in Table III.18 26 which shows the contribution of (1) inflation, (2) interest payments, and (3) borrowing requirements, to increased indebtedness, for 6 OECD countries. Statistics are not comparable with those in Table III.16 as this latter study refers exclusively to central government debt. In column (1), the table shows the proportion of government debt to GNP. The second column outlines the total change in the share. Column (3) begins the disaggregating, showing the estimates of the effect of inflation on (reducing) the real value of the debt/GDP ratio. In all cases, the impact of inflation has been to erode the real value of the debt, sometimes quite substantially, as in the UK and Canada.

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<sup>18/</sup> CME/WP1/(81)1

Table III.18

Central Government Debt in Six Major OECD Countries <sup>a/</sup>

Changes 1972-1979

Financial Years <sup>b/</sup>	Share of GDP	Change in Share	due to: <sup>c/</sup>			Average Real Return Per cent
			Inflation	Interest Payments	Borrowing Requirement	
Percentages of GDP/GNP at Market Prices						
<u>United States</u>						
1972/3	20.3	-1.7	-1.0	+1.1	-0.6	+0.5
1973/4	18.9	-1.4	-1.4	+1.1	-0.7	-1.0
1974/5	20.2	+1.3	-1.5	+1.2	+1.3	-2.0
1975/6	22.5	+2.3	-1.3	+1.2	+3.1	-0.5
1976/7	21.9	-0.6	-1.5	+1.7	+0.4	+0.5
1977/8	20.4	-1.5	-1.4	+1.4	-0.4	NIL
1978/9	19.1	-1.3	-1.5	+1.2	-0.1	-1.5
1979/80	20.1	-1.0	-1.5	+1.3	+1.2	-1.0
<u>Japan</u>						
1972/3	11.8	+2.1	-0.6	+0.4	+3.7	+1.5
1973/4	11.2	-0.6	-1.5	+0.5	+1.1	-9.0
1974/5	11.6	+0.4	-2.0	+0.5	+1.6	-12.5
1975/6	14.4	+2.8	-1.1	+0.6	+3.2	-4.5
1976/7	17.9	+3.5	-1.2	+0.8	+4.4	-3.0
1977/8	23.8	+5.9	-1.2	+1.2	+6.8	NIL
1978/9	29.4	+5.6	-0.9	+1.4	+6.7	+2.0
1979/80	33.9	+4.5	-1.4	+1.7	+5.0	+1.0
<u>Germany</u>						
1972	6.7	-0.1	-0.4	+0.4	-0.1	NIL
1973	6.7	0.0	-0.4	+0.4	+0.3	NIL
1974	7.3	+0.6	-0.4	+0.4	+0.7	NIL
1975	10.5	+3.2	-0.4	+0.5	+3.0	+0.1
1976	11.4	+0.9	-0.5	+0.6	+1.2	+1.0
1977	12.5	+1.1	-0.4	+0.7	+1.2	+2.0
1978	13.8	+1.3	-0.3	+0.8	+1.4	+3.5
1979	14.4	+0.6	-0.6	+0.8	+1.1	+2.0
1980	15.3	+0.8	-0.8	+0.8	+1.0	+0.5
<u>France</u>						
1972	8.0	-2.1	-0.6	+0.4	-1.5	-1.5
1973	7.0	-1.0	-0.6	+0.4	-0.5	-2.0
1974	6.9	-0.1	-0.8	+0.4	+0.4	-6.5
1975	8.5	+1.6	-0.7	+0.6	+1.7	-1.5
1976	8.0	-0.5	-0.7	+0.6	NIL	-1.5
1977	8.0	NIL	-0.7	+0.7	+0.2	-0.5
1978	8.8	+0.8	-0.7	+0.7	+1.1	NIL
1979	9.1	+0.3	-0.8	+0.8	+0.7	-1.0
1980			-1.1			
<u>United Kingdom</u>						
1972/3	46.7	-5.5	-3.3	+1.9	-1.6	-2.5
1973/4	44.4	-2.3	-4.2	+1.6	+0.8	-5.5
1974/5	42.8	-1.6	-7.2	+1.5	+6.2	-13.0
1975/6	42.6	-0.2	-8.1	+1.4	+7.1	-15.5
1976/7	44.0	+1.4	-5.4	+2.2	+5.2	-7.5
1977/8	43.6	-0.4	-5.3	+2.5	+3.3	-6.5
1978/9	44.9	+1.3	-3.4	+2.9	+3.8	-1.0
1979/80	41.9	-3.0	-5.7	+3.1	+0.8	-6.0
<u>Canada</u>						
1972/3	38.9	-1.8	-2.1	+2.1	+1.0	NIL
1973/4	35.0	-3.9	-3.0	+2.0	+0.1	-2.5
1974/5	33.4	-1.6	-3.4	+1.9	+1.9	-4.3
1975/6	33.7	+0.3	-3.0	+2.1	+2.2	-2.5
1976/7	33.5	-0.2	-2.4	+2.3	+1.8	NIL
1977/8	36.3	+2.8	-2.5	+2.4	+3.3	NIL
1978/9	37.5	+1.2	-3.0	+2.6	+2.1	-1.0
1979/80	35.5	-2.0	-3.2	+3.0	-0.5	-0.5

<sup>a/</sup> United States: Federal government debt held by the public, less foreign and state holdings; United Kingdom: total central government liabilities to the domestic sector; Canada: total federal liability, excluding foreign holders. Japan and Germany: total central government debt outstanding; France: 'Dette Interieure'.

<sup>b/</sup> United States: July-June until 1975/76; October-September from 1976/7; Japan, United Kingdom, Canada: April-March; Germany, France: calendar years.

<sup>c/</sup> Component changes do not add to total change since the effect of relative price changes and real GDP growth is excluded. (See Annex 2.)

Sources: OECD estimates - CPE/WP1/(81)1

In column 4, the estimated effects of debt interest payments are shown. As noted earlier, higher real interest rates have been required to compensate bond-holders for potentially higher risk of taking a capital loss on their bonds. In the past ten years, in most countries, the effect of real interest rates on debt to GDP ratios has been larger than that of increased borrowing requirements. Exceptions to this are Germany and Japan, whose debt and GDP ratios rose most.

Finally, the increased public sector deficits have, been a contributor to overall growth of debt as well. The role of the higher borrowing requirement, net of interest payments, is shown in column 5.

Finally, the last column shows real rates of return on central government debt. In most countries, (Germany excepted) the real rate of return on government debt has been negative for almost a decade. There is some evidence that it is becoming less so, however. Tentative figures for 1982 and 1983 (not shown) suggest that real rates are becoming highly positive, and as a result, are contributing substantially to growth in government debt.

### Summary

Social expenditures and debt interest have been the largest factors accounting for the growth in budget deficits. This survey suggests that both of these factors have structural elements, but that there is some room for containing, especially in social expenditures. Interest expenditures, of course, have a dynamic of their own.

This summarizes trends in the important components of government expenditure since 1970. The following section will look at and discuss the trends in, and implications for, government deficits.

### The Deficits

There is widespread concern among many OECD countries that the present level of budget deficits is unsustainable, and many of them have taken steps to correct this. The topic of sustainability of budget deficits is analyzed in a number of OECD studies.<sup>19/</sup> In general the aim in all OECD countries is to bring budget deficits down to historically 'normal' levels. However, these aims have been more difficult to achieve in practice than in principle. The US, for example, has gone from a target policy of "budget balance in 1984" to a target deficit of no more than 2% of GDP in 1988. Table III.19 and Chart D1 show actual government deficits since 1971 for 7 OECD countries and the total for OECD as a whole. The evolution since the 1970s, over the first and second oil shocks has been quite striking. From before 1970, when deficits were on the order of negative 0.5% of GDP to 0.5% of GDP, i.e., more or less balanced, the trend has changed dramatically. In 1975, the average deficit of the major 7 OECD countries was -4.3% of GDP. As OECD point out, after the first oil shock, deficits generally increased as governments took the adjustment burden on themselves, rather than forcing the adjustment onto the private sector.

Subsequently, however, the inflationary consequences of this led to unacceptable weaknesses in currencies and trade balances, and a consequent need to reverse the policies. In the more recent years, however, the very slow recovery has led to an increase in public sector

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<sup>19/</sup> Chouraqui and Price, op. cit., CPE/WP1/(81)1, and SME/SAIR/SE/83.09.

deficits to 1983. This is partly the result of the non-accommodative monetary policies which have been followed in some larger OECD countries, with the consequent growth in the interest burden. Another factor has been the interaction of monetary and fiscal policies in prolonging slow recovery.

However, the slow growth has also meant that income and employment-related revenues have been reduced while expenditure patterns have exhibited rigidities. While almost all OECD governments have adopted balanced budget targets for 1984 or 1985, the persistence of the deficits in OECD countries has stymied many governments. There is a fear that spending and revenue patterns may be structural in nature, and that the policy prescription of old can no longer be used. There is question whether new prescriptions may be called for, and above all, whether the deficits will 'disappear' when the recovery gathers steam.

Another feature of government deficits in recent years, representing a major change from previous trends, is the component of deficit which is financing government consumption expenditures. Deficits which finance government capital expenditures are nothing new, although typically government current savings had also contributed to capital formation. Nonetheless, in the 1970's government current savings have not contributed greatly to financing the deficit in all major OECD countries.<sup>20/</sup> On average, the contribution of government current savings to the overall financial deficits was 65%. In the 1980s, government

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<sup>20/</sup> See CPE/WP1/(81)1.

current savings to the overall financial deficits was 65%. In the 1980s, government current dissaving has been the rule, as Table III. indicates, so that in the 1980s, deficits were at least in part, due to higher government consumption, with any global expenditure reductions typically directed at government capital expenditures, i.e., investment and not government consumption.

Table III.19: GENERAL GOVERNMENT FINANCIAL BALANCES <sup>a/</sup>

Surplus or Deficit (-) as Percentage of Nominal GNP/GDP at Market Price

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
United States <sup>b/</sup>	-1.7	-0.3	0.5	-0.2	-4.2	-2.1	-0.9	0	0.6	-1.3	-1.0	-3.8
Japan <sup>b/</sup>	1.4	0.4	0.5	0.4	-2.6	-3.8	-3.8	-5.5	-4.8	-4.5	-4.0	-4.1
Germany	-0.1	-0.5	1.2	-1.4	-5.7	-3.4	-2.4	-2.5	-2.7	-3.2	-4.0	-3.9
France	0.7	0.8	0.9	0.6	-2.2	-0.5	-0.8	-1.9	-0.7	0.3	-1.9	-2.6
United Kingdom	1.5	-1.2	-2.7	-3.8	-4.6	-4.9	-3.2	-4.2	-3.2	-3.3	-2.5	-2.0
Italy	-7.1	-9.2	-8.5	-8.1	-11.7	-9.0	-8.0	-9.7	-9.5	-8.0	-11.7	-12.0
Canada	0.1	0.1	1.0	1.9	-2.4	-1.7	-2.6	-3.1	-1.9	-2.1	-1.4	-5.5
Total Major Seven Countries <sup>c/</sup>	-0.8	-0.7	-0.1	-0.8	-4.3	-3.0	-2.2	-2.4	-1.8	-2.5	-2.6	-4.1
Australia	2.4	2.2	0.6	2.0	-1.8	-2.0	0	-1.9	-1.5	-1.0	-0.1	0.4
Austria	1.5	2.0	1.3	1.3	-2.5	-3.7	-2.4	-2.8	-2.5	-2.0	-1.8	-2.5
Belgium	-3.0	-4.0	-3.5	-2.6	-4.7	-5.4	-5.5	-5.9	-6.9	-9.3	-13.1	-12.2
Denmark	3.7	4.6	5.8	1.5	-1.2	-0.2	-0.5	-0.2	-1.6	-3.2	-7.1	-9.1
Netherlands	-0.5	0	1.1	-0.1	-2.6	-2.2	-1.8	-2.7	-3.7	-3.9	-4.9	-5.6
Norway	4.3	4.5	5.7	4.6	3.8	3.1	1.6	0.6	1.9	5.7	4.8	4.4
Spain	-0.6	0.3	1.1	0.2	0	-0.3	-0.6	-1.8	-1.7	-2.1	-3.3	5.9
Sweden	5.2	4.4	4.1	2.0	2.8	4.5	1.7	-0.5	-3.0	-4.0	-5.3	-6.9
Total Smaller Countries <sup>c/</sup>	1.1	1.2	1.5	1.0	-0.9	-0.9	-0.9	-2.1	-2.6	-2.8	-3.9	-4.9
Total of Above OECD Countries <sup>c/</sup>	-0.5	-0.4	0.1	-0.5	-3.8	-2.7	-2.1	-2.3	-1.9	-2.5	-2.8	-4.2

<sup>a/</sup> On a SNA basis, except for the United States, United Kingdom, and Italy, which are on a national income account basis. "Financial balances" are equivalent to "net lending", a negative sign indicating net government borrowing. The general government borrowing requirement is equal to the financial balance plus financial transactions and accruals adjustments.

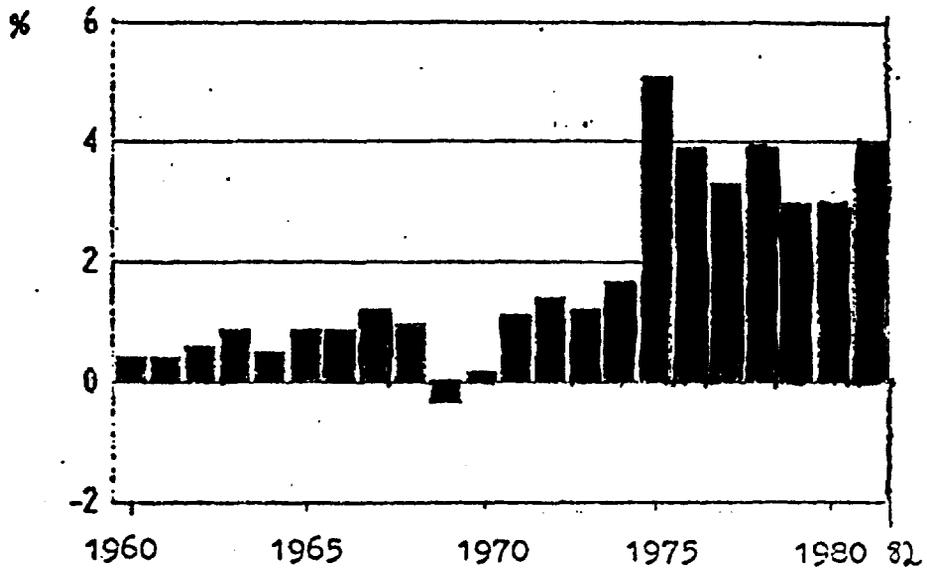
<sup>b/</sup> As a percentage of GNP.

<sup>c/</sup> 1981 GDP weighted.

Source: National Accounts of OECD Countries, national sources (see footnote <sup>a/</sup> above) and OECD Secretariat estimates.

CHART III.4

Seven Major OECD Countries  
Budget Deficits as % of GDP



Source: SME/SATB/SE/83 02, pg. 46.

The implication of the consumption-based deficits for future growth and capital formation are worrisome, because deficits will not then be financed out of future growth. As OECD points out, where economic growth is less than the real interest rate, deficits will imply borrowing to finance interest payments on the public debt.<sup>21/</sup>

Table III.20 provides corroborating evidence, showing the shrinking proportion of government investment as a share of GDP, relative to total government expenditure. From 13.1% of total government expenditure in 1970, government investment expenditure fell to 8.1% in 1982. And in FY82, for the major OECD countries, 40% of the deficit was due to current dissavings. If this is a purely cyclical phenomenon, which will reverse itself with a return to economic health, the present level of actual deficits is of less concern, as it represents counter-cyclical macro-economic policy.

In general, public sector reliance on external financing was greater at the end of the decade than at the outset. As the table shows, between 1971 and 1981, the proportion of OECD central government debt held overseas rose nearly 30% from 11.0% of the total to 13.5%. In the case of the United States, the increase is especially striking--between 1/3 and 1/4 of all government debt is presently held abroad. As a share of OECD GDP, the proportion of foreign debt grew from 2.5% almost to 3% of GDP, an increase of 20%. In sum, OECD has increasingly drawn on capital inflows from the foreign section for financing of government deficits; in many countries this has been an important factor in helping to keep domestic interest rates down.

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<sup>21/</sup> OECD Occasional Studies, June 1983.

Table III.20: GOVERNMENT EXPENDITURES AND FINANCIAL BALANCES <sup>a/</sup>  
(OECD)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Current Expenditures, Total	29.0	29.6	30.0	29.8	31.6	34.4	34.2	34.2	34.4	34.4	35.9	37.2	39.0
Saving <sup>c/</sup>	2.9	2.3	2.3	2.8	2.2	-1.0	0.0	0.6	0.3	0.9	0.2	-0.2	-1.7
Gross Investment <sup>c/</sup>	4.2	4.3	4.2	4.2	4.1	4.2	3.9	3.8	3.8	3.9	3.8	3.7	3.5
Net Capital Transfers Received <sup>c/</sup>	-0.3	-0.4	-0.3	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6
Financial Balance	0.2	-0.5	-0.4	0.1	-0.5	-3.9	-2.7	-2.2	-2.3	-1.9	-2.5	-2.8	-4.2
Gross Investment as %													
Total Expenditures	12.6	12.6	12.2	12.3	11.4	10.8	10.2	10.0	9.9	10.1	9.5	9.0	8.1

<sup>a/</sup> Aggregate for the major seven countries plus Australia, Austria, Belgium, Denmark, the Netherlands, Norway, Spain, and Sweden: 1981 GDP/GNP weights.

<sup>b/</sup> Other current transfers received and rent, dividends and interest.

<sup>c/</sup> Weighted average excluding the United States; because of this, the components will not add to the totals.

Source: See Table 1

Another factor which represents a shift from the past, is the growing fraction of OECD debt which is held abroad. Table III.21 outlines these changed shares.

Table III.21: CENTRAL GOVERNMENT DEBT HELD BY DOMESTIC AND FOREIGN SECTORS

	Year-end value as % of GDP					% of Total Government Debt		
	Debt Held by					Held by Foreign Sector		
	Domestic Sector		Foreign Sector			1971	1981	
	1971	1981		1971	1981		1971	1981
United States	16.6	15.1	.	3.1	4.7	.	15.7	23.8
Japan	9.6	27.3	.	0.2	0.3	.	0.2	0.3
Germany	7.0	14.6	.	0.2	2.9	.	2.8	16.6
France	9.3	10.7	.	0.9	0.5	.	10.2	4.0
United Kingdom	52.9	42.5	.	13.0	5.2	.	20.0	10.9
Italy <sup>a/</sup>	40.1	51.3	.	0.7	1.2	.	1.7	2.2
Canada	41.5	37.8	.	0.3	1.5	.	0.7	3.8
Australia <sup>a/</sup>	24.2	15.6	.	4.6	3.6	.	15.9	18.7
7 Country Average	20.0	20.6		2.5	2.97		11.0	13.5

<sup>a/</sup> Total public sector debt. <sup>b/</sup> 1980. <sup>c/</sup> 1973. <sup>d/</sup> Less than .1%. <sup>e/</sup> 1972. <sup>f/</sup> 1979.

United States - fiscal year ending June until 1976, ending September from 1977 on; Japan - fiscal year ending Germany, France - calendar year; United Kingdom - fiscal year ending March; Italy, calendar year; Canada - fiscal year ending March; Australia - fiscal year ending June; Austria, Belgium - calendar year; Denmark - fiscal year end until 1977, calendar year from 1978; Finland - calendar year; Ireland - fiscal year ending March until 1974, c year from 1975; Netherlands - calendar year; New Zealand - fiscal year ending March; Norway, Portugal, Spain, Switzerland, Turkey - calendar year.

Source: OECD - Chouraqui and Price. Weighted by GDP.

### Structural vs Cyclical Deficits

A recent OECD study<sup>22/</sup> has attempted to separate the effects of the structural components of these government deficits, from those which have been cyclically induced by the recession and economies' slow recovery. The questions examined include "to what extent do OECD countries face 'structural' problems with respect to deficits"?, and "are the levels of structural deficit compatible with governments", other economic objectives, such as price stability, employment output growth?' The study attempts to measure the nature and size of structural budget deficits.

Overall, in brief, their assessment has been that the deterioration in budget deficits is primarily due to the impact of inflation, slow growth and unemployment. These three factors, in the past, would probably have been classified as purely cyclical. Recent thinking, however, suggests that they have structural components and contribute to structural deficits.

Chart III.5 presents the structural budget deficit for major OECD countries, combined.<sup>23/</sup> The structural deficit is defined as the deficit which would result at "potential output", i.e., they are "full-employment" deficits. The trends differ by countries. Taken together, however, from 1970 to 1983, OECD countries deficits, when adjusted for cyclical factor,

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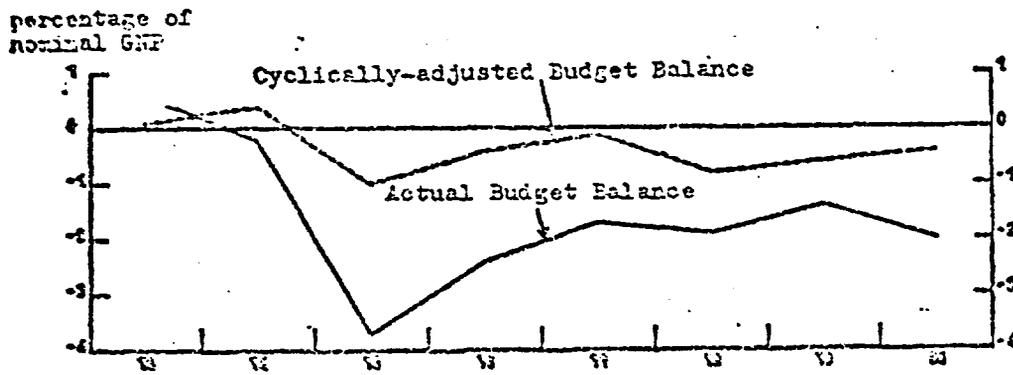
<sup>22/</sup> CPE/WP1 (81)1, and CPE/WP1(83)2.

<sup>23/</sup> Source: CPE/WP1(81)1, and CPE/WP1 (83)2, respectively.

were negative throughout the period, except 1970, ranging from negative -.1% of GDP to -2.0% of GDP (1976). In the last few years, since 1980, the structural deficit, overall for OECD has been smaller than in the past. In 1983, the structural deficit is estimated at -0.6% of OECD potential GNP, or very near being in balance. Structural surpluses exist in a number of countries including UK and France. And throughout the past decade, until 1983 the U.S. was in structural surplus.

CHART III.5

Seven Major OECD Countries



Disaggregating, revenue and expenditures from 1970-75, structural public expenditures increased from 31% of potential output to just under 35% (see Table III.22). In the second half of the decade, expenditures rose again, reaching 36% by 1980. Contributing to this was a steady growth in social security payments (column 4) from 9% to 12% of potential GDP, and an increase in the interest bill, from 1.9% to 4.8% of potential GNP (column 6). On the revenue side, full employment revenues did increase throughout the decade, from 31.7% of potential GDP to 35.6% of GDP in 1983. And at almost every point in the decade, 'full employment' expenditures exceeded, sometimes by a substantial margin of as much as 2 percentage points, 'full employment' revenues. This suggests that the contribution of expenditure rigidities is perhaps a factor in determining the long run gap between revenues and expenditures.<sup>24/</sup>

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<sup>24/</sup> In the United States, tax reductions have also been responsible.

Table III.22: POTENTIAL OUTPUT BUDGET BALANCES TOTAL MAJOR SEVEN COUNTRIES AS % OF GDP (1970 - 1983)

<u>Year</u>	<u>Actual Budget Balance</u>	<u>Cyclically Adjusted Balance of Which</u>				<u>1981 GDP/GNP Weights &amp; Exchange Rates</u>	
		<u>Revenues</u>	<u>Expenditures</u>	<u>Social Security</u>	<u>Balance</u>	<u>Interest Bill</u>	<u>Inflation Adjustment</u>
1970		31.7	31.1	8.9	0.5	1.9	-
1971	-0.8	31.3	31.4	9.3	-0.1	1.8	1.8
1972	-0.7	31.8	32.2	9.7	-0.4	1.8	1.6
1973	-0.1	32.3	32.9	10.2	-0.6	2.0	2.6
1974	-0.8	33.4	33.6	10.4	-0.2	2.1	4.4
1975	-4.3	32.5	34.5	11.1	-2.0	2.2	3.9
1976	-3.0	33.3	34.6	11.4	-1.3	2.4	2.9
1977	-2.2	33.7	34.6	11.5	-0.9	2.5	3.1
1978	-2.4	33.6	35.2	11.8	-1.6	2.7	2.7
1979	-1.7	34.2	35.3	11.9	-1.1	3.0	3.8
1980	-2.4	35.0	35.9	12.0	-1.0	3.3	5.0
1981	-2.6	35.9	36.3	12.1	-0.4	3.8	4.0
1982 <u>b/</u>	-3.7	35.9	36.1	12.1	-0.2	4.4	2.8
1983 <u>b/</u>	-4.5	35.6	36.2	12.0	-0.6	4.8	2.6

a/ OECD estimates and forecasts

Source: CPE/WP1/(83)2.  
1981 GDP/GNP Weights & Exchange Rates

### Control of Structural deficits

The need to reduce structural deficits has been given a great deal of weight. In general, measures taken by OECD countries to reduce structural deficits have been partially successful. At full employment since 1981 the size of the structural OECD deficit has, in fact, been quite small. Its noted earlier, the 1983 estimate represents the failure of the US to contain its deficit, which is now structurally estimated at (-) 0.8% as well as that of Japan, with an estimated structural deficit of negative (-) 1.8% of potential GDP. In other OECD countries, the estimated structural deficit was close to zero (Germany and Canada) or in surplus (the United Kingdom and France).

Despite the reduction in structural deficits as measured, actual deficits have continued to grow, reaching in 1983, (-) 4.5% GDP. In this measure, a large cyclical component is responsible for the actual deficits. In 1983, less than 15% of the actual deficit was due, in the estimate of OECD<sup>25/</sup>, to structural factors. Nonetheless, there is reason to fear future growth in these actual deficits, even ignoring, for the moment, any impact they may have on financial markets. The actual deficit can feed back into the structural deficit in two ways. The first is via its impact on higher debt and interest charges. The second is via the impact that prolonged recessions and high interest rates may have on capital formation and future growth. Thus, it is possible that the actual, "cyclical" deficit be converted into a structural one, as potential growth is affected by the deflationary policies followed to reduce the actual deficits. This results from the alleged effects of the level of actual deficits on capital formation and the effects of the structure of revenues and expenditure on efficiency of resource allocation.

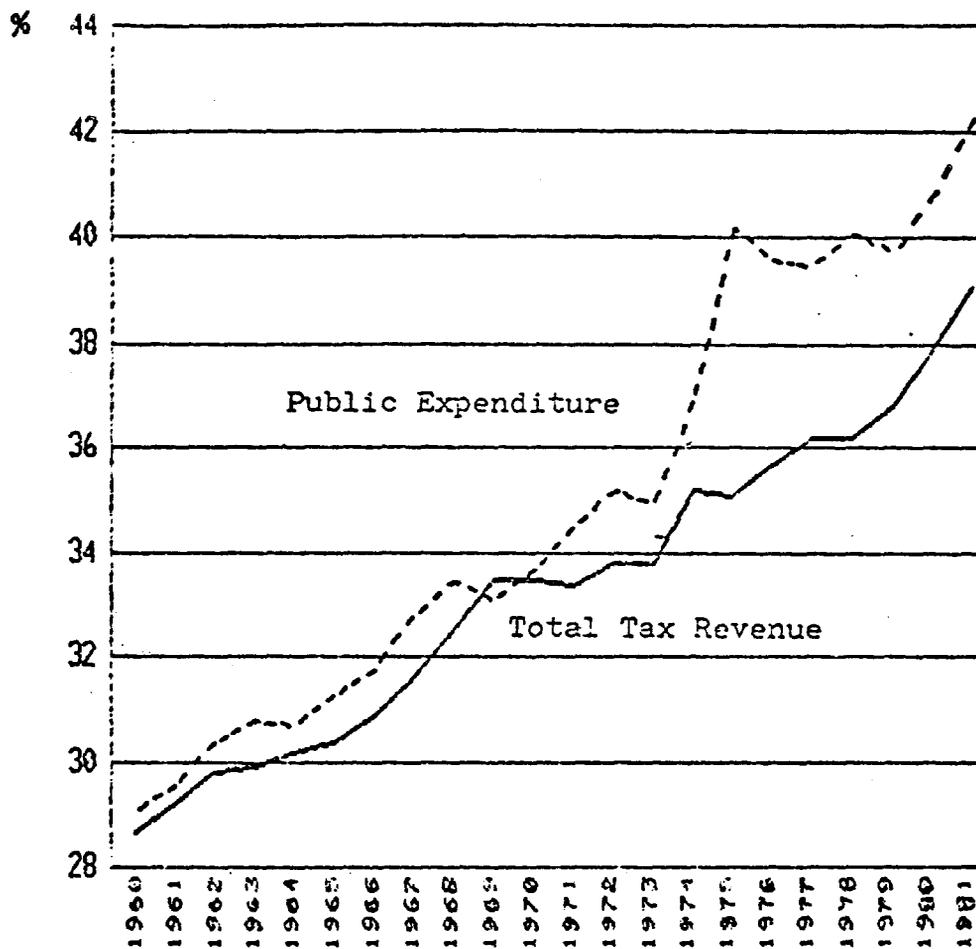
This concern that large actual deficits may have structural implications arise because concern over the private sector responses, includes savings propensities, to these deficits. In the US, the impact of the prospect of prolonged high borrowing requirements of the government has already been manifested in the level of long term interest rates which results from 'expectations'. Large deficits, which rapidly add to the stock of government debt, cannot be accommodated in investor portfolio preferences and balances, except at substantially higher interest rates. The potential crowding out is discussed in Section E and F.

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<sup>25/</sup> CPE/WP1 (83)2.

CHART III.6

(Averages for the Seven Major OECD Countries)



Public Expenditure and Total Tax Revenue

Source: CPE/WP1/83/2, pg. 46.

Summary

The structural balance figures shown in Table III.22 corroborate the discussion of revenue and expenditures elasticities, and suggest that the deficit problems cannot be solved simply by increasing taxes. If expenditures increase structurally at a rate faster than GNP because of entitlement origins and the cumulative impact of debt interest, then raising taxes cannot close the deficits. If expenditure growth can be maintained at constant levels, (i.e., grow at the same rate as GNP, or less) then taxes can do the job. The analysis in section C suggested that public expenditures especially on entitlement program subsidies and health have been growing rapidly, but that reductions in these expenditures, especially pricing changes are feasible. If the changes can be made to bring expenditures in line in a structural sense with revenues, future structural deficits can be contained, tax increases to match expenditure cuts may also be necessary.

Trends in Savings 27/

Examination of the savings rate in the 1960-82 period suggests that the apparent downward trend in savings ratios since 1975 represents the more relevant trend for analysis and projections. While fluctuation in savings rates have been procyclical, and a decline in savings ratios is expected and normal during periods of recession and an increase during the recovery periods, the analysis of the trends would support the notion of a structural shift in savings ratios.

In Table III.23 the savings rate in OECD appears to have fluctuated with changes in income over the cycle, but around a declining savings trend. The OECD average savings rate dropped from 13.11% of GDP in the 1960-74 period to 10.1% of GDP in the 1975-81 period. This is below the 12.2% of GDP savings rate for the entire 1961-81 period. There is also evidence that the savings rate at the bottom of the recent recession was

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27/ In this section trends in net savings are examined. In discussing savings behavior and behavioral determinants, net savings is the relevant concept. Net savings is defined as gross savings less capital consumption allowances. Gross savings thus include net savings and capital consumption. Because capital consumption allowances are not a behavioral variable, but determined by legal and tax structures in the country concerned, the gross savings concept is less interesting in analyzing changes in savings trends. Gross saving across countries is relatively constant and shows virtually no trend over time. Capital consumption allowances, or depreciation, are relatively more important in lower than in high savings countries. During the 1970's, capital consumption exceeded net savings by large margins in the U.S., and the U.K. In countries with the much faster rates of capital formation, capital consumption was smaller than net savings, and also less important relative to national disposable income.

lower (8.9% of GDP) than in the previous recession (9.8%), and that at cyclical highs, savings were also lower (11.05% of GDP in 1979 as compared to 13.2% in 1968). This shift in the trend of savings for the whole of OECD requires an examination of the savings rates in the different countries and an analysis of the components of savings in each country.<sup>28/</sup>

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<sup>28/</sup> This section examines only the standard national accounts savings data, which (see *passim*) do not take into account country institutional differences. Savings rates need to be adjusted, *inter-alia*, for indirect taxes, pensions, consumer durables purchases, etc. There have however been attempts at explaining the differences of the savings ratio in different OECD countries to take in to account the importance of institutional factors which the accounting rules in the SNA do not incorporate in detail. Blades (*Occasional Studies*, OECD, June 1983, *Alternative Measures of Savings*) examines household savings ratios and incorporates a variety of changes to the SNA accounting rules. The coefficient of variation of individual country savings rates using the SNA gross savings ratio is 36%. The coefficient is reduced to 26% when corporate net savings are included or incorporating households and all enterprises in the sector. The coefficient of variation rises to 50% if the adjustment is made to exclude unincorporated enterprises from the household sector, and the coefficient of variation is reduced to 19% when expenditures of consumer durables are included in the savings component. The increased stability of the savings ratio, which includes consumer durables as capital, results in a marked reduction in the difference in savings rates between countries. Nevertheless, despite the adjustments, the data on savings still shows a trend towards a reduction in national savings ratios since 1975.

Table III. 23: NET SAVINGS RATES IN OECD  
(As percent of GDP)

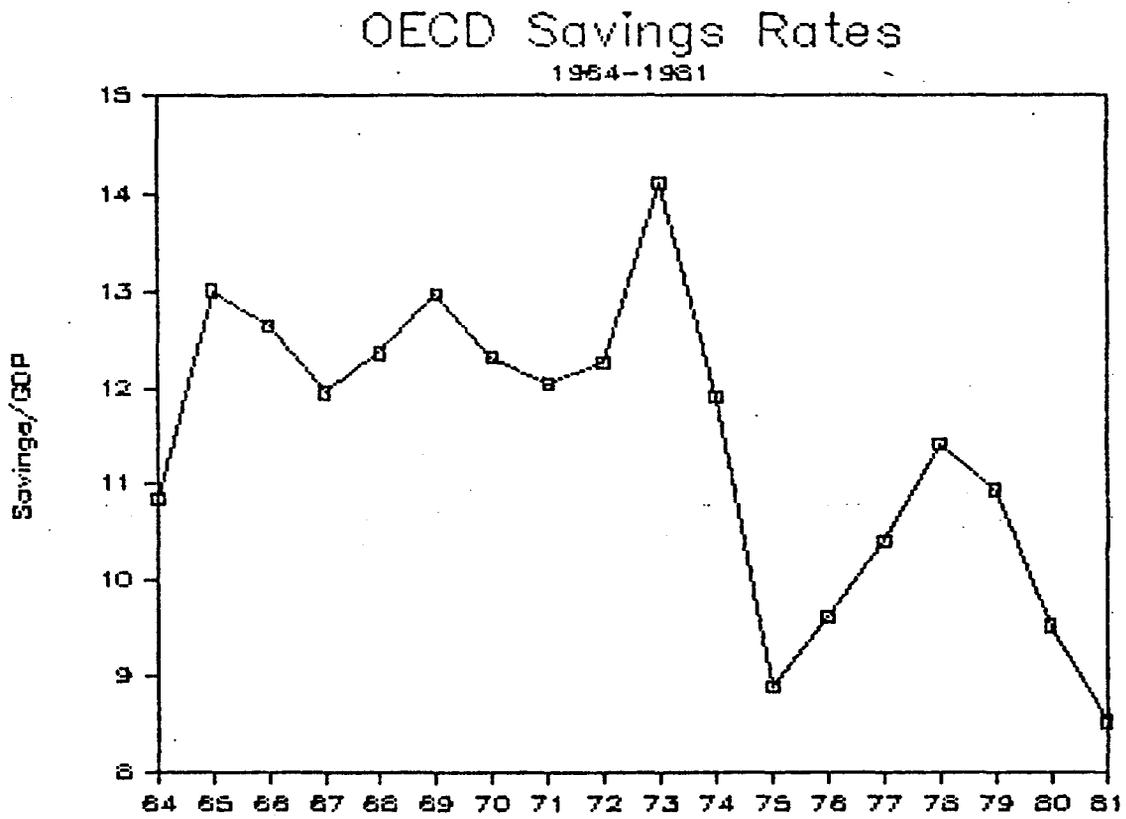
<u>Year</u>	<u>S/GDP</u>
1960	12.49
1961	12.11
1962	12.37
1963	12.28
1964	10.8
1965	13.0
1966	12.6
1967	11.9
1968	12.3 peak of cycle
1969	12.9
1970	12.3
1971	12.0
1972	12.2
1973	14.1
1974	11.9
1975	8.9 bottom of cycle
1976	9.6
1977	10.4
1978	11.4 peak of cycle
1979	10.9
1980	9.5
1981	8.5 bottom of cycle

Growth Rates of Net Savings

1960-81: 12.18% p.a.  
1960-74: 13.11% p.a.  
1975-81: 10.17% p.a.

Source: OECD National Accounts (World Bank estimates).

CHART III.7



Source: Table 1.

Table III.24 shows trends in the net national savings rate in 23 OECD countries, for two periods. In the first column, trends in the 1960-73 period are shown. Column two shows savings trends over the longer period, 1960-79. Column 3 indicates the direction of the change in trend, if any, from the 1960-73 period to the 1973-79 period.

Table III.24

Savings: Trends and Changes

	<u>Trends in Net Savings Ratios</u>		<u>Changes in Savings Trend</u>
	<u>1960-1973</u>	<u>1960-1979</u>	<u>73-79</u>
Japan	+0.35	No trend	-
Germany	-0.24	-0.46	-
France	+0.19	-0.18	-
Italy	-0.27	-0.30	-
U.K.	+0.18	-0.18	-
U.S.	No trend	-0.23	-
Canada	+0.35	No trend	-
Switzerland	+0.16	No trend	-
Netherlands	No trend	-0.33	-
Austria	+0.42	No trend	-
Greece	+0.84	+0.38	-
Australia	+0.35	No trend	-
New Zealand	No trend (1971-1979)		-
Spain	+0.43	No trend	-
Denmark	+0.49	-0.43	-
Belgium	+0.51	No trend	-
Norway	No trend	-0.32	-
Iceland	No trend	No trend	No trend
Sweden	No trend	-0.39	-
Finland	No trend	No trend	No trend
Ireland	+0.39	+0.28	-
Turkey	No trend (1966-1976)		No trend

"-" - negative trend.

Source: CPE/WP1/(81)9.

A negative change in the trend, shown in column 3, is reflected in (i) a movement from a positive trend to no trend, (ii) a reduction in a positive trend value, or (iii) a falling trend which becomes more pronounced. During the 1973-1979 period there were no rising trends in OECD net savings. Conditions appear to have worsened in the 1980-1983 period.

Although the periods here are broken into pre- and post-1973, the fall in the savings rate became more acute after 1975. While in some countries the saving rate has recovered from the very low 1975 value, in the majority, the savings rates have remained low or decreased even further.

#### Sources of Savings

The national savings ratio is comprised of the savings rates in the three principal subsectors in the economy--households, business and the general government. These are weighted--with their weights determined by the sectoral shares in national income--to provide the overall total. A comprehensive analysis of the savings ratio and the shift in the trend requires of an analysis of the sectoral savings ratio and of sectoral shares.

Sectoral savings in OECD can be regarded as the surplus on "current transactions accounts" available for financing real capital formation, lending abroad, or lending to other domestic sectors, where this surplus is used to finance investment or current expenditures.

The primary sources of funds for investment are private and corporate savings, budgetary surpluses arising from government accounts, and borrowings from the rest of the world. Table III.25 and Chart III.8 indicate the sectoral shares of savings as a percent of total GDP.<sup>29/</sup>

Table III.25: COMPOSITION OF NET SAVINGS--OECD\*\*  
(As percent of GDP)

<u>Year</u>	<u>Total</u>	<u>Corporate</u>	<u>Government</u>	<u>Household</u>
1964	10.8	3.4	2.0	5.4
1965	13.0	3.7	2.5	6.6
1966	12.6	3.5	2.3	6.4
1967	11.9	3.2	1.4	6.9
1968	12.3	3.0	2.2	6.4
1969	12.9	2.4	3.6	6.3
1970	12.3	2.5	2.3	7.4
1971	12.0	2.6	1.9	7.6
1972	12.2	2.9	1.9	7.5
1973	14.1	2.7	2.8	8.7
1974	11.9	0.7	2.1	9.2
1975	8.9	0.7	-1.3	9.6
1976	9.6	1.4	-0.2	8.5
1977	10.4	1.9	0.4	8.2
1978	11.4	2.4	0.4	8.6
1979	10.9	2.1	0.9	8.0
1980	9.5	1.2	0.3	8.1
1981	8.5	0.6	-0.2	8.2

\* The OECD national accounts include in the household sector both the households themselves and "non-profit institutions serving households in the total of "household savings".

\*\* Seven countries.

Source: OECD National Accounts (World Bank estimates).

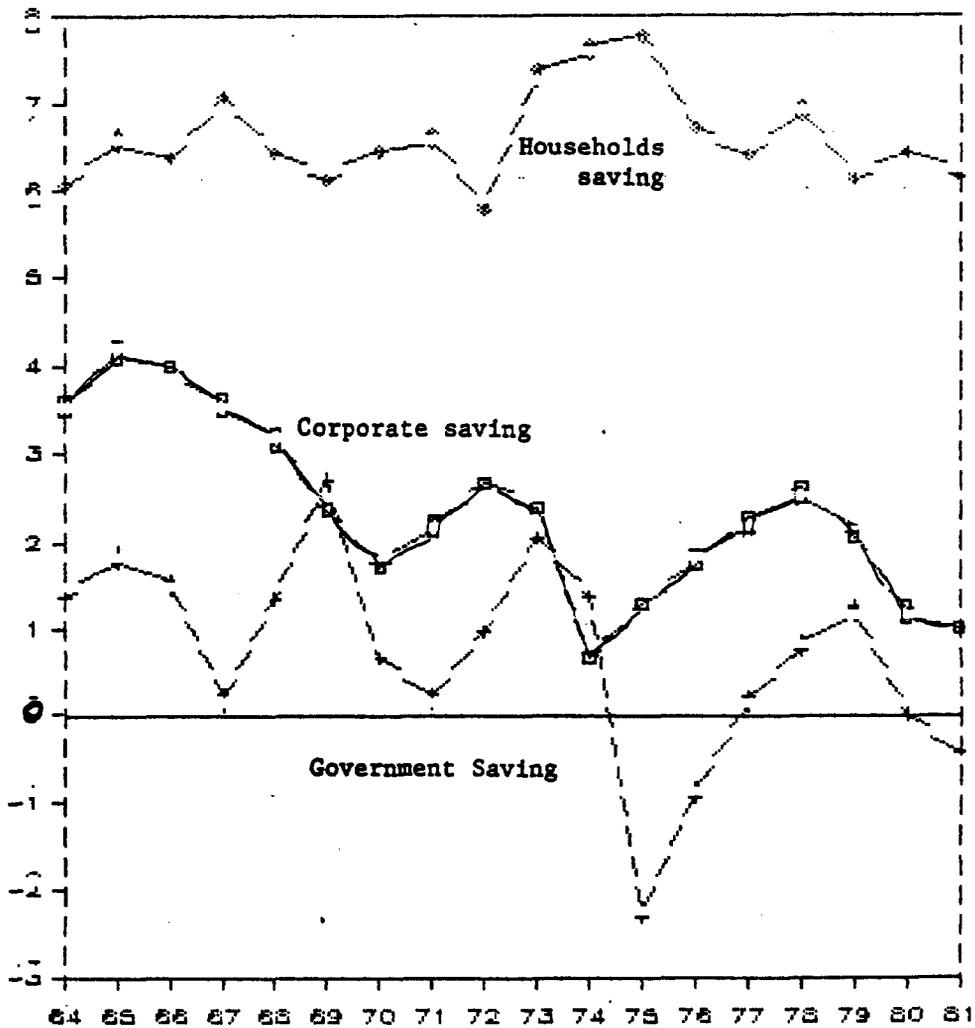
The table suggests that the drop in the net savings of the OECD corresponds to increasing dissavings in the government sector which have not been compensated by corresponding increases in house-hold or corporate savings. Household savings ratios increased in 1974 and 1975, while the corporate sector, which showed a deterioration of its financial position

<sup>29/</sup> The data is based on the classification in the "OECD National Accounts Statistics", Table 7, for each OECD country, for 1960-1981. Estimates for 1982 and 1983 have been made.

in 1974, improved balance sheets in 1975 by contracting investment and inventory expenditures.

After 1975, the household savings ratio in the major OECD countries had been declining and corporate sectors' own generation of savings has declined, and is substantially below the levels of the mid-1960s, or 1970s.

CHART III.8  
Sectoral Shares of Savings as % of GDP 1964-1981  
Seven Major OECD Countries  
(Net Savings)



### Government Savings

During the 1975-1981 period, net government current (dis)savings as a percentage of GDP in the seven major OECD countries was negative in 4 out of 6 years. When government investments are included, government's overall dissavings was greater still.<sup>30/</sup>

### Household Savings

As Table III.24 indicates, household savings have fallen since 1975. This is due to a complex interaction of microeconomic as well as macroeconomic factors--which ex-ante one may assume to have affected savings behavior. These include, for example, inflation, unemployment, level of real and nominal interest rates, demographic changes, income growth.

Table III.26 outlines the results of a selection of empirical studies of the interest elasticity of the savings rate. In general the results suggest that the relationship is positive, though small, i.e., higher interest rates stimulate higher savings. Results however are sensitive to the specifications. A related factor is the availability of credit which generally appear in the U.S., especially, to be negatively related to savings. The results would therefore support the view that savings will return to a (higher) structural level, once households adjust to, and remain convinced that positive returns can be earned on their savings.

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<sup>30/</sup> Price and Chouraqui, op. cit.

**Table III.26: EMPIRICAL ESTIMATES OF THE INTEREST ELASTICITY OF HOUSEHOLD SAVINGS IN THE UNITED STATES**  
(Author)

	Wright (1967, 69)	Houthakker Taylor (1970)	Taylor (1971)	Helen (1972)	Juster Matchel (1972)	Juster Taylor (1975)	Weber (1970, 75)	Blinder (1975)	Springer (1975, 77)	Mishkin (1976)	Boskin (1978)	Howard (1978)	Howrey Hymans (1978)	Glyfason (1981)
1. Interest Elasticity of Saving <sup>a/</sup>	0.2	NEG	0.8	1.76	0.28	POS	NEG	0.03	NEG/POS	NS	0.4	NS	NS	0.3
2. Dependent Variable <sup>b/</sup>	CON	SAV	SAV	CON	SAV	SAV	CON	CON	CON	CON	CON	SAV	SAV	CON
3. Interest Rate <sup>c/</sup>	NOM	NOM	NOM	NOM	NOM	NOM	NOM	REAL	NOM	NOM	REAL	NOM	NOM	NOM
4. Estimation Method <sup>d/</sup>	OLS	OLS	OLS	NONL	OLS	OLS	NON/ML	OLS <sup>e/</sup>	OLS <sup>e/</sup>	OLS/INST <sup>e/</sup>	OLS/INST <sup>e/</sup>	OLS <sup>e/</sup>	OLS	OLS <sup>e/</sup>
5. Periodicity of Data <sup>f/</sup>	ANN	QRT	QRT	ANN	QRT	QRT	ANN	ANN	QRT	QRT	ANN	QRT	ANN	QRT
6. Sampler Period	1905-49 1929-99	1953-66	1953-69	1948-65	1954-72	1953-73	1930-65 1930-70	1947-72	1955-71	1952-74	1929-69	1965-76	1951-74	1952-78

NOTES: <sup>a/</sup> POS = Positive, NEG = Negative. (No numerical estimates can be obtained.), NS = Not Statistically Significant.  
<sup>b/</sup> CON = Consumption Function, SAV = Saving Function.  
<sup>c/</sup> NOM = Nominal, REAL = Real.  
<sup>d/</sup> OLS = Ordinary Least Squares, INST = Instrumental Variables, NONL = Nonlinear, ML = Maximum Likelihood.  
<sup>e/</sup> With Cochrane-Orcutt autocorrelation correction where necessary.  
<sup>f/</sup> ANN = Annual, QRT = Quarterly.

Source: CPE/WPI(81)9.

The relationship between savings and inflation has also been difficult to quantify. In a period of inflation, savings could be expected to decrease since the incentive is to accelerate purchases of goods, and switch from money, which is losing its purchasing value, to commodities. Money illusion about inflationary increases in income may also stimulate consumption. If during periods of inflation, interest rates do not adjust, this is yet another damper on savings incentives. On the other hand, if real interest rates are maintained or increased, then the incentive is to shift towards financial instruments instead of commodities. Positive effects on savings derive from the fact that inflation also generates uncertainty. If the expectations of households are that antiinflationary policies will be put into effect, households will expect increased unemployment and a fall in income growth. This uncertainty will make it rational to increase savings. Finally, there may be attempts to re-establish levels of real wealth, a "target" savings phenomenon which might act to increase savings. This appears to have taken place in U.K.<sup>31/</sup> The results outlined in the tables which follow are sensitive to the period measured. In those studies which include the period to 1980, the effect on savings, of inflation is either negative, or inconclusive. This suggests that the observed decline in the savings rate in the 1878 to the present period is less due to structural factors than to micro-economic responses.

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<sup>31/</sup> See Bank of England Quarterly Review, 1983.

The role of budget deficits in the overall savings picture comes into play inter alia via the effects these might have on inflation, and inflationary expectations. The latter would arise as the result of fears that the deficits would be monetized. The attached table presents the results of number of studies using the expected inflation variable. The results are not entirely conclusive, but there is evidence that there is a negative relationship also between expected inflation and savings.

Table III.27(a): INFLATION AND SAVING RESULTS OF EMPIRICAL STUDIES FOR OTHER OECD COUNTRIES

	Deaton (1977)	Howard (1978)	Davidson et al (1978)	Shiba (1979)	Koskela- Viren (1980)	Hendry - von Urgern Sternberg (1980)
1. Effect of Inflation on Savings <u>a/</u>	POS	POS <u>b/</u>	POS	POS	POS	POS <u>h/</u>
2. Estimating Equation <u>b/</u>	SAV	SAV	CON	SAV	SAV	CON
3. Inflation Rate <u>d/</u>	ACT	ACT/EXP	ACT	ACT	ACT	- <u>h/</u>
4. Estimation Method <u>e/</u>	OLS	OLS	OLS	OLS	OLS	OLS
5. Country	UK	CANADA, JAPAN GERMANY, UK	UK	JAPAN	FINLAND	UK
6. Periodicity <u>g/</u>	QRT	QRT	QRT	ANN	QRT/ANN	QRT
7. Sample Period	1955-74	...	1958-70	1966-75	1959-76	1964-76

- NOTES: a/ POS = Positive; NEG = Negative; ... = Inconclusive.  
b/ These effects are attributed primarily to uncertainty by the authors.  
c/ CON = Consumption Function, SAV = Saving Function.  
d/ ACT = Actual, EXP = Expected.  
e/ OLS = Ordinary Least Squares, INST = Instrumental Variables, NONL = Nonlinear, ML = Maximum Likelihood.  
f/ With Cochrane-Orcutt autocorrelation correction where necessary.  
g/ ANN = Annual, QRT = Quarterly.  
h/ No inflation variable is explicitly included in the regression equation, but the income measure used as explanatory variable is adjusted for inflation induced changes in financial wealth.

Source: CPE/WP1(81)9.

Table III.27.b: INFLATION AND SAVING; RESULTS OF EMPIRICAL STUDIES FOR THE UNITED STATES

	Branson- Klevorick (1969)	Houthakker Taylor (1970)	Juster Watchel (1972)	Juster Taylor (1975)	Springer (1975,77)	Deaton (1977)	Wachtel (1977)	Boskin (1978)	Howard (1978)	Howrey Hymans (1978)	St. Louis FED (1979)	Glyfason (1981)
1. Effect of Inflation of Savings <sup>a/</sup>	NEG	POS	NEG/POS <sup>b/</sup>	POS <sup>b/</sup>	POS/NEG	POS	POS <sup>b/</sup>	POS <sup>b/</sup>	POS <sup>b/</sup>	NEG	...	NEG
2. Estimating Equation <sup>b/</sup>	CON	SAV	SAV	SAV	CON	SAV	SAV	CON	SAV	SAV	SAV	CON
3. Inflation Rate <sup>d/</sup>	ACT	ACT	ACT/EXP	ACT/EXP	EXP	ACT	ACT/REAL	EXP	ACT/EXP	EXP	ACT/EXP	ACT/EXP
4. Estimation Method <sup>e/</sup>	OLS/INST	OLS	OLS	OLS	OLS <sup>f/</sup>	OLS	OLS	OLS/INST <sup>f/</sup>	OLS <sup>f/</sup>	OLS	OLS	OLS <sup>f/</sup>
5. Periodicity of Data <sup>g/</sup>	QRT	QRT	QRT	QRT	QRT	QRT	QRT	ANN	QRT	ANN	QRT	QRT
6. Sampler Period	1955-65	1953-66	1953-71	1953-73	1955-71	1954-74	1955-74	1929-69	1965-76	1951-74	1955-78	1952-78

NOTES: <sup>a/</sup> POS = Positive; NEG = Negative; ... = Inconclusive.  
<sup>b/</sup> These effects are attributed primarily to uncertainty by the authors.  
<sup>c/</sup> CON = Consumption Function; SAV = Saving Function.  
<sup>d/</sup> ACT = Actual; EXP = Expected.  
<sup>e/</sup> OLS = Ordinary Least Squares; INST = Instrumental Variables.  
<sup>f/</sup> With Cochrane-Orcutt autocorrelation correction where necessary.  
<sup>g/</sup> ANN = Annual; QRT = Quarterly.

Source: CPE/WPI(81)9.

A third factor affecting saving is the demographic structure of the population. The life cycle hypothesis of savings is based on a number of demographic factors. Among them are increases in life expectancy, which would cause the household savings ratio of a growing population to rise, since each individual requires higher wealth accumulation to finance a constant consumption stream over the extended retirement period. The retirement age when it is reduced, will increase household savings ratios since each individual would require a larger stock of wealth to finance consumption. The age distribution of the population will determine ceteris paribus, that the savings ratio will depend on the distribution of households of certain ages in the total number of households. An increase in the ratio of the 18 to 64 working age group as a percent of the total population would increase savings, and the shift from old (dissavers) to young (savers) will increase savings. Empirically, OECD has experienced an aging of the population, with further aging expected. The table below outlines changes in OECD population which might be expected to influence savings rates. The table shows a substantial projected increase in the proportion of the aged population (dissavers) relative to the working population. The aged increase from 3.8% of total industrialized country working population in 1979 to 13.1% by the year 2000. This is a structural factor of which account must be taken.

Table III.28: DEMOGRAPHIC CHANGES: 1950-2000

Industrialized Countries

Year	% of Working Population	
	$\leq$ 14 years of age	$\geq$ 65 years of age
1950	27.8	7.6
1979	40.5	3.8
2000	34.2	13.1

Source: U.N. (ESA/P/WP.6J, Jan 1980).

Family size will affect savings as larger family affects the overall time profile of consumption and savings (see Leff, 1969). Also noted by OECD, in the average age of entry into the job market and the period of formal education of young people which will effect the dependency period of the young and the aggregate saving ratio. The increases in female participation increases the number of households with two earners. Whether this demographic change has positive or negative effects on savings depends on the access to consumer credit, the need for precautionary assets, and the substitution of home produced goods and services by commercial output. OECD (1979) indicates a tendency for a lowering of the savings ratio as a result of higher female labor force participation.

One of the most studied factors among savings determinants is the impact of pension schemes and social security. The theoretical relationship suggests that if life-cycle savings motivations predominate, working generations have little motivation to save for retirement, which is

Table III.29.a: TIME SERIES ESTIMATES OF THE EFFECTS OF MANDATORY PUBLIC PENSION SCHEMES  
ON PERSONAL SAVINGS (CONSUMPTION)  
(United States - Estimates)

	Feldstein (1974)		Munnell <sup>a/</sup> (1974)		Barro <sup>a/</sup> (1977)		Darby <sup>a/</sup> (1978)		Leimer-Lesnoy (1980)
	CON	CON	SAV	SAV	CON	CON	CON	CON	CON
1. Dependent Variable <sup>b/</sup>									
2. Regression Coefficient on Gross Social Security Wealth Variable (t-value)	0.021 (3.4)	0.029 (0.83)	-0.030 (2.60)	-0.058 (1.40)	0.014 (1.40)	0.014 (0.39)	0.017 (1.31)	0.011 (0.59)	-0.002 (0.26)
3. Estimated Depressing Effect on Personal Savings (as a percentage of actual savings, approximate average value)	50% or higher		Much weaker (and statistically insignificant) effect than Feldstein (1974 results)						No effect
4. Sampler Period	1929-71 <sup>c/</sup>	1947-71	1929-69 <sup>c/</sup>	1946-69	1929-74 <sup>c/</sup>	1947-74	1929-74 <sup>c/</sup>	1947-74	1930-74 <sup>c/</sup>

NOTES: <sup>a/</sup> Representative results have been chosen according to Esposito (1978).  
<sup>b/</sup> CON = Consumption Function; SAV = Saving Function.  
<sup>c/</sup> Excludes the period 1941-46.

Source: CPE/WP1(81)9.

Table III.29.b: TIME SERIES ESTIMATES OF THE EFFECTS OF MANDATORY PUBLIC PENSION SCHEMES  
ON HOUSEHOLD SAVINGS (CONSUMPTION)  
(Other OECD Countries)

1. Author(s) <sup>a/</sup>	Perelman/Pestieau (1981)	Wrage (1980)		Boyle/Murray (1979)	Pfeff et al (1978)	Markowski/Palmer (1980)
2. Country	Belgium	Canada		Canada	Germany	Sweden
3. Dependent Variable <sup>b/</sup>	CON	SAV	SAV	SAV <sup>c/</sup>	SAV <sup>c/</sup>	SAV
4. Regression Coefficient on Social Security Variable (t-statistics)						
(I) Social Security Wealth	0.028 (1.9)	-0.008 (-0.85)	-0.031 <sup>d/</sup> (1.79)	POS/NEG <sup>f/</sup>	-	
(II) Social Security Benefits	-	-	-	-	-0.199 (-1.33)	-11.62 <sup>g/</sup> (2.5)
(III) Social Security Contributions	-	-	-	-	-	-
5. Implied Depressing Effect on Savings (as percent of actual saving, approximate)	40%	<sup>h/</sup>	<sup>h/</sup>	...	15%	30% <sup>i/</sup>
6. Sample Period	1954-77	1953-75	1953-75	1954-75	1960-77	1952-75

- NOTES: <sup>a/</sup> Representative results.  
<sup>b/</sup> CON = Consumption Function; SAV = Saving Function.  
<sup>c/</sup> Serious misspecification reduces usefulness of results (important explanatory variables are missing from regression equation).  
<sup>d/</sup> Canadian Pension Plan wealth.  
<sup>e/</sup> Old Age Security wealth.  
<sup>f/</sup> Both positive and negative coefficients (all statistically insignificant at 95 percent level) were obtained for different combinations of additional explanatory variables.  
<sup>g/</sup> The benefit variable used is an estimate of the contribution of expected future pensions to permanent income; cf. Markowski/Palmer (1979) for a detailed description of the variable.  
<sup>h/</sup> Information given insufficient to calculate this figure.  
<sup>i/</sup> According to the study quoted, the depressing effect on personal savings as more than compensated by asset formation of the Social Security fund so that net effect on national savings was positive.

Source: CPE/WP1(81)9.

provided for through pensions. Clearly there is no one for one substitution between pensions and private savings, as the characteristics, (e.g., liquidity) of each are different, and no such one for one reduction should be expected. Moreover, since pensions do not, typically, fully replace part income, there is remains some motivation for savings. Empirically, the results presented in Table III.29 are mixed. In some countries there is evidence of reduced household savings, in others, the relationship is difficult to confirm. The reduction of private savings translates into lower national savings because public pension schemes are typically unfunded.

To summarize, these determinants suggest mixed effects, and no clear picture emerges for future savings.

Corporate Savings - During the 1964-1981 period, the corporate sector has generated a declining share of total net savings. For the period, the results for the major 7 countries are presented in Table III.30. OECD corporate savings made up, on average 28% of total savings in 1964, 19.3% in 1970, and 13.6% in 1981.

The decrease in the share of corporate savings in the total net savings is not yet explained, although there are a number of hypotheses. One factor may be the (still sparse) evidence on declining trends in profitability in the OECD corporate sector. Higher rates of inflation during the 1974-1981 period are another possible explanation.<sup>32/</sup> Higher

<sup>32/</sup> John Lintner: Inflation and Security Returns, Journal of Finance, May 1975.

inflation, through its effects on profit rates, reduces the portion of retained earnings used for internal financing. During the 1973-1981 period the realized rate of return in the six major countries [U.S., Japan, Germany, France, UK and Canada] fell from 20 to 13% while the share of gross operating surplus fell from 32 to 28%. These developments have been affected by both cyclical and secular factors. The secular decline in profitability coincides with the slow down in the growth of productivity in most of the OECD nations. Inflation would also have effects on profitability since non-indexed tax systems lead to a taxation of real and capital and wealth.

Table III.30

Net Corporate Savings as % of Total Net Savings

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Canada	45.4	42.5	35.7	37.9	41.0	35.3	34.2	38.2	39.5	43.6	42.5	48.6	46.0	51.7	55.0	60.8	57.5	40.0
France	14.3	14.1	16.8	17.5	20.1	22.2	16.7	16.4	17.2	16.4	3.4	-1.5	-8.3	2.9	7.7	9.7	0.02	-16.6
Germany	27.8	28.5	27.6	30.7	29.1	18.4	19.2	15.9	12.8	8.9	5.8	0.8	9.8	5.1	16.3	14.4	3.0	-7.6
Italy	2.4	10.3	14.9	11.9	16.7	16.4	6.9	2.9	4.0	5.6	2.0	-20.6	-7.2	-7.4	-6.1	6.0	8.9	-5.8
Japan	-	-	-	-	-	-	31.6	23.1	24.4	16.6	-2.1	-2.9	4.8	5.7	13.5	12.0	9.3	2.9
United Kingdom	49.6	41.0	28.7	26.3	27.4	21.0	10.5	21.5	33.4	38.4	2.1	-10.1	23.9	50.9	48.4	29.0	-0.3	-8.3
United States	36.3	37.6	38.6	38.6	33.6	24.9	27.9	26.0	31.6	22.3	9.2	31.8	35.2	38.7	34.4	27.6	24.7	22.9
OECD - 7 Countries	28.0	35.5	36.0	35.4	30.8	22.8	19.3	24.2	22.7	20.3	6.8	18.5	23.4	25.4	25.0	21.8	15.6	13.6

Average Shares: 1964-81 10.8%  
 1964-81 23.67%  
 1964-73 27.5%

Source: OECD National Accounts, Table 7, Lines 1.1 and 1.

Uses of Savings: Net Sectoral Balances

A comparison of gross fixed capital formation as a percent of GDP in the larger OECD countries since 1960 and gross savings as a percent of GDP provide the starting point for the examination of the uses of savings in the OECD.

Table III.31: OECD: GROSS CAPITAL FORMATION AND SAVINGS

<u>Year</u>	<u>Gross Fixed Capital Formation as Percent of GDP</u>	<u>Gross Savings As Percent of GDP</u>	<u>Surplus (+) Deficit (-) With the Rest of the World as % of GDP</u>	<u>Net Savings As Percent of GDP</u>
1960	19.5	21.6	-	12.49
1961	19.8	21.2	-	12.11
1962	20.0	21.4	-	12.37
1963	20.2	21.5	-	12.28
1964	20.7	22.2	-	13.23
1965	20.9	22.9	-	13.74
1966	20.8	22.5	-	13.38
1967	20.5	22.0	-	12.76
1968	20.7	22.4	-	13.18
1969	21.1	23.2	-	13.87
1970	21.3	22.9	-	13.55
1971	21.6	22.5	-	13.05
1972	22.1	23.1	-	14.75
1973	23.0	24.9	.32	14.75
1974	22.4	23.3	-.7	12.78
1975	21.1	20.8	+.04	9.81
1976	20.9	21.5	-.4	10.31
1977	21.3	22.1	-.5	10.46
1978	22.0	23.2	+.02	11.04
1979	22.2	23.2	-.05	11.05
1980	21.8	21.9	-1.02	9.65
1981	21.2	21.4	-.7	8.90

Source: OECD National Accounts, Table 1.

Table III.32 shows growth rates of GNP, capital formation and savings, at current and constant prices.

Table III.32

OECD  
ANNUAL GROWTH IN OUTPUT (GPD), INVESTMENT AND GROSS SAVINGS  
1960-1981

	Current Prices			Constant (1975) Prices		
	GDP	Investment (Fixed Capital Formation)	Gross Savings	1979 Exchange Rates		
				GDP	INV	Gross Savings
1961	9.0	6.8	5.0	4.7	7.1	3.1
1962	9.6	8.5	9.1	5.3	6.7	6.0
1963	8.8	7.7	7.3	4.8	6.2	5.1
1964	12.2	9.3	13.7	6.3	9.4	10.8
1965	9.5	8.8	11.1	5.2	6.7	7.7
1966	9.1	9.3	7.6	5.3	5.8	4.8
1967	5.0	6.9	4.9	3.8	2.8	2.7
1968	10.1	9.7	11.6	5.4	7.0	8.4
1969	12.3	10.4	14.0	5.3	6.8	8.8
1970	11.2	9.4	9.7	3.3	4.2	2.4
1971	11.1	10.0	7.9	3.7	4.8	1.4
1972	12.1	11.3	12.4	5.4	6.6	7.3
1973	16.6	14.2	20.8	6.0	7.5	11.2
1974	10.5	12.6	6.2	0.8	-4.7	-8.1
1975	4.7	10.7	-1.2	-0.2	-5.5	-10.7
1976	11.9	13.3	15.4	4.82	3.8	6.9
1977	13.0	12.2	12.9	3.8	4.6	8.6
1978	13.6	12.5	15.8	3.9	5.4	3.4
1979	14.3	13.0	13.8	3.1	3.8	3.3
1980	11.1	13.3	7.3	1.2	-0.9	-4.2
1981	9.5	12.4	8.5	1.5	-0.2	-1.2
Growth Rates	Nominal GDP	Fixed Capital Formation	Gross Savings	Real GDP	Real Fixed Capital Formation	Real Gross Savings
1960-81	11.25	10.5	9.8	3.97	4.2	1.5
1960-74	9.76	9.6	10.0	4.96	6.2	5.1
1974-81	11.07	12.4	9.2	2.36	0.8	0.8

Source: OECD National Accounts, Table 1 (UPI).

It shows that, in real terms corrected by a common deflator at 1975 prices and dollar exchange rates the weakness in OECD output growth is correlated with a slowdown in fixed capital formation and in savings, here shown as gross savings. The downward trends that were apparent in net savings are paralleled in the trend for the variables shown for the period 1974-1981. During the 1960-1981 period, the growth rate in capital formation in the OECD averaged 4.2 per annum. In the 1960-74 period the average was 6.2%. The average rate for the 1974-81 period has been less than 1.% (0.8) for fixed capital formation. These outcomes result in part from the large drop in investment and savings in 1974 and 1975. Taking gross savings and investment together both have grown at parallel rates in real terms over the latter period. This makes it difficult to demonstrate that lower investment derives from lower savings, suggesting that overall economic conditions have been important.

Table III.33 shows the sectoral composition of capital formation. Broadly, the sectoral shares have exhibited stability over the period, and there is little evidence of a shift in the share of investment, as between corporate, government and households. The corporate share of investment has remained stable at 55% of total investment with government investment at 11-12% and households at 30-33% of the total. What this suggests is that any decline in corporate investment should be attributed to overall economic conditions, and not to absorption of available shares of financing by governments or households.

Table III.33

Seven Major Countries: % of Total Capital Formation By Sector

	<u>Corporate</u>	<u>Government</u>	<u>Household</u>
1964	49.9	14.9	34.6
1965	51.6	14.3	33.2
1966	53.7	14.7	30.7
1967	54.0	15.4	29.6
1968	54.0	14.8	30.2
1969	56.5	13.5	29.0
1970	55.4	14.0	30.4
1971	52.4	14.0	33.0
1972	52.7	12.2	35.0
1973	54.7	11.9	33.3
1974	58.7	12.9	28.3
1975	53.9	14.8	31.2
1976	57.0	12.1	30.7
1977	54.8	11.2	33.9
1978	53.8	12.1	34.0
1979	55.9	11.5	32.5
1980	55.4	12.7	31.8
1981	55.9	11.3	32.6

Source: OECD National Accounts, Vol. II, Table 7.

Sectoral Balances

Table III.34 outlines the net savings position, or sectoral balance, of each sector. It is derived by subtracting from each sector's gross savings, the "capital formation" of that sector, to arrive at the sector's net savings or dissavings position.

Table III.34

Sectoral Financial Balances in the Seven Major OECD Countries, 1973-82 <sup>a/</sup>  
Surplus or Deficit (—) as Percentage of Nominal GDP

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
<b>United States <sup>a/</sup></b>										
General government sector	0.6	-0.3	-4.2	-2.1	-0.9	0	0.6	-1.3	-1.0	-3.8
of which:										
Federal government	-0.4	-0.8	-4.5	-3.1	-2.4	-1.4	-0.7	-2.3	-2.0	4.8
Household sector	2.8	4.0	4.7	2.7	1.2	1.2	1.4	2.4	3.1	3.9
Corporate sector <sup>c/</sup>	-2.9	-3.3	0.7	-0.2	-1.0	-1.9	-2.0	-0.9	-2.0	-0.2
Foreign sector	-0.5	-0.3	-1.2	-0.3	0.7	0.7	0.1	-0.3	-0.1	0.2
<b>Japan <sup>b/</sup></b>										
General government sector	0.7	0.4	-2.8	-3.8	-3.8	-5.9	-4.4	-3.9	-4.0	-4.0
of which:										
Central government	0.0	-1.8	-4.2	-4.5	-5.5	-6.2	-5.6	-5.5	-5.6	..
Household sector	8.0	9.9	9.6	10.7	9.9	9.7	8.5	7.9	11.6	11.9
Corporate sector <sup>c/</sup>	-8.7	-11.2	-6.9	-6.2	-4.6	-2.0	-5.0	-5.0	-7.2	-7.1
Foreign sector	0	1.0	0.1	-0.7	-1.5	-1.7	0.9	1.1	-0.4	-0.6
<b>Germany</b>										
General government sector	1.2	-1.4	-5.7	-3.4	-2.4	-2.5	-2.7	-3.2	-4.0	-3.9
of which:										
Central government	0.0	-0.5	-3.0	-2.3	-1.5	-1.6	-1.5	-1.7	-2.4	-2.1
Household sector	7.9	8.6	9.4	7.8	7.0	6.7	7.0	7.3	7.9	7.9
Corporate sector <sup>c/</sup>	-7.8	-4.7	-2.7	-3.6	-3.9	2.8	-5.2	-6.3	-5.1	-3.4
Foreign sector	-1.3	-2.6	-1.0	-0.8	-0.7	-1.3	0.9	2.1	1.2	-0.4
<b>France</b>										
General government sector	0.9	0.6	-2.2	-0.5	-0.8	-1.9	-0.7	0.3	-1.9	-2.6
of which:										
Central government	1.2	0.9	-1.9	-0.1	-0.7	-1.3	-0.8	-0.2	-1.1	-1.9
Household sector	3.5	3.7	5.7	3.8	4.3	5.2	3.6	2.8	3.7	3.7
Corporate sector <sup>c/</sup>	-4.6	-6.8	-3.6	-5.0	-4.2	-2.8	-3.0	-4.6	-3.6	-2.9
Foreign sector	0.2	2.4	0.1	1.6	0.8	-0.5	0.1	1.4	1.5	2.1
<b>United Kingdom</b>										
General government sector	-2.7	-3.8	-4.6	-4.9	-3.2	-4.2	-3.2	-3.3	-2.5	-2.0
of which:										
Central government	0.1	-0.4	-2.3	-3.4	-2.0	-3.2	-2.1	-2.1	-2.4	-2.4
Household sector	4.0	5.1	5.4	4.8	3.8	5.6	6.7	8.2	6.6	4.5
Corporate sector <sup>c/</sup>	-2.7	-5.3	-2.3	-0.6	-0.8	-0.7	-4.0	-3.6	-1.7	-1.0
Foreign sector	1.4	4.0	1.4	0.7	0.2	-0.6	0.4	-1.3	-2.4	-1.5
<b>Italy</b>										
General government sector	-7.0	-7.0	-11.7	-9.0	-8.0	-9.7	-9.5	-8.0	-11.7	-12.0
of which:										
Central government	-5.3	-4.0	-7.4	-4.6	-4.9	-11.0	-9.1	-7.4	-9.8	-10.5
Household sector	11.9	12.1	17.5	13.7	14.2	15.2	13.3	9.6	10.6	11.3
Corporate sector <sup>c/</sup>	-6.7	-9.8	-6.1	-6.2	-5.1	-3.1	-2.1	-4.0	-1.2	-0.9
Foreign sector	1.8	4.7	0.3	1.5	-1.1	-2.4	-1.7	2.4	2.3	1.6
<b>Canada</b>										
General government sector	1.0	1.9	-2.4	-1.7	-2.6	-3.1	-1.9	-2.1	-1.5	-5.5
of which:										
Federal government	0.3	0.8	-2.3	-1.8	-3.5	-4.6	-3.5	-3.5	-2.4	-6.0
Household sector	3.9	5.0	5.1	3.9	4.2	5.3	5.1	6.1	6.5	8.0
Corporate sector <sup>c/</sup>	-4.8	-7.9	-5.5	-4.2	-3.7	-4.3	-5.1	-4.3	-6.6	-1.7
Foreign sector	-0.1	1.0	2.9	2.0	2.1	-2.1	1.9	0.4	1.6	-0.8
<b>7 Country Average</b>										
General government sector	0.1	-0.4	-4.3	-3.0	-2.3	-2.5	-2.0	-2.4	-2.8	-4.1
Household sector	4.7	5.8	6.8	+5.6	4.8	5.2	4.8	5.0	+6.1	+6.4
Corporate sector	-4.9	-6.2	-2.3	-2.9	-2.8	-2.3	-3.0	-3.0	-3.5	-2.2
Foreign sector	+0.1	+0.8	-0.2	+0.3	+0.2	-0.4	+0.2	+0.4	+0.2	+0.1

<sup>a/</sup> On a SNA basis except for the United States and the United Kingdom which are on a national income account basis. For explanations concerning methodology see annex "Sources and Methods" OECD Economic Outlook No. 32. The sum of the three domestic sectors may not equal the foreign sector due to rounding.

<sup>b/</sup> As a percentage of nominal GNP.

<sup>c/</sup> Including public corporations and financial institutions.

Sources: National Accounts of OECD Countries and OECD Secretariat estimates, net lending to the rest of the world, Table 67.

Note: Foreign sector: (-) = capital outflows; (+) = inflow.

Table III.35

OECD NET LENDING TO THE REST OF THE WORLD - AS A % OF SAVINGS  
AS A % OF OECD

	1973	1974	1975	1976	1977	1978	1979	1980	1981
Net Lending as % of Savings	2.2	-5.72	0.4	-4.3	-5.02	+0.2	-4.2	-10.5	-8.8
Net Lending as % of GDP	+0.32	-0.7	+0.04	-0.4	-0.5	+0.02	-0.05	-1.02	-0.7
Memo item:									
OPEC Surplus % OECD GDP*	+1.4	+1.0	0.6	0.6	0.4	0.1	0.5	1.00	0.8

\* Surplus of capital surplus oil exporting countries.

Source: OECD National Accounts and Table 7; World Bank Estimates,

Net borrowing from outside OECD has averaged about 4.2% of savings and about 2% of the gross fixed capital formation. The recent trend since 1974 reflects a systematic decline in OECD net lending and a reversal from net lender to a net borrower position.

Deficits and Savings

Taken from an OECD study, Table III.36 examines national savings in relation to government absorption of savings.<sup>33/</sup> The table shows the claims of government borrowings on the private savings available, from 1970-83. Shown are: (i) actual budget deficits as a fraction of gross savings; (ii) actual budget deficits as a fraction of net savings; and (iii) actual deficits as a fraction of gross savings at full employment GDP, i.e., "potential savings." For the seven major OECD countries taken together, the government deficit absorbs 51.7% of net savings, and 21.2% of gross savings in 1983. This range varies widely among countries, with the US deficit absorbing some 60% of private net savings in 1982, and a low of 20.9% of net savings absorbed by the government sector in Japan. The largest fraction is absorbed in Italy, where the government absorbs some 75% of net savings. The extent of government absorption of saving represents a striking change from past trends--in 1970, OECD government deficits absorbed less than 1% of gross savings. By 1975, this had risen to 44.8%, and, by 1983, to 51.7%.

The chart which follows depicts these trends in government deficits and in national saving graphically. There has been a substantial narrowing of the gap between the domestic savings available and the deficits required to be financed. This gap has, to some extent been filled by foreign savings.

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<sup>33/</sup> CPE/WP1/(83)2 and Chouraqui and Price, op-cit.

**TABLE III.36**  
**GENERAL GOVERNMENT FINANCIAL DEFICITS**  
**(as a Percentage of Private Saving<sup>a/</sup>)**

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982 <sup>c/</sup>	1983 <sup>c/</sup>
<b>UNITED STATES</b>														
Actual Gross <sup>b/</sup>	5.9	10.3	2.0	-2.8	1.1	22.9	12.4	5.4	-0.2	-3.6	7.6	5.6	20.6	24.2
Actual Net	13.3	22.2	4.6	-5.7	2.7	52.4	30.6	13.5	-0.5	-9.6	22.9	16.2	55.5	60.2
Potential Gross	-0.9	2.8	-0.7	0.2	-5.2	5.0	-2.2	-3.4	-4.5	-7.3	-3.6	-8.2	-5.9	5.0
<b>JAPAN</b>														
Actual Gross	-5.7	-4.4	-1.2	-1.6	-1.2	9.5	12.1	13.1	18.2	16.6	15.0	14.4	13.3	9.5
Actual Net	-9.3	-7.7	-2.0	-2.7	-2.1	17.1	20.6	23.0	31.0	29.8	27.5	28.0	28.1	20.9
Potential Gross	-5.3	-5.0	-1.2	-0.2	-1.7	7.1	10.0	11.3	17.2	16.7	15.3	13.8	11.4	7.4
<b>GERMANY</b>														
Actual Gross	-0.9	0.8	2.5	-6.0	6.3	26.5	16.6	12.5	12.2	13.1	15.4	19.8	21.1	21.4
Actual Net	-1.6	1.4	4.6	-11.9	12.6	55.9	35.5	28.9	26.2	28.1	36.3	48.9	55.2	61.8
Potential Gross	0.9	0.8	2.4	-4.2	4.5	18.2	12.7	8.6	9.9	12.9	13.9	12.7	6.0	0.3
<b>FRANCE</b>														
Actual Gross	-4.4	-3.5	-3.7	-4.4	-3.1	10.7	2.5	4.2	8.8	3.3	-1.8	8.8	15.3	16.1
Actual Net	-7.9	-6.1	-6.3	-7.5	-5.9	20.2	5.8	8.5	16.7	6.5	-4.2	21.8	34.5	36.7
Potential Gross	-8.0	-5.9	-3.7	-3.2	-5.2	-0.7	-9.3	-9.9	-5.1	-11.3	-22.2	-20.7	-16.1	-18.0
<b>UNITED KINGDOM</b>														
Actual Gross	-21.3	-10.8	7.2	14.0	23.4	28.4	27.9	16.5	19.8	15.5	16.9	13.6	13.4	13.5
Actual Net	-48.1	-25.9	14.0	24.8	54.7	70.0	61.5	34.0	38.2	31.8	39.1	36.1	43.9	57.6
Potential Gross	-21.3	-12.3	3.2	18.6	21.6	17.7	19.2	11.0	23.1	19.0	10.0	-4.7	-9.8	-10.4
<b>ITALY</b>														
Actual Gross	20.9	28.9	35.7	32.6	31.7	43.5	33.4	29.9	35.1	33.3	32.6	44.8	45.1	45.4
Actual Net	31.2	42.4	51.2	47.2	48.7	69.4	52.4	47.9	54.2	50.5	51.4	70.9	71.7	74.4
Potential Gross	21.5	27.5	33.8	32.4	31.7	38.8	30.0	25.5	30.0	29.4	29.6	40.5	36.2	34.3
<b>CANADA</b>														
Actual Gross	-5.5	-0.8	-0.4	-5.3	-9.8	12.5	8.5	13.6	15.5	9.3	9.7	6.2	30.5	30.6
Actual Net	-13.6	-2.0	-1.0	-10.5	-19.1	24.1	16.1	27.4	29.5	17.2	18.0	11.9	55.4	54.2
Potential Gross	-8.8	-0.8	1.9	1.3	-4.8	12.2	10.1	11.6	13.4	6.6	2.1	-2.7	2.1	1.3
<b>TOTAL SEVEN COUNTRIES<sup>d/</sup></b>														
Actual Gross	0.5	4.4	3.1	0.1	3.8	21.0	14.1	10.0	9.3	6.4	11.0	11.7	20.1	21.2
Actual Net	0.9	8.6	5.5	-0.9	7.7	44.8	30.1	20.4	16.6	10.4	25.3	26.5	48.8	51.7
Potential Gross	-2.8	0.5	1.6	2.6	0.5	9.4	4.8	3.2	5.6	3.3	3.0	-0.1	-0.2	3.1

<sup>a/</sup> (+) = financial deficit; (-) = financial surplus. Gross private savings = households + business savings net of stock appreciation, where data are available (for the United States, United Kingdom and Canada), but before allowance for capital consumption. Net private savings = gross savings after deducting capital consumption.

<sup>b/</sup> Actual gross = ratio of actual general government net lending to actual gross private savings; actual net = ratio of actual general government net lending to actual net private savings; potential gross = ratio of general government net lending at potential output to OECD estimate of private gross savings at potential output.

<sup>c/</sup> OECD estimates and forecasts.

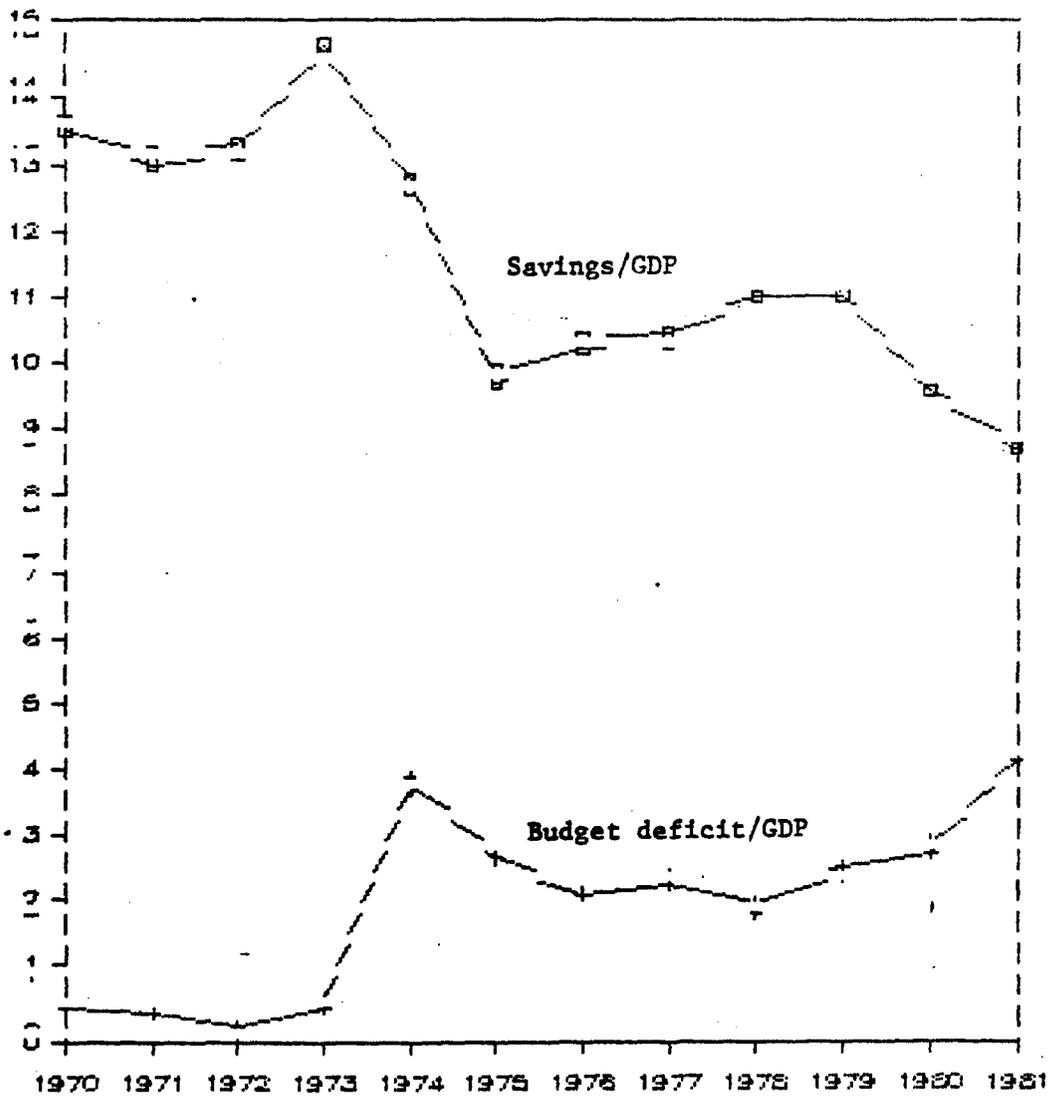
<sup>d/</sup> 1981 GNP/GDP weights and exchange rates.

Source: CPE/WPI(83)2 Tables.

CHART III.9

SAVINGS RATES AND BUDGET DEFICITS AS % OF GDP

OECD 1970-1981



Source: OECD National Accounts Statistics, Vol. 1, Tables 1, 7.

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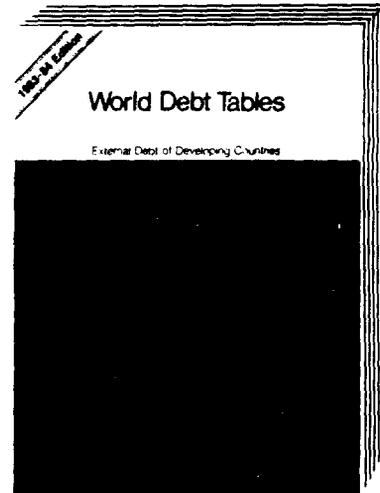
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ISSN 0253-2115/ISBN 0-8213-0522-0

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