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THE EXTERNAL BALANCE OF THE SMALLER INDUSTRIAL COUNTRIES: INTERNATIONAL DEVELOPMENTS AND NATIONAL POLICIES SINCE 1968

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Table of Contents

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I. Introduction

This paper examines some salient features of the balances of payments of the developed countries outside the Group of Ten[1] since 1968, a starting-point chosen so that the first oil shock of the 1970s may be viewed in the context of five preceding years of relative normalcy. Two levels of aggregation are employed in the analysis; Section II relates the evolution of the current account of the group of other developed countries (ODCs) to those of the other main groups in the world, while Section III of the paper discusses how the exports of each of seven countries of the group have fared in comparison with exports of the OECD area as a whole. Finally, Section IV, reverting to the group level of analysis, discusses some aspects of financing of the ODC current-account deficit, the resulting growth of the group's external indebtedness, and the repercussions of the latter development on the current-account position.

II. The other developed countries in the world economy

(i) An overview

In many respects the economies of the ODCs are dissimilar; for example, Greece, Portugal, Spain and Turkey are countries where the industrialisation process has occurred relatively recently, resulting in

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1 The BIS grouping of "other developed countries" (abbreviated henceforth to ODCs) comprises Australia, Austria, Denmark, Finland, Greece, Ireland, Israel, New Zealand, Norway, Portugal, South Africa, Spain, Turkey and Yugoslavia.

consistently faster GDP growth over the past twenty years in these countries than in the OECD as a whole. In contrast are the relatively mature economies of, for example, Austria and Denmark. In spite of the differences between their economies, however, the ODCs share two characteristic features of the "small countries". The first such characteristic is their openness. In 1982 the average proportion of the GDP of the seven largest economies which was represented by exports was little more than one-fifth; but for the ODCs the corresponding average proportion was almost one-third.* The second shared characteristic of the ODCs is that they are to a great extent price-takers in their traded goods markets - since their shares of total world trade for their traded goods is small, both the supply curve for their imports and the demand curve for their exports are typically highly elastic, giving them little influence over prices.

The openness of the ODCs has tended to increase in recent years, because the growth of world trade has regularly exceeded that in world production. Table 1 below shows that the (unweighted) average degree of openness of the ODCs increased by over one-fifth between 1968 and 1982, measured as Imports divided by GDP, or by almost one-third if measured as Exports divided by GDP.

One result of this increasing interdependence of national economies may have been to promote demand management as an instrument of current-account adjustment in the ODCs. This is because the increases in the average propensity to import and export shown in Table 1 are likely to reflect increases in the marginal propensities to trade; hence, in the typical ODC, the size of the aggregate demand adjustment required to achieve a given current-account adjustment is likely to have declined.

At the same time as changes in aggregate expenditure have become more potent as a means of achieving external adjustment, the use of exchange rate depreciation as an expenditure "switching" device has been hindered by the growth of interdependence, at least in the case of deficit countries. This is because depreciation can only be successful if domestic currency prices in the traded goods sector (exporting and import-competing industries) increase relative to those in the non-traded goods sector. But the more open an economy is, the greater is the real income loss to factors of production in the non-traded sector, consequent on the depreciation-

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* These proportions are unweighted by country size.

Table 1

Growth of "openness" in the ODCs, 1968-82

	Export volumes ÷ GDP volumes		Import volumes ÷ GDP volumes	
	1968	1982	1968	1982
Australia	14.1	16.9	16.6	18.0
Austria	25.1	44.7	26.4	40.1
Denmark	26.5	35.5	28.6	31.4
Finland	26.4	32.2	23.5	27.7
Greece	10.6	18.7	22.7	29.1
Ireland	41.4	56.7	50.0	61.0
Israel*	29.7	45.4	47.2	68.8
New Zealand	23.2	29.5	26.2	34.2
Norway	40.9	42.3	41.6	42.6
Portugal	28.8	25.6	36.9	37.3
South Africa*	25.4	25.1	21.8	21.2
Spain	10.6	19.3	13.3	18.1
Turkey	5.4	11.5	11.4	9.2
Yugoslavia*	17.9	26.3	19.4	27.5
Average, all ODCs	23.3	30.7	27.5	33.3

* Export, import and GDP values.

Source: OECD National Accounts, 1983, Volume 1 (except for Israel, South Africa and Yugoslavia, for which the source is the IMF's International Financial Statistics).

induced rise in the price of importables; and so, with the attempt by these factors to preserve real incomes, the greater is the likelihood of depreciation engendering a purely inflationary response.[1] (Although this comment may not be so applicable to the use of appreciation to correct a surplus, because then the required adjustment is a real income rise for factors in the non-traded sector, some models (notably the "Scandinavian" one) imply rigid real income differentials between factors in the traded and non-traded sector even in this case.)

The tendency towards greater interdependence through trade has detracted from the efficacy of exchange rate depreciation as a means of adjustment in one further respect. Depreciation is a "zero-sum game"; it is impossible for the depreciating country to gain, by raising output of tradable goods, without competitor countries suffering demand reductions for their tradable goods. Greater openness has enhanced awareness of this fact, and increased the likelihood that one country's exchange rate depreciation will be partially negated by depreciations in competitor countries (an example of the latter was the round of Scandinavian devaluations by Sweden (16 per cent.), Norway (6 per cent.) and Finland (9½ per cent.) in the autumn of 1982).

Graph 1 shows aggregate current-account balances of country groups, with the value of global GNP as a scaling variable in each case. The principal features of the graph are the two episodes of current-account imbalances between the groups, precipitated first by the fourfold rise in oil prices in December 1973, and later by a more than doubling of oil prices between 1978 and 1980.[2]

There are two salient features of policies adopted by the groups of oil-importing countries in response to the oil shocks. The first of these is the duration of the deterioration in the ODCs' current account after the 1974 shock, in comparison to the speed at which the other two oil-importing groups moved back towards current-account equilibrium; the second, in contrast, is the relative resilience of the ODCs' current account subsequent to the 1979 shock, compared both with the earlier experience of these countries and also with the pronounced current-account deterioration in the other two oil-importing groups at the turn of the decade.

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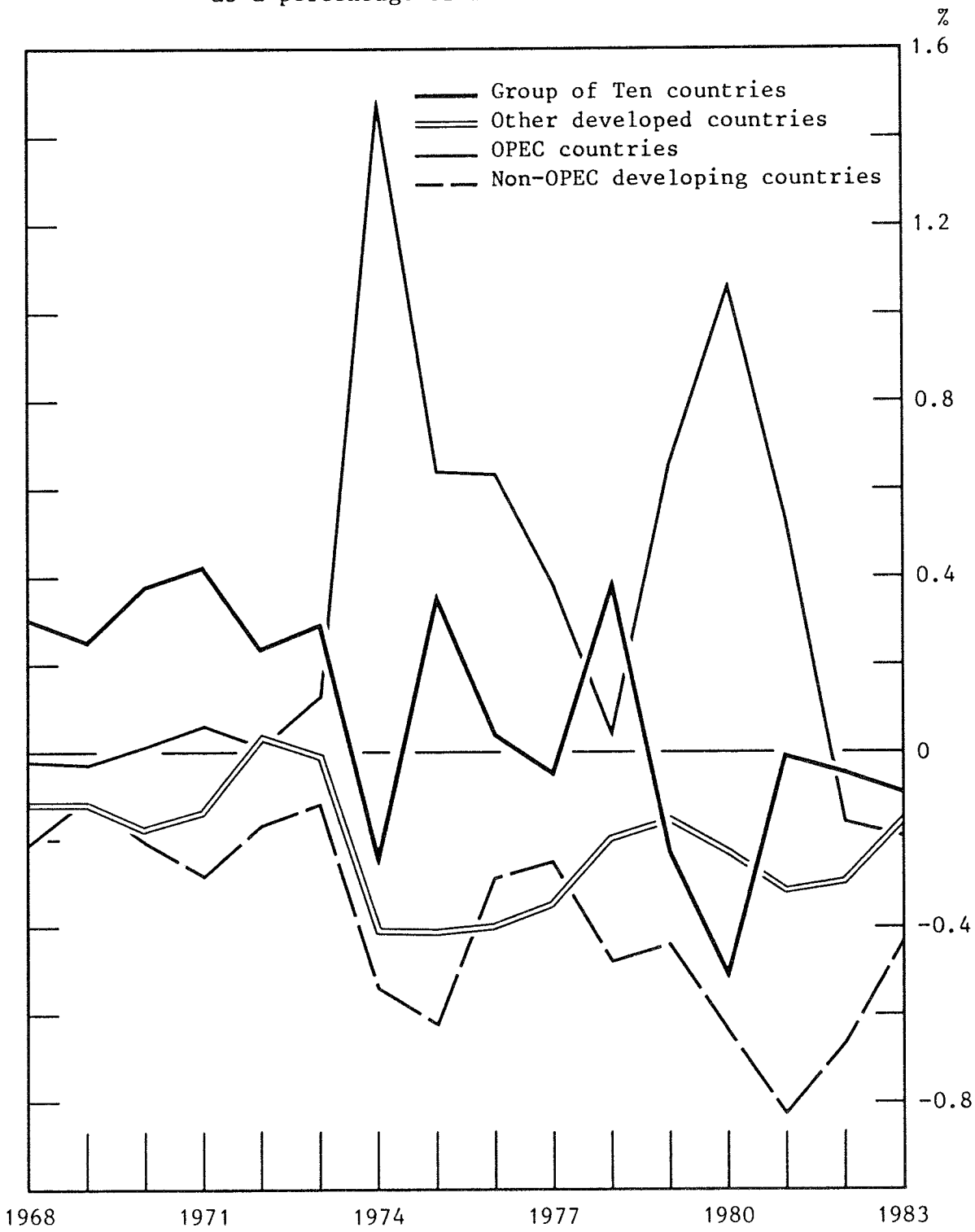
1 An example of a devaluation which was unsuccessful partly for these reasons was the 15½ per cent. devaluation of the drachma in January 1983.

2 Employing Saudi Arabian prices as tabulated in the IMF's publication International Financial Statistics.

Graph 1

Aggregate current-account balances of major groups of countries as a percentage of world nominal GNP*



*Excluding centrally planned economies.

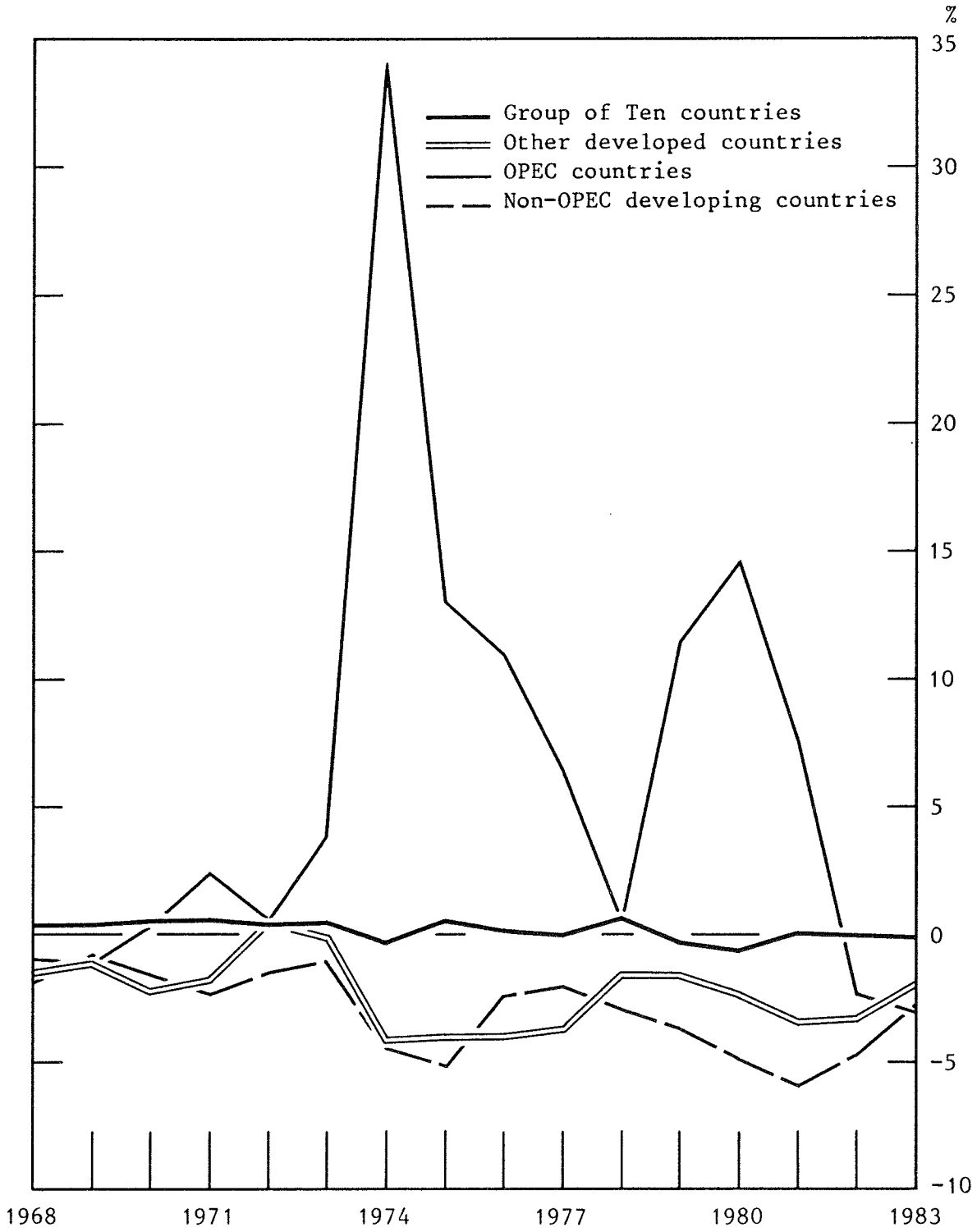
These two episodes are analysed more closely in the following sections. Before this discussion, however, it is relevant, in amplification of the theme of the relative "openness" of the ODCs, to discuss Graph 2, which shows the same aggregate current-account balances as Graph 1, but this time as a proportion of the total GNP of the corresponding country groups. The salient feature of the second graph is that, amongst the industrialised countries, the current account has played a much more prominent rôle as a determinant of aggregate demand in the ODCs as a group than in the Group of Ten. This is demonstrated in Graph 2 by contrasting the changes in the Group of Ten's current account - never equivalent to more than about 1 per cent. of the value of GNP (between 1978 and 1980) - with those in the ODCs' current account, which between 1973 and 1974 amounted to almost 5 per cent. of the value of GNP. Furthermore, the graph emphasises the very different current-account evolution of the Group of Ten and the ODCs since 1972, the last year when the current-account configuration was "normal", in the sense of a surplus for the Group of Ten, the ODCs, and the OPEC countries, with a deficit in the non-OPEC developing countries. Since that year, the group of ODCs has experienced a persistent current-account deficit of between 2 and 5 per cent. of GNP, whilst the Group of Ten's current-account position has fluctuated around balance, and has never been large in relation to GNP. One consequence of the persistent current-account deficit of the ODC group has been a marked increase in the external indebtedness of a number of the members of the group.

(ii) Impact of the first oil shock on the ODC current account

The first oil shock amounted to a (first-round) income loss of roughly 2 per cent. for the developed countries; this loss was OPEC's gain. The loss was approximately shared between the Group of Ten and the ODCs (allowing, of course, for the much larger income of the former group). Within the ODC group, some countries were much more dependent on (net) oil imports than others; for example, in Denmark, Finland, Ireland and Israel the loss arising from the first oil shock was equivalent to over 8 per cent. of income, whereas in Australia (which had indigenous oil) the loss was only about 1 per cent. and in South Africa (which had alternative energy sources, notably coal) there was no loss.

Graph 2

Aggregate current-account balances of major groups of countries as a percentage of their respective nominal gross national products*



*Excluding centrally planned economies.

Given that relative dependence on imported oil in the ODCs was no greater than in the Group of Ten countries, an explanation for the comparatively worse current-account performance in the former group must be sought elsewhere. In any case, economic theory tells us that relative dependency on imported oil, whilst certainly an important factor in relative current-account performance in the short run after an oil price rise, ought to be much less important in the longer run; if a country's current-account deficit arising from an oil price rise is represented as an excess of "absorption" by residents over "income" of residents, then - if the income decline is regarded as permanent - absorption should sooner or later adjust, and the current account should once again move back towards equilibrium.

Since it seems implausible that the private sector in the ODCs should have taken a much different view from their counterparts in the Group of Ten as to how permanent the income loss arising from the first oil shock would be, a logical conclusion is that government fiscal and monetary policy in the ODCs in the years after 1973 attempted, to a much greater extent than in the Group of Ten, to offset the deflationary impact of the oil price rise. This indeed seems to have been the case, comparing the course of demand in the two groups.

Table 2

Real domestic demand in the Group of Ten and the other developed countries:

(percentage changes in constant US dollars, at prices and exchange rates of 1975)

Country Groups	1974	1975	1976	1977	1978	1979	1980
Group of Ten	-0.6	-1.2	+5.3	+3.6	+4.3	+3.6	+0.1
Other developed countries ...	+6.1	+1.7	+3.8	+1.9	+0.9	+3.0	+2.0

Source: OECD National Income Accounts 1984, Volume 1, p.82 - except in the case of Israel, South Africa and Yugoslavia (IFS Yearbook, 1982).

Table 2 shows the contrast between demand-management policy in the Group of Ten and in the ODCs in 1974 and 1975. In the Group of Ten, "absorption" declined in each year - admittedly not as much as income, although the 2 per cent. fall in income quoted earlier is probably an overestimate, given that around 20 per cent. of OPEC's increased surplus was spent on imports from the industrialised countries. However, in the ODCs there was no deceleration in absorption at all - indeed, in 1974 and 1975 the rise in the volume of demand amounted to over 8 per cent. Hence, as shown in the graphs above, between 1973 and 1975 the current account of the Group of Ten actually improved, by $6 billion, whilst that of the ODCs worsened, by over $20 billion, with their exports suffering from restrictions on demand in the Group of Ten countries.

This emphasis in the ODCs on the preservation of employment and demand, with current-account and inflation considerations playing only a secondary rôle, can be illustrated by the relatively expansionary fiscal stance adopted by many ODCs in the period 1973-75. Because the public-sector deficit is closely correlated with GDP, ratios of the former to the latter are not a good indicator of fiscal stance; furthermore, the public-sector deficits of two countries with identical fiscal stances but different positions in the economic cycle will appear to be different, unless allowance is made for this different cyclical phase. The OECD has attempted to adjust public-sector deficit to GNP ratios in a number of member countries for these two effects. Although these "structural deficit measures" are only available for Austria, Denmark and Norway, countries which may not be representative of the ODC group as a whole, the data show that in each case the "structural fiscal stance" between 1973 and 1975 became significantly more expansionary than was the case for the average Group of Ten country.

Within the ODC group, the extent by which the current account worsened after the first oil shock varied considerably. In Table 3 below, the members of the group are arranged in order of the deterioration in their current account between 1973 and 1975, with GDP employed as a scaling variable. The columns contain variables that may be relevant for the ordering in the first column.

The first noteworthy feature of Table 3 is that the degree of oil dependency tabulated in the second column sheds little light on the extent

of current-account deterioration depicted in the first column. Indeed, for some countries - Denmark, Turkey, Norway, South Africa, Austria and Ireland - the relationship seems to be inverse. Given the argument above,

Table 3

Influences on ODC current-account performance subsequent to the first oil shock

Country	Change in current account, 1973-75, as a percentage of 1973's nominal GDP	Net oil imports in 1973 as a percentage of nominal GDP	Real domestic demand, percentage growth, 1973-75	Real wages, percentage growth, 1973-75	Terms of trade, percentage change, 1973-75
Israel	-19.4	2.3	+29.4	+ 0.8	-12.9
Turkey	-10.8	0.8	+25.2	n.a.	-22.3
Norway	-10.8	0.9	+13.2	+16.5	+ 6.6
Finland	- 9.8	2.2	+10.1	+ 4.8	+ 6.6
Portugal	- 9.6	1.3	- 3.5	+ 8.8	n.a.
South Africa	- 8.6	0	+16.1	n.a.	-11.7
New Zealand	- 8.3	1.2	+13.0	0	-42.3
Spain	- 6.9	1.3	+ 7.9	+20.0	-19.9
Yugoslavia ..	- 5.2	1.4	+15.9	+ 3.3	- 6.9
Australia ...	- 2.0	0.3	+ 4.5	+ 9.4	-29.7
Denmark	0	2.3	- 4.8	+12.3	- 9.0
Austria	+ 0.1	1.3	+ 1.7	+ 9.6	- 2.2
Greece	+ 1.9	1.2	- 2.5	+ 9.5	-14.1
Ireland	+ 3.0	2.4	- 4.5	+ 9.9	-17.0

Sources: OECD National Income Accounts, 1984, Volume 1; IMF International Financial Statistics; and IMF Supplement on Trade, 1982.

relating to the different current-account performance of the two groups of developed countries, this is what one might expect when one compares individual countries. However, the third column, which shows the outcome of demand management policy in the two years subsequent to the oil shock, shows a clear tendency for the countries where policy was most

expansionary - Israel, Turkey, Norway, Finland, South Africa and New Zealand - to have had the largest deterioration in current accounts, and, correspondingly, in the five countries where the current account deteriorated least - Australia, Denmark, Austria, Greece, Ireland - real domestic demand fell in three cases, and rose less steeply than the ODC average in the other two cases.

The noteworthy exceptions to the general experience are Portugal, with a much worse current-account performance than might be expected on the basis of demand growth, and Yugoslavia, where the converse held true. The weakening in Portugal can be attributed to the aftermath of the revolution in April 1974, which had a number of detrimental consequences for the current account: production was for a time disrupted; with the severing of colonial ties, preferential markets for Portugese exports were lost; the return of many Portugese working abroad resulted in a sizable decline in emigrants' remittances; and tourism was discouraged by the domestic upheavals. Between 1973 and 1975 the trade balance deteriorated by $0.7 billion; the net services (including tourism) balance fell by $0.3 billion; and private inward transfers fell by some $3/4 billion. In addition, Portugal had a very small share of the rapidly growing OPEC import market; and the escudo's exchange rate became progressively overvalued until the latter part of 1975, owing to rapidly rising unit labour costs.

In Yugoslavia, where the current-account performance appears better than might be expected in view of the rapid rise in the volume of demand after 1973, three factors appear to have had an influence:

(a) there had been an unusually heavy build-up of oil stocks in 1973, and consequently oil imports almost doubled in volume. In 1974 this was partially reversed, and the volume of (now higher-priced) oil imports fell by about 20 per cent.;

(b) Yugoslavia was amongst the most successful of the ODCs in capturing a share of the new OPEC market after the first oil shock. The share of its exports destined for OPEC members increased almost threefold, comparing 1971-73 with 1974-76 - a performance equalled amongst the ODCs only by Greece, Ireland and New Zealand, the two latter from a very small base (under 1 per cent. of their total exports);

(c) in addition to the range of import restrictions imposed in August 1974, further restrictions were imposed in 1975 and bank credit conditions were tightened for importers and eased for exporters.

(iii) Impact of the second oil shock on the ODC current account

Comparison of the economic impact of the second oil shock with that of the first reveals both similarities and differences. The principal similarities were (i) the size of the oil shocks, representing around 2 per cent. of the industrial countries' GNP,* and (ii) the deterioration of the industrial countries' current account in the aftermath of the oil shocks, representing around 1¼ per cent. of area GNP in each case. The principal difference was in the distribution of the area current-account deterioration. As has been noted, after the first oil shock the worsening occurred disproportionately in the ODCs; but after the second oil shock, the distribution of the worsening reflected to a much greater extent relative incomes of the Group of Ten and the ODCs (as shown in Graph 2 above). This was to a great extent a consequence of two aspects of economic policy consensus. The first of these, the "concerted action" programme, was adopted at OECD Ministerial level in June 1978; since this was before the second oil shock, it cannot be seen as a response to it, but, as a programme for growth which placed a particular responsibility to expand demand on countries in a strong balance-of-payments position, it helped to achieve the better-balanced distribution of current-account deterioration after the second oil shock. As shown in Table 2 above, the divergence between the path of demand in the Group of Ten countries and that in the ODCs was much less pronounced in the aftermath of the latter oil shock than in the former. Indeed, in 1979 and 1980 the current account of the ODCs was supported by the maintenance of demand in the Group of Ten, since about 60 per cent. of ODC exports go to Group of Ten countries. Bearing in mind that the demand for Group of Ten imports is generally agreed to be elastic with respect to income, the contrast between falls in Group of Ten demand in 1974-75 and growth of Group of Ten demand in 1979-80 explains much of the relatively favourable ODC current account in the latter period.

The second factor behind the more sustainable current-account distribution after the second oil shock was the less expansionary policy

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* See OECD Outlook, July 1980; the figure represents the initial terms-of-trade impact.

stance of the ODC governments. This again was a product of broad policy consensus amongst the industrial countries. There was general agreement that, whilst the reduction in real income consequent on higher oil prices should not be disproportionately borne by any single sector, it should be transmitted into resource allocation as fully and speedily as possible, with the least possible impact on economic growth and inflation rates. In the fiscal policy sphere, these intentions were translated into public expenditure cuts in many ODC countries; in the monetary sphere, there was an implicit tightening of policy when authorities did not accommodate in their monetary targets the inflationary pressure resulting from oil price rises.

Table 4 below illustrates the limited extent of current-account worsening in the ODCs after the second oil price hike. Only four (Ireland, Greece, Austria, Denmark) of the fourteen countries failed to improve on their post-1973 current-account performance (see Table 3) - and these were the countries whose current accounts, exceptionally, had not worsened between 1973 and 1975.

Table 4

Influences on ODC current-account performance subsequent to the second oil shock

Country	Change in current account, 1978-80, as a percentage of 1978's nominal GDP	Real domestic demand, percentage growth, 1978-80	Terms of trade, percentage change, 1978-80
Ireland	-10.0	+ 5.6	-10.9
Finland	- 6.0	+16.8	- 7.6
Spain	- 4.6	+ 3.2	-16.8
Greece	- 4.0	+ 2.5	- 7.0
Turkey	- 3.8	- 2.7	-20.7
Portugal	- 3.4	+ 9.4	n.a.
New Zealand	- 2.1	+ 4.3	- 4.3
Yugoslavia	- 1.9	+10.1	- 4.0
Austria	- 1.8	+ 8.3	- 6.4
Denmark	- 1.7	- 1.2	-11.7
Australia	0.5	+ 5.6	- 9.6
Israel	0.6	- 6.8	-14.5
South Africa	4.3	+11.3	-12.0
Norway	7.9	+ 8.6	+23.1

Source: International Financial Statistics, August 1984.

South Africa, where the cumulative surplus between 1977 and 1980 amounted to $9.0 billion, benefited from the fact that the price of gold more than quadrupled between 1976 and 1980. Norway reached energy self-sufficiency in 1975 and by 1979 production was more than twice domestic consumption. The Norwegian current account was in deficit throughout the 1970s, but in 1980 this turned into a surplus which has since been maintained.

(iv) The ODC current account in the 1980s

By 1983 the current account of the ODC group had moved closer to balance, in relation to the group's GNP, than in any year since 1973. The progression towards balance occurred in spite of a steadily declining surplus on invisibles account, principally due to increased indebtedness combined with high interest rates; by 1983 the invisibles surplus had dwindled to $0.4 billion, whereas as recently as 1980 it had amounted to $11.3 billion. The move towards current-account balance, therefore, was less pronounced than the improvement in the trade deficit, which, after reaching a peak of $37.0 billion in 1981, was more than halved, to $16.4 billion, in the space of the next two years. For the group as a whole, import volume fell by around 2 per cent. in both 1982 and 1983, while export volume grew by ½ per cent. in 1982 and accelerated to 4 per cent. the following year. Terms-of-trade movements were also favourable, an improvement of around 2 per cent. in 1983 reinforcing the small gain (around ½ per cent.) of the previous year.

Although the more than halving of the group's trade deficit from 1981 to 1983 reflected reduced deficits (or increased surpluses) within all countries (save Israel), it was disproportionately (almost 60 per cent.) accounted for by four countries; in South Africa a deficit of $0.9 billion gave place to a surplus of $3.9 billion; in Spain a deficit of $10.1 billion was reduced to $7.4 billion; in Australia a deficit of $2.3 billion was transformed into a small surplus of $0.2 billion; and in Portugal a deficit of $5.1 billion was reduced to $2.4 billion. In the rest of this section these developments are analysed in greater detail.

Australia and South Africa had both incurred unprecedentedly large current-account deficits in 1981 and 1982. In Australia these

deficits were attributable to the combined effects of depressed overseas markets, commodity price weakness and a deterioration of 20 per cent. in relative cost competitiveness between end-1978 and mid-1982. By mid-1983, however, the recouping of around half of this loss combined with the world recovery (especially the growth of around 3 per cent. in Japan, which takes one-quarter of Australia's exports) to boost exports. In South Africa the current-account position is dominated by the price of gold. In 1979 and 1980, when the price of gold trebled, surpluses amounting to 6 and 5 per cent. of GNP respectively were recorded. Then in 1981, when the gold price fell by one-quarter, the turn-round from surplus to deficit in the current account was equivalent to over 10 per cent. of GNP. In order to counteract the deficit, policy was tightened, and this, together with the depreciation of the rand in 1981 and 1982 and the recovery in the gold price in the second half of 1982, has contributed to an improvement in the current-account position amounting to $4.7 billion over the past two years. In Portugal the record current-account deficit of 1982 was more than halved in 1983, comfortably within the target of $2 billion agreed with the IMF in September 1983, mainly owing to a sharp downturn in aggregate domestic demand (of some 6 per cent.) in 1983. In addition, the 40 per cent. depreciation of the effective exchange rate of the escudo between end-1981 and end-1983 maintained Portugal's competitiveness, despite the relatively high rate of inflation. In Spain export volumes grew by 6½ per cent. in 1983, mainly owing to increased market shares in EEC countries' manufactured imports, while import volumes were static. Competitiveness - as measured by the real effective exchange rate - improved by around 14 per cent. between January 1982 and December 1983.

III. Trade balances of selected countries in the ODC group

This section focuses on the trade adjustment process of seven of the fourteen countries in the ODC group. These seven - Australia, Austria, Denmark, Finland, Ireland, Norway and Spain - are representative of the heterogeneity of the countries in the group; while Austria, Denmark and Finland have well-established manufacturing sectors, Ireland and Spain's development is relatively recent. The economies of Australia and Norway, in

contrast, are highly dependent on exports of natural resources; Norway's export structure was transformed during the period under study, from domination by shipping and manufactures to domination by oil and energy products.

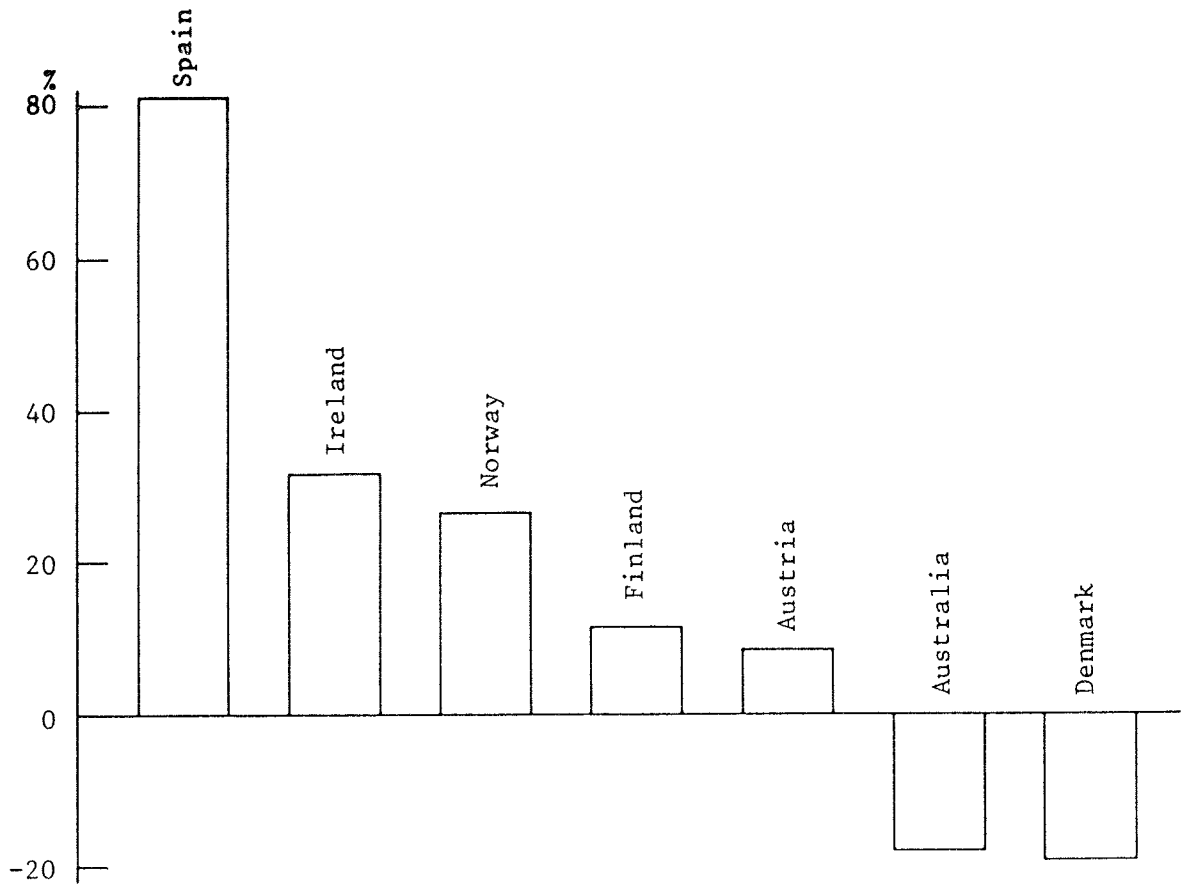
(i) A comparison of export market shares

Over the past fifteen years there have been pronounced differences in the extent to which the selected countries have been able to promote exports. This is shown in Graph 3 below, which shows the change over the period in the shares taken by each of the seven countries in total OECD exports. The biggest rise in export market shares has been that of Spain, but most of the other countries also show increases; the exceptions are Australia and Denmark. Although Australia's position as the principal exporter of the group was maintained throughout the period, Denmark's market share had, by 1982, been surpassed by those of Austria, Norway and

Graph 3

Market share changes for exports of seven ODCs

(average of 1967-68 to average of 1981-82)



Spain. None of these changes in relative market shares, however, has been evenly distributed across the period. For example, Australia's loss was concentrated in the mid-1970s, with some recovery thereafter, whilst Ireland and Norway's gains occurred in the latter part of the period.

The following sections analyse these divergent developments more closely, within the analytical framework of "Constant Market Share" analysis, initially applied in the foreign trade context by Tyszynski, and reviewed by Leamer and Stern.* An attempt is made to isolate that part of export market share growth (loss) attributable to an exported goods product structure that is beneficial (adverse) and that part attributable to a geographical market structure that is beneficial (adverse); the remaining market share change is then ascribed to "competitiveness" factors. Then a "competitiveness" residual for imports, akin to that for exports, is derived. The two sets of "competitiveness" residuals are then compared, and the tentative conclusion is drawn, that they both represent changing relative costs rather than other factors (e.g. the imposition or removal of trade restrictions, or the exploitation of newly discovered natural resources).

(ii) Constant Market Share (CMS) analysis of exports

The central hypothesis of the CMS framework (a mathematical explanation of CMS can be found in the Appendix) is that an exporting country's share in world exports of a given product to a given geographical market (V_{ij}, where i denotes product and j market) ought to remain constant, provided that there is no change in the competitiveness with which the country can supply the product. Hence, when the V_{ij} are aggregated to give the country's total exports of all products to all markets, there are three possible explanations of changes in the ratio of its total exports to global exports:

(a) the country, perhaps because of natural endowments or industrial infrastructure, specialises in exports for which the demand is growing faster/slower than for other products (the so-called "product effect");

(b) the country, because of geographical location or historical ties for example, has important customer countries where demand for imports

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* H. Tyszynski, "World Trade in Manufactured Commodities, 1899-1950", The Manchester School, XIX (September 1951), 272-304; E.E. Leamer and R.M. Stern, "Quantitative International Economics", 1970. A recent interesting paper employing the CMS technique is A. Utne, "The EFTA countries' export performance for manufactured goods, 1970-82", EFTA Occasional Paper No. 7, July 1984.

is growing faster/slower than in other countries (the so-called "market effect");

(c) there is a change in the country's relative "competitiveness" at supplying some, or all, of the i products to some, or all, of the j markets.

The interpretation of the final (residual) item in CMS analysis is less straightforward than that of the first two terms. As well as subsuming the quantifiable aspects of competitiveness, it also includes the more amorphous aspects - quality changes and marketing skills, for example. But because it is a residual, it is also influenced by the level of product and market aggregation employed in the first two calculations. For example, in a CMS analysis performed for US exports in recent years, with the level of market aggregation by groups, rather than individual countries, the proportion of export market share loss attributed to competitive factors would be too great, and that to adverse market structure correspondingly too small, simply because imports of Mexico and Brazil, which are relatively important markets for the United States, have been compressed so much more than those of other LDCs. Moreover, the size of the competitiveness effect also depends on the necessarily arbitrary choice of base period. All these qualifications should be borne in mind in the following analysis.

An additional problem concerns the limitations of the available trade data. Because the cross-classification by exporters, importer and SITC category is only available for values, volume and price effects cannot be distinguished.

The present analysis distinguishes five export products and seven export markets. The products are:

SITC category	Description
0 + 1	Food, live animals, beverages, tobacco
2 + 4	Crude materials, inedible, animal and vegetable oils and fats
3	Mineral fuels, lubricants and related

	materials
5 + 6 + 8 + 9	Chemicals, manufactured goods classified chiefly by materials, miscellaneous manufactured articles
7	Machinery and transport equipment.

	Market group	Countries
I	North America	United States and Canada
II	Japan	Japan
III	Other Group of Ten	United Kingdom, Germany, France, Sweden, Italy, Belgium, Luxembourg, Netherlands, Switzerland
IV	Other developed countries	See footnote 1 to page 1
V	Centrally planned economies	Bulgaria, China, Czechoslovakia, German Democratic Republic, Hungary, Poland, USSR,
VI	OPEC	Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, Venezuela, Oman
VII	Non-OPEC less developed countries	All other countries.

A further issue in CMS analysis concerns the "standard" against which it is appropriate to compare the selected countries. The demand for certain products has very low price elasticities of substitution between different suppliers (because, for example, of high transport costs) and hence changes in relative competitiveness may not be revealed in the CMS residuals for such products. It may not then be appropriate to compare certain export categories with a "world" standard growth rate. The standard employed in this analysis is exports from the whole OECD area to the world; the seven small developed countries' export market shares are therefore measured against those for the OECD as a whole. The current value data cover each year from 1967 to 1982 (complete OECD data for 1983 had not been published at the time of writing).

(iii) The evolution of export market shares

Table 5 shows the evolution of the selected countries' shares of the exports of the OECD area for the years 1970-82. The broad implication of the table is that these countries have been amongst the more successful of the OECD countries at preserving, or strengthening, their export market shares. Australia maintained its position as the leading exporter of the group, despite a loss of around one-fifth of its market share over the period. The least favourable period was from 1974 to 1978, when a cumulative loss of 30 per cent. was incurred, mainly owing to a rise in export prices far below the OECD average, implying a relatively large adverse product effect for those years, in the CMS analytical framework. Denmark's export market share shows a falling trend, with a slight recovery in the mid-1970s. Of the remaining countries, all of which gained export market shares, Spain exhibits the largest increase, with its market share only falling in one year, 1980. Spain experienced the strongest economic and political transformation of all the seven countries during the 1967-82 period; its dependence on non-manufactured exports was halved. Ireland and Norway also underwent significant structural changes, contributing to their rapid market share growth in the latter part of the period; in Ireland, EEC entry in 1973 precipitated the establishment of many foreign (especially non-EEC - for example, US and Japanese) export-oriented companies, attracted by government grants and tax exemptions. Norway's economy was transformed by the discovery of oil, and by 1981 the petroleum and gas sector was as large as the manufacturing sector. Austria and Finland exhibit more moderate increases in export market shares; 1979 marked a peak for Austria, while Finland's growth has been concentrated in the post-1979 period.

For comparative purposes, Table 5 also documents the export performance of the United States, Japan and the remaining countries of the Group of Ten. The market share of the United States fell over the 1967-82 period by more than 16 per cent. The reasons for the decline since 1981 are now well-known - namely the massive real appreciation of the dollar and consequent loss of competitiveness, combined with retrenchment in Latin America, and the depth of the recession in Canada. Prior to the recent fall, the market share of the United States had alternated between

Table 5

Shares of the OECD countries' exports to the world, 1967-82

(in percentages)

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Australia	2.39	2.15	2.23	2.16	2.12	2.28	2.40	2.08	2.1	2.08	1.86	1.67	1.77	1.79	1.80	1.92
Austria	1.24	1.21	1.27	1.30	1.27	1.32	1.25	1.34	1.33	1.34	1.37	1.41	1.47	1.41	1.31	1.36
Denmark	1.71	1.57	1.56	1.49	1.47	1.48	1.52	1.45	1.53	1.44	1.41	1.38	1.39	1.36	1.32	1.33
Finland	1.05	1.00	1.05	1.05	0.96	1.01	0.96	1.03	0.97	1.00	1.07	1.00	1.06	1.15	1.16	1.14
Ireland	0.54	0.49	0.47	0.47	0.53	0.55	0.53	0.49	0.57	0.53	0.61	0.66	0.68	0.69	0.65	0.70
Norway	1.19	1.18	1.16	1.11	1.04	1.12	1.17	1.18	1.27	1.25	1.22	1.17	1.28	1.50	1.48	1.53
Spain	0.95	0.97	1.00	1.08	1.19	1.27	1.30	1.33	1.35	1.38	1.43	1.52	1.73	1.69	1.69	1.79
U.S.	21.35	20.72	19.75	19.32	17.66	16.77	17.61	18.25	18.70	17.95	16.50	16.31	16.51	17.25	18.69	17.91
Japan	7.16	7.91	8.44	8.76	9.75	9.79	9.22	10.44	9.82	10.64	11.26	11.36	9.79	10.49	12.57	12.04
Other G10	61.00	61.52	61.80	61.83	62.70	62.90	62.48	61.00	61.05	61.01	62.00	62.05	62.70	61.19	57.89	58.66
Other OECD	1.42	1.28	1.27	1.43	1.31	1.51	1.56	1.41	1.31	1.38	1.27	1.47	1.62	1.48	1.44	1.62
Total OECD	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

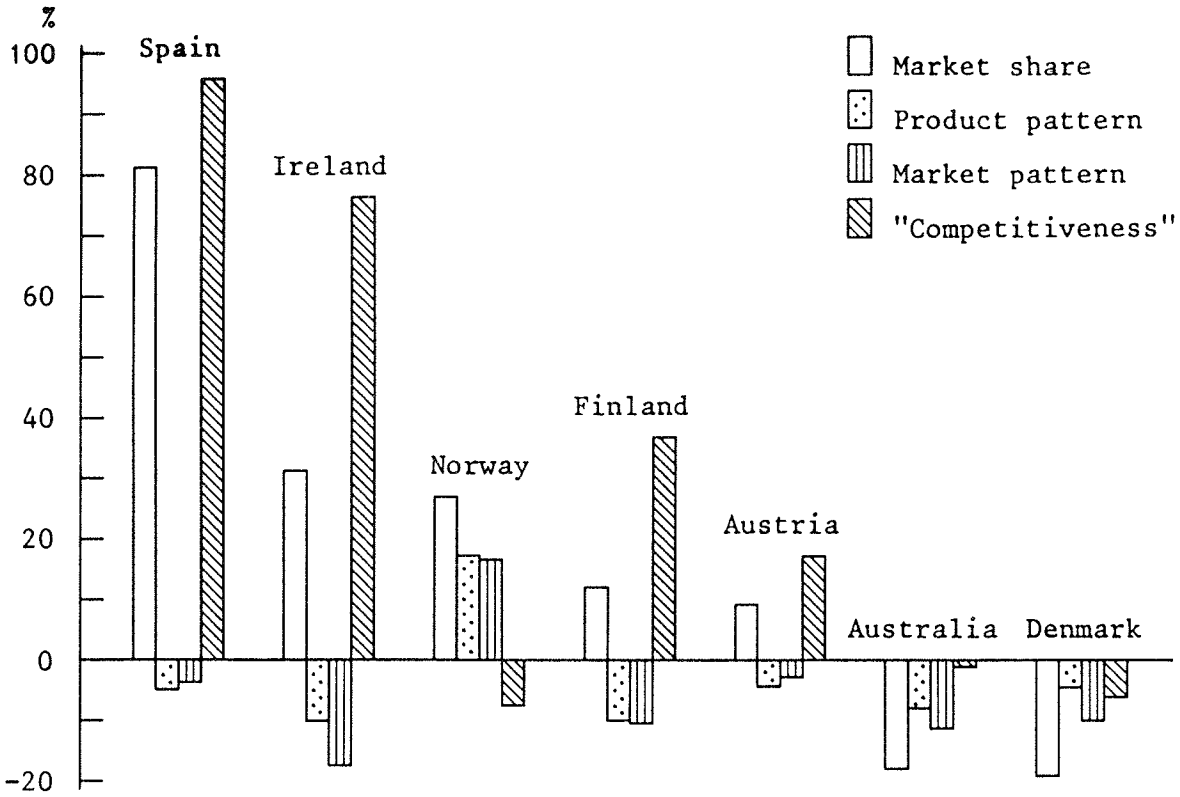
strengthening and weakening in rather regular three or four-year cycles. These alternating periods show a very close relationship with the United State's normalised manufacturing unit labour costs competitiveness indicator, itself dominated by the movement of the dollar's exchange rate, which fell from 1970 to 1973, rose until 1976 and fell again until 1980. Japan achieved the largest gain in export market share of any OECD country between 1967 and 1982, amounting to over two-thirds. In 1968 its market share had amounted to one-third that of the United States; by 1982 it stood at two-thirds. Indeed, movements in Japan's export market share have been generally opposed to those in the export market share of the United States, falls in 1973, 1975 and 1979 being reflected in rises for the United States.

(iv) The causes of market share changes

Graph 4 below analyses the contributions made by the product effect, the market effect and competitiveness to the market share changes of the seven ODC countries; the seven countries are ordered, as in Graph 3,

Graph 4

Changes in the market share of exports and contributory factors for seven ODCs, from 1967-68 to 1981-82



according to the extent of market share gain (shown again as the unshaded column for each country). The most important conclusion to be drawn from the graph is that the relative success of these seven countries in promoting exports has been achieved despite product and market structures which have both been adverse for all except Norway. In Spain, Ireland, Finland and Austria large gains in competitiveness have more than offset adverse product and market structures. In Australia and Denmark adverse product and market structures have been compounded by losses in competitiveness, though in both cases the latter have been rather small. The most severe loss in competitiveness occurred in Norway, but this has been more than offset by both favourable product and market structures. The former factor is well-known; the latter less so. When, between 1978 and 1980, Norway's oil and natural gas exports grew more than twofold, its market structure was also highly advantageous, since it is relatively heavily dependent on the European Group of Ten countries for its exports, and it was there that the greatest increase in demand for OECD energy exports occurred.

Apart from Norway, product and market structures have been adverse for the other six countries. Markets have been disproportionately concentrated in the low import-growth areas - for example, the other developed countries - rather than in the centrally planned economies and OPEC, the highest import-growth areas. Similarly, trade in the product categories on which the six countries are relatively dependent - foodstuffs and crude materials - has grown very much more slowly than that in fuel and machinery over the period surveyed.*

Table 6 shows the annual evolution of export market shares, together with the contributions made by product and market patterns, and the competitiveness residual. It can be observed that neither the general

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* The percentage growth rates for total OECD export values are (expressed at an annual rate):

Market	Percentage growth, 1968-82	SITC category	Percentage growth, 1968-82
North America	12.7	0+1	14.2
Japan	15.0	2+4	11.2
Other G-10	15.0	3	22.9
Other developed	14.0	5+6+8+9	14.1
Centrally planned	15.3	7	15.5
OPEC	23.1		
Non-OPEC less developed	14.9		

Table 6

Changes in export market shares of seven ODCs, and contributory factors

(in percentages)

Items	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Australia															
Market share change	- 9.8	3.5	- 2.8	- 2.1	7.6	5.4	-13.4	0.8	- 0.9	-10.7	- 9.8	5.9	0.9	0.9	6.5
Attributable to:															
- Product pattern	- 4.7	- 3.9	0.5	- 2.7	0.7	5.8	- 2.3	- 4.1	- 0.8	- 2.0	- 1.9	5.7	0.7	- 0.3	- 1.7
- Market pattern	- 6.0	- 4.9	2.6	- 6.3	0.1	10.0	- 4.0	- 5.7	- 2.5	- 3.5	- 1.7	3.5	1.9	4.1	- 2.6
- Competitiveness	0.9	12.3	- 5.9	6.9	6.8	-10.4	- 7.1	10.6	2.4	- 5.2	- 6.2	- 3.3	- 1.7	- 2.9	10.8
Austria															
Market share change	- 2.2	5.0	1.8	- 1.8	3.6	- 5.3	7.3	- 0.8	1.0	2.0	3.2	3.9	- 4.1	- 7.0	3.9
Attributable to:															
- Product pattern	0.4	0.2	- 0.3	- 1.0	- 0.5	- 0.2	2.2	- 2.9	0.1	0.5	0.6	0.2	- 1.0	- 2.2	- 0.7
- Market pattern	- 0.5	2.0	1.3	- 1.7	1.2	1.6	1.8	- 0.7	- 0.8	- 1.0	0.7	2.5	- 1.6	- 7.6	0.4
- Competitiveness	- 2.1	2.8	0.8	0.9	2.9	- 6.7	3.3	2.8	1.7	2.5	1.9	1.2	- 1.5	2.8	4.2
Denmark															
Market share change	- 8.1	- 0.9	- 4.4	- 1.8	1.1	2.8	- 5.1	6.0	- 6.0	- 2.3	- 2.0	0.7	- 2.4	- 2.5	0.7
Attributable to:															
- Product pattern	- 3.5	- 2.0	- 0.2	0.3	1.3	2.5	- 3.0	1.3	- 1.2	- 1.3	0.3	- 1.2	0	0.3	- 1.3
- Market pattern	- 4.0	- 0.6	0.3	0.1	1.5	1.4	- 5.4	1.5	- 0.7	- 1.4	- 0.4	0.6	- 1.5	- 3.8	0.3
- Competitiveness	- 0.6	1.7	- 4.5	- 2.2	- 1.7	- 1.1	3.3	3.2	- 4.1	0.4	- 1.9	0.3	- 0.9	1.0	1.7
Finland															
Market share change	- 5.3	5.0	- 0.1	- 8.5	5.5	- 5.0	7.5	- 5.9	3.6	7.0	- 7.3	6.4	8.1	0.9	- 1.8
Attributable to:															
- Product pattern	- 0.6	- 0.9	- 0.1	- 2.7	- 0.7	1.3	1.4	- 5.4	0.5	0.3	- 0.2	1.2	- 1.2	- 2.9	- 1.1
- Market pattern	- 2.2	0.2	0.1	- 3.5	1.4	3.4	- 5.4	1.5	- 0.7	- 1.4	- 0.4	0.6	- 1.5	- 3.8	0.3
- Competitiveness	- 2.5	5.7	- 0.1	- 2.3	4.8	- 9.7	11.5	- 2.0	3.8	8.1	- 6.7	4.6	10.8	7.6	- 1.0
Ireland															
Market share change	- 9.8	- 3.4	- 0.1	13.2	4.2	- 3.5	- 7.5	15.3	- 6.6	15.6	7.8	2.8	1.1	- 5.8	8.4
Attributable to:															
- Product pattern	- 5.4	- 3.2	- 0.4	- 0.6	1.7	3.8	- 3.6	- 1.0	- 2.4	- 1.8	1.2	- 0.1	- 0.5	- 0.1	- 1.3
- Market pattern	- 3.9	- 0.5	- 1.8	- 0.5	1.8	- 0.4	- 6.4	- 1.4	- 0.4	- 1.0	1.2	0.6	- 2.4	- 5.5	0.3
- Competitiveness	- 0.5	0.3	2.1	14.3	0.7	- 6.9	2.5	17.7	- 3.8	18.4	5.4	2.3	4.0	- 0.2	9.4
Norway															
Market share change	- 0.8	- 1.6	- 4.2	- 6.6	8.0	3.8	1.3	7.5	- 1.3	- 2.7	- 4.0	9.4	17.1	- 1.0	2.8
Attributable to:															
- Product pattern	- 0.6	- 0.3	- 0.2	- 1.0	0	0.6	0.3	- 1.0	0	- 0.1	- 1.1	7.7	6.1	4.4	3.1
- Market pattern	- 1.0	0.9	0.8	- 1.4	0.8	1.3	- 1.1	- 2.3	1.0	- 1.0	- 0.9	9.1	7.2	0.9	2.8
- Competitiveness	0.8	- 2.2	- 4.8	- 4.2	7.2	1.9	2.1	10.8	- 2.3	- 1.6	- 2.0	- 7.4	3.8	- 6.3	- 3.1
Spain															
Market share change	1.6	3.5	8.0	10.2	6.2	2.3	2.6	1.8	2.0	3.4	6.6	13.7	- 2.5	0.4	5.6
Attributable to:															
- Product pattern	- 3.6	- 2.2	0.1	- 0.3	0.6	1.6	- 0.3	- 0.6	- 0.8	- 0.4	0.7	0.2	- 0.5	- 0.8	- 0.6
- Market pattern	- 3.5	- 2.9	- 0.8	0.1	0.3	0.8	0.8	0.9	- 0.3	0.3	1.1	- 0.6	0.2	- 1.7	- 0.3
- Competitiveness	8.7	8.6	8.7	10.4	5.3	- 0.1	2.1	1.5	3.1	3.5	4.8	14.1	- 2.2	2.9	6.5

tendency towards improved or maintained competitiveness, nor that towards adverse product and market effects, has been a smooth process. In Spain, for example, the largest competitiveness gains were concentrated in the years 1968-72, 1977-79 and 1982. In Denmark, where competitiveness losses were overall relatively large, competitiveness nevertheless improved in almost as many years as it worsened. In Norway, the loss of competitiveness was concentrated in the oil-producing period, demonstrating the well-known propensity for the real exchange rate of an oil-endowed country to rise when the oil price rises (mirrored in the case of the United Kingdom). Only in Austria and Spain has there been any prolonged tendency to improved competitiveness.

With product and market structures that have been marginally adverse, Spain's success in export promotion is entirely attributable to the competitiveness factor, which moved adversely in only two years (1973 and 1980) out of fifteen. Nevertheless, the interpretation of this residual demonstrates the necessity for caution alluded to in Section III(ii) above, since indicators constructed to calculate Spain's competitiveness - for example, the growth in wages per unit of GDP, measured by reference to a trade-weighted basket of currencies - did not, until very recently, paint a rosy picture (although it should be remembered that at the start of the period real wages in Spain were amongst the lowest of all industrialised countries). The competitiveness "catch-all" in CMS analysis, in the case of an economy undergoing intense structural change, picks up the effects of the structural change, since the product effect is always calculated with reference to the economic structure one year in arrears. In the case of Spain, the favourable competitiveness residual reflects a move away from a relatively undeveloped, closed economy to a more developed, more open one (as already noted, Spain's dependence on non-manufactured exports was halved in the period under consideration). Moreover, and especially towards the end of the period, the prospect of EEC entry has attracted foreign economic investment in manufacturing plant designed principally for exports.

Like Spain, Ireland's economy has also undergone considerable structural change over the past fifteen years, during which the proportion of non-manufactures in exports has halved, from two-thirds to one-third. Table 6 shows the competitiveness effect to have been greatest in the 1975-

78 period, as Irish exporters exploited the new markets made available by EEC entry in 1973, and foreign firms in Ireland, attracted by financial incentives, expanded their capacity; however, following entry into the European Monetary System in March 1979, the scope for large competitiveness gains has been limited by the extent and duration of real exchange rate appreciation, since exchange rate changes have failed to offset the wage inflation that has been significantly higher than in the other EMS member countries (except Italy). The effect of EMS entry on Ireland's overall competitiveness has, however, been considerably offset by the depreciation since 1979 vis-à-vis sterling, since the United Kingdom still accounts for more than one-third of all Irish exports.

Norway's export market share evolution falls into two distinct periods, the division being at the end of 1978. After this date, as has been noted, its experience was atypical of the group of small industrialised countries, with adverse competitiveness and non-price factors, but favourable product and market developments (especially as the build-up of oil extraction coincided with a doubling of the dollar oil price). Prior to this date, however, the group's pattern of adverse product and market developments with favourable competitiveness had also applied to Norway, though the competitiveness residual was less favourable than the average for the group. The latter is a reflection of Norway's relative unit labour costs, which, in the face of a strong counter-cyclical policy after the first oil shock (see Table 3 above), deteriorated steadily through the 1970s, to be checked only by a wage and price freeze in 1978 and 1979. The decision taken in December 1978 to opt for a currency basket pegging, rather than to join the EMS - even though Norway had been in the European "snake" from May 1972 - was a reflection of the worsening in competitiveness arising from the real exchange rate appreciation whilst in the "snake", and a desire to maintain independence in the timing of exchange rate adjustment decisions.*

Finland's export market share growth has been restrained by its product structure which, at least until the 1980s, was disproportionately dependent on raw materials - especially lumber - whose export growth has been the slowest of any of the five categories. Finland is also much more dependent on the centrally planned economies than the OECD average - six and a half times more so at the start of the period, rising to eight times

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* For the background to the December 1978 decision, see "Norwegian exchange rate policy", by H. Skånland, Norges Bank Economic Bulletin, April 1983.

in most recent years. (Even in absolute terms, only Germany among the OECD countries exports more to the USSR than Finland.) Although this has been the most buoyant market (apart from OPEC), Finland's market pattern in Graph 4 is nevertheless adverse; the explanation lies in the fact that Finland's principal exports do not include the import products for which demand has grown fastest in the centrally planned economies. Finland's market share gain, therefore, is entirely due to gains in competitiveness (partly reflecting the short-term effects of large devaluations) and non-price factors, most of which (see Table 6) occurred after 1976. Since then Finland's performance in this category has ranked with Spain's, at the top of the group. Prior to 1978, the responsiveness of exporters in progressively diversifying product structures accounted for much of the gains. Subsequently (see Table 4), Finland's trade successes enabled it to avoid the brunt of the recent international recession; this was due in large part to trade agreements with the USSR, which require bilateral trade to broadly balance. Thus, when the second oil shock resulted in a rapid increase in the value of oil imports from the USSR, Finland was able to increase its exports accordingly, avoiding the trade recession which affected most other OECD countries.

Austria exhibits the smoothest "competitiveness" improvement of all countries in Table 6, apart from the possible exception of Spain, where, as has been noted, pronounced structural changes were occurring. The adversity of product and market structures was relatively limited, except in 1981, when a 7 per cent. market share loss was wholly attributable to recession in Austria's important European markets (Table 6 shows that exports of Denmark, Finland and Ireland were similarly affected).

Although relative cost indicators confirm strengthening competitiveness after 1978, the policy during the 1970s of linking the schilling's exchange rate to the stronger European currencies meant that relatively low Austrian inflation was often offset by currency appreciation; therefore, the favourable competitiveness factor shown in Table 6 must have implied a profitability squeeze in export industries. However, a further impetus to the "competitiveness" factor - and one which cannot be disentangled from favourable relative cost movements - came from the progressive abolition during the 1970s of tariffs on manufactured goods trade between Austria and the EEC.

Australia's export market share loss of almost one-fifth over the period is shown in Graph 4 to be attributable in equal shares to adverse product and market structures; "competitiveness" factors have played a minor rôle. Australia's market share loss was concentrated in the mid-1970s, with some subsequent recovery; the loss was attributable to all three factors (Table 6).

In 1973-74 a growing excess of real wage increases over productivity gains, coupled with an appreciating exchange rate, resulted in real exchange rate appreciation of 30 per cent. and the very large competitiveness losses for those years. No market share growth was recorded until 1979, when commodity price rises were mainly responsible for a beneficial product term of almost 6 per cent. In 1982 a further market share gain of 6½ per cent. rendered Australia immune from the fall in world trade in that year; the large favourable competitiveness term for that year reflects the buoyancy of mineral exports, partly owing to increased supplies coming on stream in the 1980s.

The adverse development of all three factors analysed in Table 6 has rendered Denmark's export-market share performance the weakest of the seven countries, and this has been fundamental to the unbroken run of annual current-account deficits in Denmark over the period in question. Initially, at the end of the 1960s, trade was retarded owing to the proportion of slow-growing foodstuffs in Denmark's exports; in 1967 these accounted for over 44 per cent. of the total, against an OECD average of 13 per cent. Subsequently, from 1970 to 1973 competitiveness factors became more important; in addition to a deterioration in relative unit labour costs, there were very large rises in private disposable incomes, and consequent restrictions in 1973 on the supply of goods for export. In 1974 and 1975, although product and market movements were, on balance, adverse, Denmark's new membership of the EEC gave some impetus to exports (reflected in Table 6 in positive competitiveness components), but much of this gain was lost in 1976 owing to the effect on domestic costs of counter-cyclical policies that, in the absence of similar action by Denmark's trading partners, produced a sharp deterioration in the current account. (In autumn 1976 the policy stance was tightened.) In 1981 and 1982 there were further gains in the competitiveness factor in market shares, owing to a devaluation of the krone's effective exchange rate by one-fifth, and a

strong rise in industrial productivity. The gains, however, were more than offset in 1981 by reduced demand for imports in the European Group of Ten countries (which take almost two-thirds of Danish exports) and in 1982 relatively adverse demand for Denmark's export products cancelled out much of the competitiveness gain.

(v) The relationship between import growth and the competitiveness residuals from the Constant Market Share analysis of exports

Changes in a country's competitiveness should be reflected in imports as well as in exports, though not necessarily simultaneously; research has generally concluded that the "expected" changes in imports after a change in competitiveness pre-date those in exports. For a small country, such as those analysed in this paper, one explanation for this is that imports form a much higher proportion of domestic sales than do the country's exports in their foreign markets, and so the relative price changes are more transparent in the import than in the export case. A further explanation has to do with the currency of invoicing of trade. Where domestic currency invoicing is significantly more common for exports than imports, for example in Austria and Denmark (see S.A.B. Page, National Institute Review, November 1981, "The Choice of Invoicing Currency in Merchandise Trade") changes in competitiveness arising from exchange rate changes will in the short run have a "perverse" impact on the dollar value of exports, while the dollar value of imports will tend not to change.

In order to assess the extent to which the CMS competitiveness effects of Table 6 reflect relative prices and costs, rather than non-price factors, Table 7 below was constructed. This shows, for the same seven smaller developed countries, the proportion of import value growth which cannot be "explained" by growth in real incomes and by import price changes. (The income elasticities of demand for imports that have been employed are those in the OECD's INTERLINK model.)*

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* Expressing the change in import values between two years as $p_2q_2-p_1q_1$, the change due to real income growth is $p_1[q_1+\delta(y_2-y_1)]-p_1q_1$, where δ is the appropriate income elasticity of demand for imports. This equals $p_1\delta(y_2-y_1)$. The change in import values due to their price change equals $(p_2-p_1)[q_1+\delta(y_2-y_1)]$ (it should be noted that this abstracts from any consequent volume changes). The residual change equals $p_2q_2-p_2q_1-p_2\delta(y_2-y_1)$. Table 7 shows this residual as a percentage of p_1q_1. The residual depends on relative competitiveness, but also on such non-price factors as quantitative import restrictions, import deposit schemes, etc.

Table 7

Import growth of ODC countries in excess of that attributable to income and price factors

(in percentages)

Country	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Australia	4.4	- 8.7	- 0.5	- 11.6	- 14.4	17.5	17.1	- 29.2	4.8	- 1.8	1.0	- 7.7	- 10.9	8.9	8.5
Austria	4.1	- 2.0	2.0	- 0.2	7.2	- 3.2	- 0.6	- 5.7	13.8	3.4	- 2.0	0.8	- 0.1	- 3.1	- 2.7
Denmark	- 5.2	6.9	7.4	- 11.3	- 6.8	18.9	- 7.3	- 2.3	6.6	- 9.1	- 0.9	- 2.7	- 6.3	- 2.3	- 3.2
Finland	- 10.9	10.2	6.2	- 5.7	- 7.4	4.8	5.0	- 1.7	- 5.1	- 8.4	- 9.5	4.7	3.9	- 8.4	- 3.4
Ireland	2.3	6.0	- 1.6	3.5	- 3.6	13.3	- 12.1	- 17.7	10.6	1.5	6.4	10.6	- 12.2	- 0.2	- 5.3
Norway	- 1.3	- 1.3	19.3	- 3.1	- 10.3	11.4	- 3.3	- 4.8	3.7	- 0.3	- 25.0	- 2.2	1.2	3.0	7.6
Spain	- 6.2	- 1.2	- 4.1	- 10.9	10.2	- 0.1	- 11.1	- 3.0	4.8	- 12.4	- 7.5	18.3	- 9.5	- 4.2	1.4

Despite the potential for non-price factors to impinge on both the "excess import growth" data of Table 7 and the "competitiveness residuals" of Table 6, there is a pronounced tendency for positive (negative) values in the first table to be mirrored in negative (positive) values in the second: of the 54 competitiveness residuals in Table 6 which have a magnitude of 3 per cent. or greater, over 60 per cent. are reflected in excess import growth with the "correct" sign in Table 7. Furthermore, if the likelihood that competitiveness changes affect imports before exports is taken into account, by in addition looking at the year in Table 7 prior to that of the competitiveness change in Table 6, the measure of correspondence rises to over 85 per cent.*

IV. Aspects of financing of ODC current-account deficits and the growth in external indebtedness

(i) Financing

There were striking differences between the ways in which the deficits consequent on the first and the second oil shocks were financed. The former deficits were predominantly financed from reserves. Between 1973 and 1975 non-gold reserves fell by almost one-fifth in nominal terms, and by almost one-half in real terms (deflating by the dollar price of world trade). However, in the years 1978-80 they rose by almost one-fifth, and in real terms the decline was limited to about one-sixth. With the group's current-account deficit broadly comparable after the second oil shock, a marked switch in the magnitude of capital inflows is implied.

One important feature was the fivefold growth of these countries' net indebtedness to BIS area reporting banks during the second half of the 1970s (see Table 8). For example, almost half of the cumulative ODC current-account deficit between 1978 and 1981 was covered by increased bank lending ($29 billion out of $70 billion).

The factors bearing upon the move from reserve-financing to bank financing can be subdivided into those affecting the demand for reserves, those affecting the supply of bank credit, and those affecting the demand for bank credit. The most important of these for the ODCs at the end of the

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* For example, a negative 6.7 per cent. export competitiveness residual (Table 6) in Austria in 1973, while not reflected in "excess" import growth in 1973 (which (Table 7) is negative), may be reflected in the positive "excess" import growth for 1972, since it has been argued that competitiveness changes impinge on imports before exports.

Table 8

Net indebtedness of the other developed countries to BIS area reporting banks

Country	1975	1978	1980	1981	1982	1983
	in billions of US dollars, end of period					
Australia	1.6	3.4	4.8	6.9	10.5	13.8
Austria	- 1.2	1.6	4.2	5.1	4.8	6.3
Denmark	1.5	7.5	9.4	9.3	11.0	11.5
Finland	2.2	3.5	4.1	4.3	5.4	5.2
Greece	0.1	0.3	1.4	3.7	4.0	4.8
Ireland	0.0	1.1	2.9	3.1	4.4	4.5
Israel	- 0.4	- 2.2	- 3.4	- 3.3	- 2.8	- 3.0
New Zealand ...	0.6	0.8	1.2	1.6	1.8	2.4
Norway	1.8	5.5	5.5	4.3	4.8	5.7
Portugal	- 0.2	1.3	2.7	5.6	7.5	7.7
South Africa ..	4.0	6.2	4.8	8.4	11.5	14.4
Spain	- 1.8	- 0.5	0.6	4.3	8.0	7.8
Turkey	0.2	2.2	2.1	1.6	1.4	1.9
Yugoslavia	0.7	2.8	6.9	7.3	7.3	7.4
Total	9.1	33.5	47.2	62.2	79.6	90.4

Source: BIS Quarterly International Banking Developments.

1970s were probably factors affecting the supply and price of international bank credit. For one thing, current-account deficits were, as has already been observed, much more balanced after the second oil shock than after the first. The counterpart deficits to the phase two OPEC surplus were largely located in Germany, Japan and the United States, countries which could finance deficits through reserves rather than through borrowing from international banks. This was in contrast to the phase one OPEC surplus, when deficits were concentrated in some European countries - notably the United Kingdom and Italy - whose external positions had already been weak well before the oil price rise. The result was that after the second OPEC episode there was much more room for the international banking system to recycle the OPEC surplus towards the smaller industrial countries.

Borrowing by the ODCs from the international banks was further encouraged by the narrowing of spreads (between deposit and lending rates) that took place during the latter half of the 1970s. In 1978 and 1979, in particular, there was no shortage of international liquidity and lending conditions were favourable, especially with respect to the negative real interest rates that prevailed. But even when real interest rates became positive around the turn of the decade, the ODCs maintained their preference for financing their deficits via bank borrowing, rather than drawing on reserves. In part this reflects the desire of banks, at least since mid-1982, to reduce their exposure to a number of heavily indebted less developed countries, and the consequent wider availability of funds to other countries, including many in the ODC group, which are viewed as prime borrowers. In the two years from 1981 to 1983, despite a total current-account deficit of $46 billion, non-gold reserves rose by 9 per cent., while net indebtedness to the international banking system grew by 45 per cent. In real terms, reserves rose even more - by one-fifth - in this period, owing to the decline of world trade prices.

(ii) The growth of external indebtedness

As shown in Table 2, the ODCs could not after 1975 maintain more expansionary demand policies than those in the Group of Ten. This in large part reflects the unsustainability of the current-account position which resulted from the attempts to offset the deflationary impact of the first

oil shock. As observed in the previous section, the ODCs' non-gold reserves declined by almost one-fifth between 1973 and 1975, and in real terms were virtually halved. One important reason for the persistence of the ODC deficit (though not for its emergence) lay in the sharp increase in debt-servicing costs which some countries suffered in the second half of the 1970s, both because of the rise in nominal interest rates in tandem with the rate of inflation, and because their indebtedness had increased considerably as a consequence of their extensive use of floating rate bank finance of the current-account deficits noted above. Unlike some of the non-OPEC developing countries, which had access to concessionary, fixed interest rate financing, the ODC group's growing external indebtedness was mostly contracted at market-related interest rates. Table 9 below illustrates the levels of ODC indebtedness in 1980 and 1983.

Although the figures in this table are illustrative of the magnitudes of different countries' indebtedness, it should be noted that they are not comprehensive; nor is the coverage identical across countries. Nevertheless, they do demonstrate that, by the end of the last decade, a substantial proportion of the ODC current-account deficit was attributable to the costs of debt-servicing; and, more significantly, that by 1983 the entire deficit was more than accounted for by debt-servicing costs.

In 1980 the three-month US dollar LIBOR rate averaged just over 14 per cent. In conjunction with the total net debt of $138.6 billion shown in Table 9, and even assuming that the average "net" interest rate on ODC net debt was just 10 per cent., the implication is that almost two-thirds of the 1980 ODC current-account deficit of US$ 22 billion was attributable to net debt-servicing costs. Table 9 indicates that by 1983 total net debt of the ODC group had risen by around two-fifths in comparison with 1980. Assuming a "net" debt-servicing interest rate of 8 per cent., the current-account deficit of $16.2 billion in 1983 is almost entirely accounted for.

These figures provide some explanation of why the measured ODC deficit persisted in the latter part of the 1970s despite relatively restrained demand growth in comparison to the Group of Ten countries. For debt-servicing represents an obligation fixed in foreign currency terms; unlike other imports, neither devaluation nor deflation can reduce the foreign exchange requirement of debt-servicing, since its price elasticity is zero. So the greater the share of debt-servicing in a country's current-

Table 9

External indebtedness of ODC countries at end-1980 and end-1983 (or nearest available date)

(in billions of US dollars)

Country	Identified debt (net of private-sector assets)		Non-gold reserves		Net identified debt	
	1980	1983	1980	1983	1980	1983
Australia	13.5	34.0	1.7	8.9	11.8	25.1
Austria	14.0	15.5	5.3	4.5	8.7	11.0
Denmark	20.0	22.0	3.4	3.6	16.6	18.4
Finland	7.5	8.0	1.9	1.2	5.6	6.8
Greece	7.0	9.5	1.3	0.9	5.7	8.6
Ireland	10.0	13.5	2.9	2.6	7.1	10.9
Israel	15.0	21.5	3.4	3.7	11.6	17.8
New Zealand	6.0	9.0	0.4	0.8	5.6	8.2
Norway	18.0	11.5	6.0	6.6	12.0	4.9
Portugal	9.0	14.0	0.8	0.4	8.2	13.6
South Africa	5.0*	14.5*	0.7	0.8	4.3	13.7
Spain	23.5	29.5	11.9	7.4	11.6	22.1
Turkey	15.0	17.0	1.3	1.3	13.7	15.7
Yugoslavia	17.5	19.0	1.4	1.0	16.1	18.0
Total	181.0	238.5	42.4	43.7	138.6	194.8

* Only net indebtedness to BIS area reporting banks.

account deficit, the less leverage it can have over the deficit by using traditional expenditure-switching or reducing policies.

There is, however, an important argument, the implication of which is that the combination of high indebtedness and high inflation contributes to a major overstatement of current-account deficits and corresponding net capital inflows. The reason* is that during periods of increased inflation, nominal interest rates tend to rise so as to limit any reduction in their "real" levels. The consequent increased interest payments by debtors compensate creditors for the impact of inflation on the real value of their assets and directly increase both the current-account deficits of debtor countries and the surpluses of creditor countries. This inflation compensation element of higher nominal interest rates is, in effect, an early repayment of capital. As such, it distorts the split of the balance of payments between the current and capital accounts.

As an illustrative example, the ex-post real interest rate on US dollar loans in 1980 was around zero, since the year-on-year rise in the CPI was 13½ per cent, and three-month US dollar LIBOR averaged just over 14 per cent. If all ODC net indebtedness was dollar-denominated, the implication of the total of $139 billion in 1980 (see Table 9 above) is that the "inflation compensation", or early repayment of capital, portion of the ODC current account was in the order of US$ 20 billion. The "inflation-adjusted" current account of the ODCs for 1980 would on this reasoning be much closer to balance than the recorded current-account deficit of US$ 22 billion implies; and it follows that insofar as the persistent ODC recorded current-account deficit in the years since the first oil shock reflects these distortions associated with the interaction of high indebtedness and high inflation, a misleading impression of the extent of the external imbalance may have been conveyed.

As for the accessibility to the ODC countries of the international banking system, there does not seem to be any evidence - except in the case of Turkey in 1977, and Portugal more recently - of a reluctance to enter into new lending agreements. In 1983 the three countries with the largest deficits - Australia, Spain and Israel - were able to prevent, or limit, a decline in reserves, by means of capital inflows, much of which took the form of new bank lending.

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* See P.W. Stanyer and Mrs. J.A. Whitley, "Financing world payments balances" (Bank of England Quarterly Bulletin, June 1981). The argument has been stated frequently, mostly in the context of domestic public-sector deficits; in the international context, see for example J.D. Sachs (Brookings Papers on Economic Activity 1981) and R.N. Cooper's comment on Sach's paper.

In Portugal the growing deficits of 1981 and 1982 were to a considerable extent financed by direct borrowing by the public sector; but last year, despite the reduction in the deficit, no more than half could be financed by recourse to the international capital markets, and Portugal had to negotiate three loans from the BIS totalling $1 billion. The reserves fell by almost 13 per cent., to about $1.1 billion.

The ratio of net identified indebtedness to foreign currency earnings of the group, at about 80 per cent. (end-1983), is appreciably below that for the non-OPEC less developed countries group (around 150 per cent.). Nevertheless, within the group there is a wide dispersion of indebtedness on this measure, ranging from Austria, Finland and Norway, all with ratios below 50 per cent. (in Norway the ratio has more than halved in three years) to Israel, Portugal, Turkey and Yugoslavia, with ratios in excess of 150 per cent., or as high as those seen in much of Latin America. Two countries in the group - Turkey and Yugoslavia - have undergone bank debt restructuring in recent years. As might be expected, the more highly indebted countries tend also to be the poorest; the notable exception is Greece, perhaps because most of the current deficit there in recent years has been covered by autonomous non-debt-creating capital inflows (mainly payments for real estate purchases and foreign exchange deposits by Greeks resident abroad).

V. Conclusion

This paper has studied the autonomous international disturbances which have necessitated adjustment by the ODC group in order to avoid internal and external imbalance, and has examined the nature and extent of such adjustment. Although the fourteen countries in this group are very dissimilar - in terms, for example, of natural endowments, economic maturity, political stability and labour market institutions - the single characteristic they have in common is their economic openness. Thus, they were already highly vulnerable to external shocks in the latter part of the 1960s (when this study commences) and, with the further progress towards international economic integration that has occurred since then, this vulnerability has even increased. An additional contributory factor has

been the rapid growth of external indebtedness, because this has heightened susceptibility to interest rate and exchange rate fluctuations, at a time when both have grown; moreover, debt-servicing costs, unlike most other external payments, are beyond the direct influence of the conventional expenditure-switching or reducing tools of balance-of-payments adjustment.

The marked increase in the degree of vulnerability of the ODCs to external shocks has not, however, been matched by a commensurate broadening of the options available to preserve balance-of-payments equilibrium. The potency of exchange rate depreciation has been reduced - not only because of the increase in debt-servicing costs, which are fixed in foreign currency terms, but also because with increasing openness the requisite changes in relative real incomes for a devaluation to be successful have become harder to achieve. In addition, increased openness has made the incidence of competitive devaluations, where no single country succeeds in changing its terms of trade, much more common. As a consequence, more emphasis has come to be placed on domestically generated competitiveness changes as an external adjustment tool - for example, through productivity improvements or a moderating of labour costs. It is these competitiveness changes which are examined in Section III of this paper.

The broad conclusion which emerges from the analysis is that, despite the diversity of the countries in the ODC group, they have not generally suffered pronounced, prolonged external disequilibria as a result of autonomous disturbances. After the second oil price shock, this is mainly attributable to tight policy and to the maintenance of demand in the Group of Ten countries. It has also, however, resulted from policies of promoting all aspects of competitiveness, as well as from the broad range of more structural, country-specific factors described in the paper, and it has moreover been achieved despite adverse product and market structures of exports. The improvements in competitiveness have not, however, proceeded smoothly over time.

A further conclusion to be drawn from the analysis is that policy-makers learn from history, since the current-account consequences of the second oil shock were much more evenly distributed than those of the first. It was also observed that the distribution of current-account worsening between the ODC countries depended much more on the manner in which the oil shocks were absorbed than on the degree of energy dependency "per se".

Another aspect in which the ODCs' policy reaction to the two oil shocks differed was in the financing of the consequent deficits. Whereas the first round of deficits was in the main financed from reserves, the second round was to a much greater extent financed by external borrowing - hence, as a direct consequence, the rise in indebtedness.

This increase in external indebtedness has been one of the most striking developments. By 1983 almost the entire current-account deficit of the group was accounted for by debt-servicing, and a rise of 2 percentage points in international interest rates would boost this deficit by as much as one-quarter. Although indebtedness for the group as a whole is less of a concern than in, for example, the group of non-OPEC LDCs, a few individual countries in the group have reached a level of indebtedness which is hindering their access to the international lending market.

Appendix: Constant Market Share analysis*

The following definitions apply for each of the seven countries analysed:

$V_{i\bullet}$ = value of exports of product i in opening year

$V'_{i\bullet}$ = value of exports of product i in closing year

$V\bullet j$ = value of total exports from each country to market j in opening year

$V'_{\bullet j}$ = value of total exports from each country to market j in closing year

V_{ij} = value of exports of product i to market j in opening year

V'_{ij} = value of exports of product i to market j in closing year

r = percentage increase in total OECD exports from opening year to closing year

r_i = percentage increase in OECD exports of product i from opening year to closing year

r_{ij} = percentage increase in OECD exports of product i to market j from opening year to closing year

Then the change over time in a country's exports of product i to market j can be expressed thus:

(1) $$V'_{ij} - V_{ij} \equiv r_{ij}V_{ij} + (V'_{ij} - V_{ij} - r_{ij}V_{ij})$$

When aggregated over the i products and j markets, this yields:

(2) $$V'_{\bullet\bullet} - V_{\bullet\bullet} \equiv \sum_{i=1}^{i=5}\sum_{j=1}^{j=7} r_{ij}V_{ij} + \sum_i\sum_j (V'_{ij} - V_{ij} - r_{ij}V_{ij})$$

(3) $$\equiv rV_{\bullet\bullet} + \sum_i (r_i - r)V_{i\bullet} + \sum_i\sum_j (r_{ij} - r_i)V_{ij}$$

(a) (b) (c)

$$+ \sum_i\sum_j (V'_{ij} - V_{ij} - r_{ij}V_{ij})$$

(d)

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* This appendix draws heavily on Leamer & Stern (op. cit.).

The fourth term, (d), in (3) is the same as the second term in (2). The first three terms in (3), (a) + (b) + (c), are equivalent to the first term in (2). Term (a) allocates the country its share of the increase in OECD exports; term (b) adjusts for the fact that the country's export product structure is not equivalent to that of the OECD average; term (c) does the same for the country's export market structure; term (d) is then the competitiveness residual.

Expression (3) can be transformed so as to show the three sources of effects on market shares (as in the text). Let T be total OECD exports in the opening period. Then term (a) becomes:

$$\frac{V_{..} + rV_{..}}{T_{..} + rT_{..}} - \frac{V_{..}}{T_{..}} \equiv 0$$

and (3) becomes:

$$(4) \qquad \frac{V'_{..}}{T_{..} + rT_{..}} - \frac{V_{..}}{T_{..}} = \frac{V_{..} + \sum_i (r_i - r)V_{i.}}{T_{..} + rT_{..}} - \frac{V_{..}}{T_{..}}$$

(change in market share o/a product effect)

$$+ \frac{V_{..} + \sum_i \sum_j (r_{ij} - r_i)V_{ij}}{T_{..} + rT_{..}} - \frac{V_{..}}{T_{..}}$$

(change in market share o/a market effect)

$$+ \frac{V_{..} + \sum_i \sum_j (V'_{ij} - V_{ij} - r_{ij}V_{ij})}{T_{..} + rT_{..}} - \frac{V_{..}}{T_{..}}$$

(residual change in market share o/a competitiveness effect)