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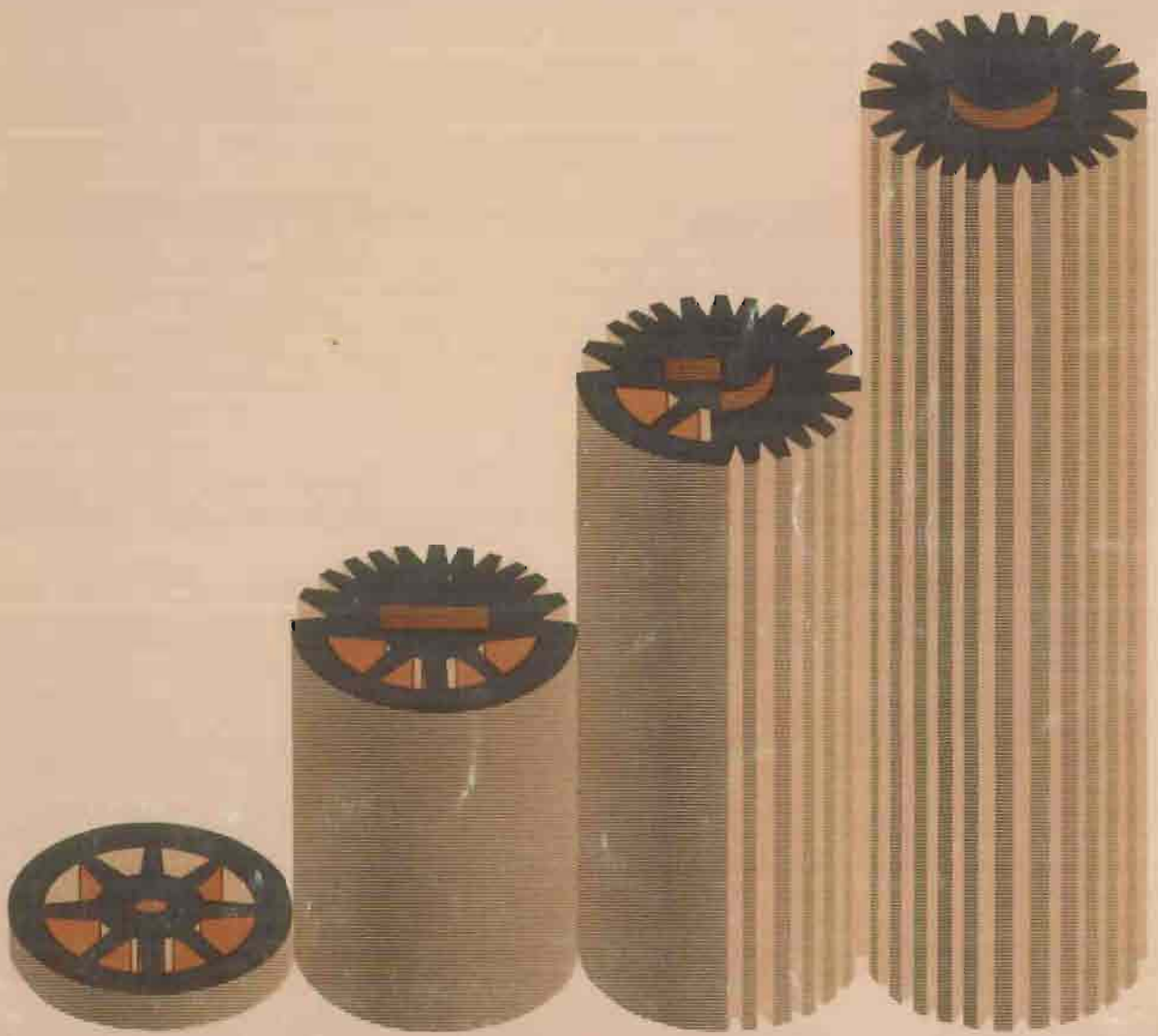

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Editorial note

A pre-publication text of this report was issued early in August 1982 (UNCTAD/TDR/2, vol. I-III, of which vol. II and III were in English only).

The first report in this series was issued in printed form in September 1981 with the symbol TD/B/863/Rev.1 (Sales No. E.81.II.D.9).

The present text was finalized in September 1982. In addition to the customary editorial revision and the correction of errors, a number of tables originally placed in the main text have been transferred to annex A. No up-dating of statistical material or of the analysis has been undertaken.

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ABBREVIATIONS

AFESD	Arab Fund for Economic and Social Development
BIS	Bank for International Settlements
CFF	Compensatory Financing Facility (of IMF)
c.i.f.	cost, insurance and freight
DAC	Development Assistance Committee (of OECD)
ECDFTT	Employment-corrected double factorial terms of trade
ECE	Economic Commission for Europe
EEC	European Economic Community
EFF	Extended Fund Facility (of IMF)
EFTA	European Free Trade Association
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GNP	gross national product
HA	high absorbers
IATA	International Air Transport Association
ICOR	Incremental capital-output ratio
ICDSI	Independent Commission on Disarmament and Security Issues
IDA	International Development Association
IEA	International Energy Agency
IMF	International Monetary Fund
ISIC	International Standard Industrial Classification of all Industrial Activities
LDCs	least developed countries
LIBOR	London Inter-Bank Offered Rate
LMA	low and medium absorbers
mb/d	million barrels per day
MFA	Multifibre Arrangement
MFN	most-favoured-nation
MSA	most seriously affected (countries)
NMP	net material product
OAPEC	Organization of Arab Petroleum Exporting Countries
ODA	official development assistance
OECs	oil-exporting developing countries
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
SAL	structural adjustment lending
SDRs	special drawing rights
SFF	Supplementary Financing Facility (of IMF)
SITC	Standard International Trade Classification (revision 1)
UNCTAD	United Nations Conference on Trade and Development

EXPLANATORY NOTES

The statistical data in this report have inevitably been drawn from a large number of sources. Every effort has been made to adjust the data from these primary sources in order to ensure consistency of coverage and classification. However, this has not always been possible, and notes to the tables, as also the explanatory text in annex A, draw attention to any significant lack of comparability.

The classifications of countries used in general in this report are given in the explanatory notes to annex A.

The term "dollars" ($) refers to United States dollars unless otherwise stated.
The term "billion" signifies 1,000 million.
Annual rates of growth and change refer to compound rates.
Exports are valued f.o.b. and imports c.i.f. unless otherwise specified.
Use of a hyphen (-) between dates representing years, e.g., 1965-1966, signifies the full period involved, including the initial and final years.
An oblique stroke (/) between two years, e.g., 1980/81, signifies a fiscal or crop year.

In the tables:

One dot (.) indicates that the data are not applicable.
Two dots (..) indicate that the data are not available, or are not separately reported.
A dash (—) indicates that the amount is nil or negligible.
A plus (+) before a figure indicates an increase; a minus sign (−) before a figure indicates a decrease. Details and percentages do not necessarily add up to totals, because of rounding.
Except where otherwise specified, figures in brackets are estimates.

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FOREWORD

The second annual Trade and Development Report, like its predecessor, seeks to provide an integrated review of world development and its impact on the trade and development of developing countries. It undertakes to examine in greater depth the longer-term forces which have led to the acute difficulties being experienced by developing countries and the world economy at large.

The present report takes on particular importance in view of the forthcoming sixth session of the United Nations Conference on Trade and Development. It is designed to provide an analytic background to the major issues that will be addressed at the Conference.

Gamani COREA
Secretary-General of UNCTAD

INTRODUCTION AND OVERVIEW

The *Trade and Development Report 1981* [1] reviewed the development performance of developing countries over the past several decades and pointed to the emerging crisis of the development process. It noted that this crisis was unfolding against the background of unfavourable world economic conditions and posed the question of how development could be made to accelerate in the face of the likely continuation of those conditions. This year's *Trade and Development Report* elaborates on these same themes. It reports on the serious deepening of the crisis in development that has occurred since last year's report, on the further deterioration in the international economic environment, and examines certain aspects of the dynamic interrelationship between the two. The conclusion of this analysis is that urgent action in the fields of trade, commodities and international finance is required in support of the development process.

A. The deepening development crisis

The developing world is facing its gravest economic crisis since the Great Depression. As in that earlier period, the crisis is the product of the malfunctioning of the economies of developed market-economy countries, and has been intensified by the growing disarray of the trade and financing systems.

The current crisis has many dimensions, all of which have contributed to the poor growth performance that currently characterizes most developing countries. Net oil-importing developing countries recorded a rate of growth of GDP of 1.5 per cent in 1981, as compared with 4.9 per cent in 1980. The least developed countries, whose growth rate was declining in the late 1970s, recorded a 2.8 per cent rate of growth in 1981, the same as in 1980. Continuation for two years running of such an unsatisfactory growth performance represents a serious setback to efforts to improve living standards in these countries. The fast-growing exporters of manufactures experienced a sharp setback in their economies, with output falling by 1.5 per cent, in contrast to growth of 6.7 cent in 1980. The remaining oil-importing developing countries also experienced an overall slowdown in growth in 1981.

In most countries poor growth performance was the result of intensified pressures on external payments. The current-account deficit of deficit developing countries[2] grew from $76 billion in 1980 to $92 billion in 1981. This reflected mainly price movements: the terms of trade of oil-importing developing countries, which had fallen sharply in 1980, deteriorated further in 1981, reflecting in large part the collapse of commodity prices. The larger deficit also reflected higher outflows on account of interest payments and profit remittances, which grew by about one quarter in 1981, due primarily to higher interest rates. As a result, despite good performance as regards the volume of exports, the volume of imports fell in 1981 for the second consecutive year, thus seriously impairing growth.

This severe compression of imports also occurred despite substantial borrowing from abroad: medium- and long-term debt outstanding rose by more than $60 billion in 1981, and stood at $400 billion at year end. Some categories of financial flows failed to provide any new resources to developing countries: new private bank loans were more than offset by repayments and interest due on former loans.

Debt servicing has become extremely difficult for many developing countries, and a growing number of them have sought debt reorganization. The majority of these were poorer developing countries, all of which were obliged in the context of debt reorganization exercises to introduce strongly deflationary policies, or to pledge to do so, in order to reduce their current-account deficits and resume debt-service payments.

The sharp deceleration of growth in developing countries as a whole occurred despite performance in the agricultural sector that was better than average. The impact of the slowdown thus appears to have been concentrated in urban areas and in the more modern sectors of the economy that are usually more susceptible to changes in the external environment. 1981 has already witnessed an increase in open urban unemployment in a number of countries, including some in which employment in the non-agricultural sector actually declined, and an aggravation of social tension and instability can be expected if these trends continue.

Growth in the industrial sector is central to the process of structural adjustment, and to the capacity to generate and capture additional savings for investment. A faltering of investment, which appears to be under way in many developing countries, would diminish their ability to re-orient their structures of production and to make the necessary adaptations in critical sectors such as energy and food. The current situation is thus progressively depriving developing countries of the capacity to undertake the kind of adjustment required and is instead characterized by a process that enforces the containment of external imbalances through sharply reduced economic growth.

[1] United Nations publication, Sales No. E.81 II.D.9.

[2] Excluding major oil exporters.

Moreover, this is occurring at a time when considerable adjustment of the economies of developing countries has already occurred. Policies put in place since the mid-1970s to improve the external accounts while fostering growth have borne fruit in many countries. Except for the least developed countries, the result of these efforts, which was often obtained at high cost in terms of compressed consumption, greater inequality in income distribution, and mounting external indebtedness, was an acceleration of export volumes and a higher rate of savings. Instead of reduced external deficits and higher growth, however, this performance was accompanied by ever-widening external deficits and a progressive slowing down of growth. In effect, the favourable results of the policies of developing countries were negated by the adverse impact of external events. The costs of the policies remain, however, and will greatly constrain the range of policy options open to developing countries in the 1980s.

The virtual standstill in the development process has thus occurred not as a result of any diminished effort on the part of developing countries, but because of the sharp deterioration in the external economic environment facing them.

B. The deterioration in the international economic environment

The international economic environment is characterized by two central features: slower growth in the developed countries and the acceleration of price inflation in the world economy.[3]

Developed market-economy countries recorded a rate of growth of 1.3 per cent in 1981, which was virtually unchanged from the preceding year. The outlook for 1982 is for significantly slower growth. There was some abatement of inflation in 1981, but this was achieved at the cost of worsening rates of unemployment. The number of unemployed workers in developed market-economy countries is estimated to have reached 25 million in 1981.

The socialist countries of Eastern Europe have been obliged to reduce the planned rates of growth of their economies. The average planned rate of growth of net material product for 1981 was set at the historically low figure of 3.2 per cent. Due mainly to events in Poland, but also as a result of growth rates markedly lower than planned in Czechoslovakia and Romania, NMP advanced by only 1.9 per cent in 1981 for the socialist countries of Eastern Europe as a whole. This reflected in part difficulties in increasing agricultural output and the consequences of certain adjustments being undertaken in these economies. The trade balances of most of these countries were adversely affected by changes in international prices, and their payments position was influenced by the widening scope of restrictive trade policies applied by certain developed market-economy countries and the extension of a smaller volume of external credits.

The slowdown in growth in the developed market economy countries has, to date, defied satisfactory explanation. A central feature has been the decline in labour productivity. Among the reasons often put forward in explanation of this phenomenon are changing attitudes to work, the proliferation of government regulations, existing tax structures, accelerated inflation, shifts in relative prices, changes in the quality of the labour force, lack of adequate innovation and inadequate research and development. However, attempts to measure empirically the impact of such factors have proved inconclusive, and even the most meticulous statistical investigations into the sources of growth fail to explain why it has been slowing down persistently.[4]

The key to growth performance in developed market-economy countries in the 1970s would seem to reside in the management of aggregate demand. This, in turn, was influenced in the beginning of the decade, and came to be dominated towards the end of the decade and the early 1980s, by the need to combat inflation.

The acceleration of price inflation began in some developed market-economy countries in the latter half of the 1960s. In the early 1970s, however, it took on added impetus in the wake of important demand-pull forces fostered by the synchronized boom of 1972-1973. These demand-pull forces were quickly supplemented by rises in commodity prices and the steep rise in the price of petroleum. The sharp reduction in levels of activity in 1975 eliminated excess demand as a factor influencing price behaviour, but cost-push factors continued to operate as various social groups attempted to maintain their real income growth against the background of declining aggregate income brought about by lower growth in output and a sharp deterioration in the terms of trade.

In the mid-1970s the management of aggregate demand in most developed market-economy countries was balanced between the need to contain inflation and sustain growth. It was recognized that the deflationary impact on expenditure of the large current-account surpluses of oil-exporting countries would need to be offset at least in part by appropriate policy actions. It was also recognized that the impact of higher energy prices and lower growth on the external accounts would have to be dealt with in a way which protected the system as a whole from the cumulative effects of either inflation or deflation.

Two concrete manifestations of these perceptions were the creation of the Oil Facility in the IMF and the multilateral negotiation of patterns of demand stimulus that would provide buoyancy to the world economy with the least danger to price levels and external balances.

With the change in the nature of inflation from demand-pull to cost-push, however, cautious demand management failed to make a significant impact on inflation rates, and the concern of policy-makers was increasingly focused on resolving this

[3] For a discussion of inflation, see the report by the UNCTAD secretariat "World Inflation and the Development Process" (TD/B/914).

[4] See, for example, E. F. Denison, *Accounting for slower economic growth: the United States in the 1970s* (Washington, D.C., Brookings Institution, 1979).

problem, particularly as inflation came to be associated in the minds of electorates with declines in their real income.

The sharp increase in energy prices in 1979-1980 and the significant slowdown in growth in the developed market-economy countries, which paralleled closely the events of 1974-1975, were thus met with a very different policy stance. The objective of containing and reducing inflation was given emphasis, to the virtual exclusion of other policy objectives, and the deflationary impact on expenditure of the large current-account surplus of oil-exporting countries was allowed to make its full force felt in almost all the developed market-economy countries, with policies geared not towards offsetting the effects on expenditure, but towards additional demand contraction. The use of demand contraction to deal with cost-push inflation has proved costly to the developed market-economy countries themselves, and has also slowed the growth of exports to them from developing countries.

Moreover, the change in the character of monetary policy in the United States, with the resulting abrupt rise in interest rates, has been translated directly into higher costs of borrowing in international capital markets. This was particularly onerous for developing countries, whose annual interest payments are estimated to increase by as much as $2 billion for every percentage point rise in interest rates in the Eurocurrency markets.

1. The transmission of lower growth

Slower growth of output and consumption in the developed countries has influenced economic activity in the developing countries in several ways. Declining growth of output in the various industrial branches has directly affected imports from developing countries, and this effect was magnified where stocks were run down. But lower growth, particularly when accompanied by price inflation, has been associated with changes in the structure of both output and consumption which have further reduced the import demand for the products of developing countries.

This reduction is most clearly illustrated in the case of primary commodities, where both *per capita* consumption of foods and beverages and the input of raw materials per unit of output declined. Within these broad categories there were also shifts in the pattern of demand that were unfavourable to developing countries. Because of this, the effect of lower growth in depressing demand for primary commodities was magnified, and the volume of imports of primary commodities by developed market-economy countries stagnated during the second half of the 1970s. The cumulative effects of these unfavourable shifts, together with the impact on inventories of higher interest rates, help to explain why the recession of 1980-1982 has affected commodity prices much more severely than the recession of 1974-1975.

A slower pace of structural change in the manufacturing sector of developed market-economy countries has also had serious consequences for developing countries. During the 1960s, structural change in these countries had been away from manufacturing activities in which developing countries were particularly competitive. Such change continued in the 1970s, but the slower pace meant that the capacity to accommodate exports from developing countries was expanding less rapidly. Although developing countries were nevertheless able to increase their share in the imports of such products by developed market-economy countries during much of the 1970s, this no longer appears to be the case for many such products.

These changes were directly related to the rising tide of protectionism. In recent years the world trading system has come increasingly to rely on non-tariff regulation of trade, often through means negotiated outside the appropriate institutions and on conditions imposed unilaterally on trading partners. There has been an increased reliance on export restriction and market-sharing arrangements designed to protect traditional markets without conforming to multilaterally agreed safeguard procedures. Whereas tariff barriers allow the relative competitiveness of exporters to be reflected in trade flows, the governments of many developed market-economy countries appear to have an increasing preference for controlling the volume of imports or their prices. The most prominent example of measures to this end is the Arrangement Regarding International Trade in Textiles (the Multifibre Arrangement or MFA). The MFA covers almost one-third of the exports of developing countries of manufactured goods. While these products are at present exported on a large scale by a relatively small number of developing countries, it is clear that, given the special role that trade in textiles and clothing has played in the historical process of economic development, any arrangement regulating trade in these products is of potential importance to virtually all developing countries.

2. The role of international prices

In addition to the markedly slower growth of output in the developed market-economy countries, a notable feature of the international economic environment during the 1970s and early 1980s has been the role of prices in international trade.

The 1970s were characterized by an acceleration in global inflation and changes in relative prices of traded commodities, which were very sharp in the case of petroleum. The unit value of world exports grew at an average annual rate of only 0.5 per cent during the period 1955-1970. The corresponding figure for the period 1970-1979 was 13 per cent, while for fuels it was more than 25 per cent.

These price changes affected in the first instance the balance of payments. The terms of trade of oil-importing developing countries have deteriorated since the mid-1970s and in 1981 stood roughly 30 per cent below their level of a decade earlier. The effect of price inflation and deterioration in the terms of trade was to intensify sharply pressures on the external accounts: the negative effect of price changes during the period 1971-1981 as a whole amounted to more than $60 billion, by far the larger

part of the change occurring from 1979 onwards. These pressures, together with the need to allow for some rise in import volumes, were met by increasing both export volumes and external financing.

Although the expansion of export volumes helped to promote adjustment with growth, and was by far preferable to a reduction in import volumes, it meant that countries were giving up through trade more of their domestic resources per unit of imports than had previously been the case. This suggests that the gains to these countries from participating in international trade have been reduced — a conclusion that is borne out in the case of countries exporting mainly primary commodities (other than minerals) by detailed analysis of trade prices and volumes and labour productivity and employment in the trade sector.[5]

In addition to these negative effects on the external accounts and the gains from trade, changes in world prices have had a direct influence on the domestic economies of developing countries. During the 1970s the rise in import prices accounted for much of the acceleration in domestic price inflation. In many developing countries export proceeds play an important role, either directly or indirectly, in generating budget receipts, and changes in export prices thus directly influence public expenditure and/or the budget deficit. Further, the deterioration in the terms of trade reduced the growth of real income relative to output, making increases in domestic saving more difficult to achieve.

C. The evolution of the international financial system

Coping with the intense pressures on the external accounts described above became a major focus of policy in developing countries during the 1970s and early 1980s.

As mentioned earlier, developing countries undertook important steps to adjust their external balances while maintaining growth, and many succeeded in improving export growth and savings performance. To assist this process, increased external financing was required to sustain imports while the necessary adjustment was taking place, and to help finance the additional investment required to change the structure of output along the lines required by the new situation.

The experience of the 1970s shows that those developing countries that were able to sustain the growth of their imports were able to maintain their growth rates of GDP and accelerate the pace of domestic investment. Countries that were not able to do so saw their growth of GDP decline and domestic investment decelerate, sometimes quite sharply.

In the mid-1970s external finance played an important role in cushioning downward pressures on import volumes and therefore on output and investment. By far the larger part of the increased flow of external finance to developing countries occurred through private markets. Bilateral ODA expanded significantly in 1975 owing in large part to a sharp increase in flows from OPEC member countries, but also to efforts by some DAC donors to meet the increased needs of poorer countries. The following two years, however, saw declines in bilateral assistance flows from DAC member countries, after which such flows expanded again, at least in nominal terms.

As the decade advanced, the degree of flexibility provided to the developing countries by the operation of the international financial system tended to diminish. This reflected a number of factors. The first was the rapid build-up in external indebtedness that was the result of large-scale external borrowings from private markets. The total public and publicly-guaranteed external debt of deficit developing countries rose from less than $70 billion in 1970 to about $400 billion at the end of 1981. Moreover, the preponderant role played by Eurocurrency credits in the debt of some developing countries increased their vulnerability to changes in international financial conditions. In 1971, for example, only a very small proportion of the outstanding debt of countries in Latin America and the Caribbean was accounted for by loans with variable interest rates, but by 1980 the proportion was almost 60 per cent. Thus the recent increases in interest rates resulting from changes in United States monetary policy have had a particularly adverse effect on the balance of payments of many developing countries.

The higher interest costs and need for caution in managing external indebtedness led many developing countries to reduce their borrowings from the Eurocurrency markets. Disbursement of bank credits grew at 27.5 per cent per annum in 1973-1978 but at only 19 per cent per annum in 1978-1981. This, together with higher interest payments, has meant that the resource transfer resulting from these credits, which grew at an annual rate of 12.5 per cent from 1973-1978, declined in 1979-1980. As mentioned earlier, in 1981 the net transfer was actually negative.

The reduced flexibility was also reflected in the fact that ODA failed to advance at a rate commensurate with the worsening economic situation of the poorer developing countries, so that the economies of a number of them came under intense pressure.

Developments over the past several months have intensified concern regarding the capacity of the international financial system to cushion the effects of the unfavourable economic environment and underpin adjustment. A large number of uncertainties have emerged with respect to financing via international capital markets. These include the greater sense of vulnerability felt by financial institutions owing to the growth of assets, both domestic and foreign, whose liquidity and future earnings are in doubt, and the impact on their earnings of recent bankruptcies of borrowers. A further cause of hesitancy on the part of lenders is the magnitude of their exposure to individual borrowing countries relative to their own capital. Difficulties as regards claims on a major non-developing country borrower have increased apprehension regarding exposure. Finally, the blocking of assets in connection with hostilities in the South Atlantic has also created uncertainties

[5] For details see part II, chap. 2 below.

about the way in which financial markets may function.

These factors, together with the likely continuance of relatively high interest rates, point to only a modest future expansion in net borrowing from international capital markets. The outlook for ODA is no brighter. As regards DAC member countries other than the United States, a further expansion of flows appears assured. In the case of the United States, however, the outlook appears to be for a reduced volume of flows, distributed with increased emphasis on geo-political considerations.

There are also considerable uncertainties regarding the future role of multilateral financial and monetary institutions. Pressures are being exerted in all of these institutions to constrain the size of their operations and alter their policies. In IMF, for example, there are pressures to limit increases in quotas and to impose stricter conditionality. As regards the World Bank, a matter of special concern is that IDA disbursements are expected to fall considerably short of what was previously expected, primarily because of the United States decision to stretch its contribution to the Sixth Replenishment over a four-year period. Thus stringency in the provision of official payments finance would be superimposed on lower growth of multilateral development finance.

D. The development crisis and the functioning of the international trade, finance and monetary systems

The current situation of developing countries is one of considerable difficulty, with little room for manoeuvre. The economic problems of developed countries are being transmitted to developing countries through a variety of channels. Slower growth in the developed market-economy countries is curtailing directly their import demand and is also associated with structural changes in those countries which have a further negative impact on demand. Policies to deal with inflation have increased borrowing costs, and trade policies are evolving in a way that calls into doubt the future dynamism of international trade, particularly for products of special importance to developing countries. Inflation in the world economy and the deterioration in the terms of trade of non-oil-exporting developing countries have enlarged current-account deficits and reduced for many developing countries the benefits derived from participating in the international trading system. The international financial system appears to have lost a good deal of the flexibility which it had formerly provided to developing countries to offset the negative influences of the external environment and to mobilize resources required for the transformation of their economies. The spirit of international co-operation is on the wane.

The development crisis is thus not simply a set of poor growth figures for one or two years, however disquieting these may be. It is also the progressive alteration of the international environment in ways that narrow the range of feasible policies open to developing countries to promote their own development, and that reduce the effectiveness of those that are available.

Several characteristics of the international trade, finance and payments systems have had an important bearing on the intensity of the present crisis. The first of these is the incompatibility of the broad direction of change in the trading system, on the one hand, and in the financial and monetary systems, on the other. The trading system is increasingly being used to allow the pace of structural adjustment in developed market-economy countries to be slowed, or limits to that adjustment to be enforced. The monetary and financial systems, on the other hand, are evolving in ways that imply more rapid adjustment of developing countries. The tensions created by this incompatibility are at the heart of the external payments difficulties and poor growth performance of many developing countries.

Secondly, the trade, finance and payments systems are not yet sufficiently endowed with a South-South dimension. The experience of the past several years has demonstrated that wherever South-South transactions took on importance, external constraints were eased and growth enhanced. Institutional mechanisms for South-South co-operation exist in the financial field, and are present in the payments area. Arrangements to accelerate South-South commercial transactions could play an important role in supporting growth.

The most telling defect of the present international economic system, however, is the failure to endow it with an adequate support system designed to ensure that the interests of developing countries are adequately met. Recent developments have vividly illustrated the costs to developing countries of instability in commodity prices — costs that would have been substantially attenuated by a fully operational Integrated Programme for Commodities. Adequate measures in such fields as debt and access to markets would also have helped protect developing countries from the adverse consequences of the current economic environment. Further efforts to enhance or restore mechanisms of support for developing countries — whether they be in the field of trade, commodities or financial flows — must be among the major items on the international agenda in the months to come. There is an overall need to strengthen confidence in the system of multilateral co-operation and to use the modalities of that system in a concerted effort to enhance development.

Part I

THE CURRENT WORLD ECONOMIC CRISIS

Chapter 1

THE DETERIORATING STATE OF THE WORLD ECONOMY

A. The widespread nature of the current crisis

1. The world economy is in the midst of an economic crisis which manifests itself in sharply lower rates of growth of output, the deflation of commodity prices, declines in the volume of traded goods and a resurgence of pressure for increased protectionism, high and rising unemployment rates, high interest rates and fluctuating exchange rates, increased difficulties in managing internal and external debt, sharply reduced rates of growth of capital formation, and retrenchment in the provision of official development assistance and in domestic social programmes. All in all, the crisis appears to have reduced social welfare in many countries, sometimes seriously.

2. The developing countries are seriously affected by the current world recession, which compounds their difficulties in regaining the momentum necessary to continue with the structural transformation of their economies. The urgency of regaining development momentum was illustrated in the *Trade and Development Report 1981* [6] by numerical calculations which suggested that the rate of growth of GDP would have to exceed 6 per cent per year by a substantial margin merely to prevent any further increases in the already high urban unemployment rates in these countries. Moreover, the increase in the real price of energy has imposed the necessity of revising development plans both to increase domestic supplies of energy and to conserve on its use. However, the emergence of increased investment requirements coincided with the re-emergence of large payments deficits in 1980 due to sharp reductions in the terms of trade of most developing countries. With the currently high levels of debt and debt servicing further aggravated by the prevalence of historically high interest rates, possibilities of continued financing of such deficits for any length of time through non-concessional capital flows, within the present financial framework, appear extremely limited.

3. The task of reducing these deficits while regaining more satisfactory rates of growth of output via export expansion has been made more difficult by the reduction in the trend rate of growth of output in the developed market-economy countries. This has reduced the rate of growth of markets for primary commodities, where scope for increased market penetration is limited, as well as of those for manufactured exports of developing countries, where the scope for market penetration is large but may not be realized because increasing unemployment rates in the developed market-economy countries have intensified protectionist pressures. Long-term prospects are for low growth in the latter countries and this will impede any significant reversal of the declines in terms of trade experienced by the developing countries during the recent past. Efforts by the developing countries to adapt economic policy to this new external environment have resulted in measures intended to increase domestic saving rates, increase intra-trade, further diversify exports and also increase the pace of import substitution. Concomitant with efforts to increase domestic saving rates and to encourage the process of economic restructuring, domestic rates of inflation have tended to increase, reinforced by imported inflation, posing additional problems for policy makers. The difficulties of implementing these policies have been greatly compounded by the current world recession which has brought about the sharp terms of trade losses, high interest rates, and resurgent protectionist pressures. All of these intensify the difficulties confronting policy makers in developing countries as they grapple with the dilemma of intense pressure to maintain high growth of output and employment on the one hand, while on the other they fully recognize the importance of controlling domestic inflation and reducing external imbalances.

4. The current economic difficulties are not confined to the developed market-economy countries and the developing countries alone. The socialist countries of Eastern Europe have also been forced to reduce their planned rates of increase in national income for both structural reasons and reasons of a more short-term nature. Among the structural factors have been the slower growth of the labour force and a growing imbalance among economic sectors. The decision to reduce investment in heavy industry relative to light industry and agriculture has proved difficult to implement, in part owing to the difficulty of matching the output mix of light industry to the

[6] TD/B/863/Rev.1 (United Nations publication, Sales No. E.81.II.D.9.

pattern of demand of consumers. It has also not proved easy to increase the share of investment in energy and high technology activities, which are relatively intensive in both capital and engineering skills.

5. Virtually all countries are making efforts to reorder investment priorities. Investment in the energy sector and in energy conservation is under way in nearly all countries. Developing countries, particularly net oil-importing countries, and most socialist countries of Eastern Europe are seeking to expand manufactured exports and to reduce dependence on imports of food and petroleum. Oil-exporting developing countries, meanwhile, are seeking to diversify their economies. While these clearly identified investment requirements suggest the need to raise the share of investment in GDP for the world economy as a whole, preoccupation with inflation has led to short-term aggregate demand policies which have discouraged investment in developed market-economy countries. At the same time, adequate finance has not been forthcoming to support the structural adjustment efforts being made in developing countries. Governments in many countries have, accordingly, felt compelled to take policy measures reinforcing the deflationary pressures transmitted through the channels of international trade and finance.

6. It was during the decade of the 1970s that the imbalances associated with the longer-term trends in growth of the labour force, changing comparative advantage, the pattern of energy use, and international finance became fully manifest and culminated in the 1974-1975 recession — the deepest in the post-war period. The response to that recession was inadequate to the task of redressing the structural imbalances and resulted in a prolonged period of slow growth in output and investment. When this expansion, weak as it was, raised capacity utilization rates and energy use, thereby provoking the reappearance of the basic structural imbalances, these were suppressed by another economic downturn which initiated the current world recession. Thus, the decade of the 1980s has begun with a recession which, although not as deep as its 1974-1975 predecessor, has been notable both for its duration and for the policy measures in developed market-economy countries which, in effect, tend to reinforce the present decline in aggregate demand. Subsequent sections of part I explore in some detail the dimensions of the present crisis: its implications for markets in goods and finance, for the development prospects of developing countries and China, for output and employment in developed market-economy countries and for growth of national income in the socialist countries of Eastern Europe.

B. The operation of international markets

7. The international environment facing developing countries has seldom been more unfavourable. The terms of trade of their principal exports have fallen precipitously, while growth in their volumes has declined sharply. Interest rates on non-concessional loans meanwhile have risen to unprecedented levels, while capital flows on concessional terms have stagnated in real terms. Moreover, the expected increase of demand on international capital markets relative to the supply of funds, tends to increase the importance of creditworthiness in obtaining access to these markets.

1. Developments in the prices and volumes of traded goods

8. The bleakness of the international environment facing the developing countries during the recent past was reflected most dramatically in the steep falls in the prices of their exports in both nominal and real terms. After moderate increases during the first three quarters of 1980 reflecting mainly the strength of sugar prices, the combined index of the prices of non-oil primary commodities exported by the developing countries dropped steadily from the last quarter of the year to the first quarter of 1982 at an average annual rate of 22 per cent in current dollar terms. A large part of this decline was accounted for by the concomitant strengthening of the dollar. Nevertheless, the drop when measured in terms of SDRs was also very steep and amounted to almost 13 per cent annually from October 1980 to March 1982 (see chart 1 and table 1). Moreover, when expressed in real terms, i.e. deflated by the unit value of manufactured exports from the developed market-economy countries, the deterioration exceeded 19 per cent at an annual rate during the same period. In March 1982 the deflated index stood at its lowest level since 1960, the first year for which the UNCTAD index of prices of primary commodities exported by the developing countries was compiled.

Table 1

Market prices of primary commodities (other than petroleum) exported by developing countries
(Percentage change at annual rates)

Commodity group	*January-October 1980*	*October 1980-March 1982*
	(In current US dollars)	
Food	54.6	−42.7
Tropical beverages[a]	−29.3	−5.1
Vegetable oilseeds, oils	−14.2	−23.3
Agricultural raw materials	−0.3	−23.5
Minerals, ores and metals	−11.7	−13.4
Total primary commodities (excluding petroleum)		
Denominated in $US	4.3	−22.1
Denominated in SDRs	2.7	−12.9
Terms of trade[b]	−3.9	−19.5

Sources UNCTAD, *Monthly Commodity Price Bulletin*, April 1982, United Nations *Monthly Bulletin of Statistics*, various issues

Note The percentage changes are given by log-linear regressions on monthly data and converted to annual rates

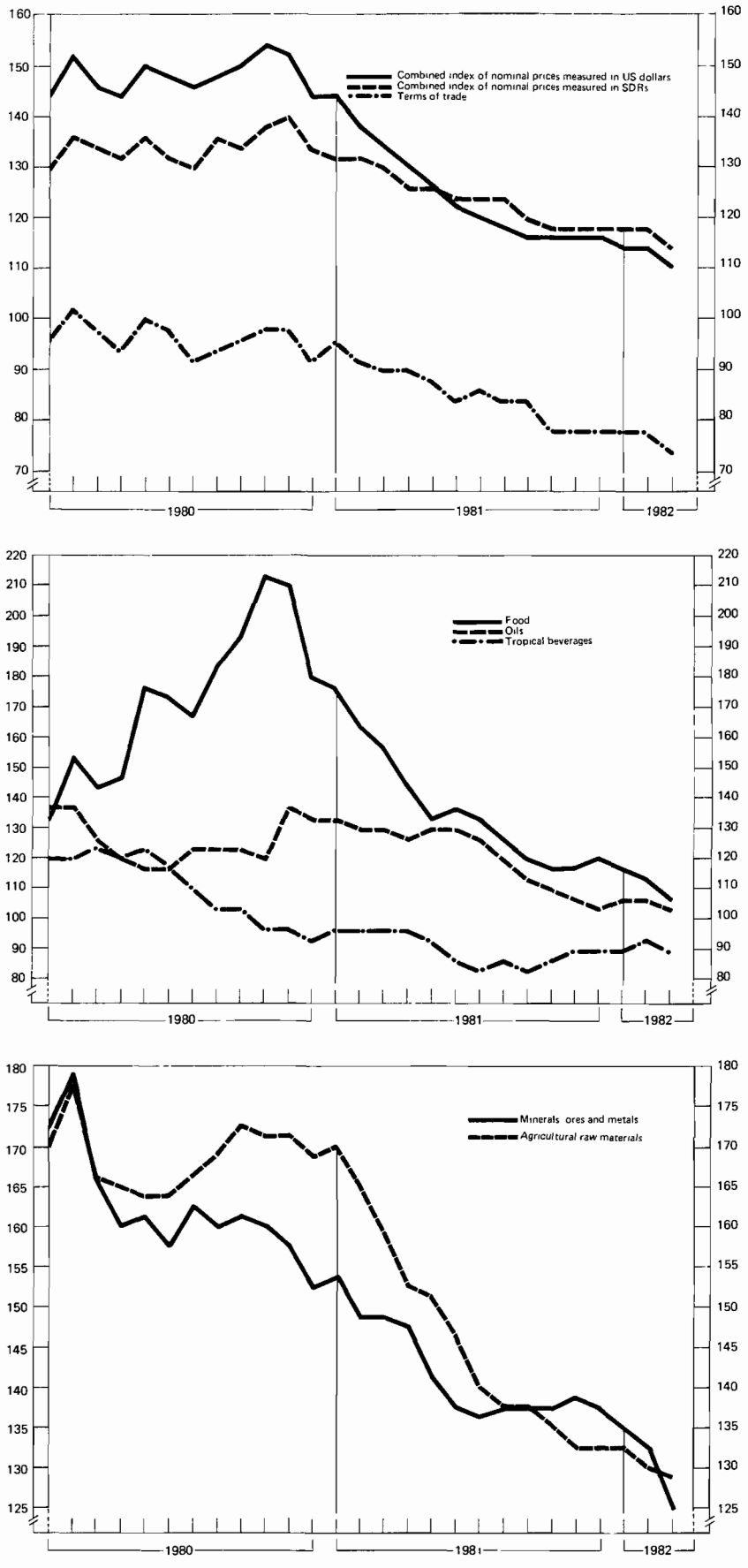
[a] Coffee, cocoa and tea

[b] The index of primary commodity prices (excluding petroleum) in current dollars divided by the unit value index of manufactured exports from the developed market-economy countries

CHART I

Monthly indices of free market prices of selected primary commodities exported by developing countries

(1975-1977 = 100)



Source UNCTAD, *Monthly Commodity Price Bulletin*

9. The declines in nominal prices in 1981 and early 1982 were characteristic of all major primary commodity groups. In the case of tropical beverages, vegetable oilseeds and oils, and minerals and metals these declines represented a continuation of trends established in 1980. For agricultural raw materials declines in nominal prices followed a period of price stagnation. With respect to food prices, a sharp decline followed a period of strongly rising prices reflecting mainly the near trebling of the price of sugar in 1980 because of supply shortfalls.

10. In retrospect, it can be seen that the highly unsatisfactory situation facing developing country primary exports during recent months has resulted from the existence of generally ample supplies in the presence of weak overall demand. Moreover, high interest rates also tended to discourage stockbuilding and led in some cases to a reduction in inventories, thus contributing to the weakening of commodity prices. The declining price trends in 1981 were in a few instances accompanied by very large fluctuations, most notably in the case of tin. It also appears that the recent rapid rises in the prices of synthetics, which reflect price increases in the petroleum products required for their production, may have cushioned to some extent the declines in the prices of those agricultural materials for which they are close substitutes. Oil prices also softened considerably as consumption and trade exhibited substantial declines during 1981 and continued to remain sluggish in early 1982, prompting further cuts in production by the major developing country exporters.

11. The weakness of aggregate world demand was also reflected by sluggish trends in the volume of trade in most commodity groups in 1981. In fact, total world exports registered a decline in volume in 1981,[7] the first such decline since 1975.

12. This decline was due mainly to a steep drop in oil trade. However, deceleration in the volume growth of manufactured exports to 2.2 per cent in 1981 from rates exceeding 5 per cent during each of the preceding three years also contributed to the poor overall world trade performance. Despite its deceleration, the rate of expansion of manufactured exports nevertheless continued to outpace that of world GDP (excluding China and the socialist countries of Eastern Europe) in 1981.

13. The bleak situation facing primary commodity exports is expected to persist in 1982. It is, however, extremely difficult to determine with any degree of certainty the price levels at which trade will take place during the coming months. Forecasting movements in dollar-denominated indices of commodity prices, normally a hazardous exercise at best, has been made more difficult in recent years due to the increased volatility of exchange rates. On balance, however, it seems likely that the prices of primary commodity exports will deteriorate further vis-à-vis those of manufactured exports during 1982. In view of the expected low growth of world GDP, a substantial increase in the demand for raw materials is not likely to be forthcoming. Moreover, a considerable upward movement of commodity prices would be required to recoup the losses incurred during the recent months. Indeed, even if commodity prices were to increase at the same rate as the prices of manufactured exports from April 1982 onward, their terms of trade this year would still show a deterioration on a year-to-year basis. Declines in the real prices of oil exports are also almost certain in 1982. In fact, due to the elimination of surcharges by many countries, the effective selling price charged by some individual OPEC sellers has already fallen in nominal terms since the latter part of 1981.

14. Any significant improvement in the prospects for the terms of trade or export volumes of primary commodities in the short term would require a resumption of buoyant growth in the developed market-economy countries. Since the upturn forecast for 1983 is likely to be modest at best, no significant improvements in the terms of trade of most non-oil primary commodities can be expected in 1983.

2. Payments imbalances and international capital markets

15. Between 1980 and 1981 changes in the pattern of surpluses and deficits on current account among major countries and country groups reflected mainly changes in relative growth rates and a sharp reduction in world petroleum exports. Although significant changes in relative commodity prices occurred as well, this factor was of much less importance than in previous years. The combination of buoyant import volume growth in oil-exporting developing countries and falling export volumes led to a marked reduction in their combined trade surplus (see annex table A.4) only partially offset by increases in the average level of their export prices and by increases in earnings on investment income account. The counterpart to this was a decrease in the aggregate deficit of the larger developed market-economy countries. In 1981 there was an increase in the deficits of the "deficit" developing countries despite good export volume performance since, as already mentioned, the terms of trade moved against them for the fourth consecutive year, interest rates rose and import volumes proved difficult to reduce (see table 2).

16. Capital markets remained highly liquid in 1981; the amount of recorded medium-term Eurocredits increased by 72 per cent from the 1980 level to reach $138 billion. Both the surprisingly large increase in the amounts agreed upon and the rise in interest rates in international capital markets appear to have been noticeably affected by developments in the United States. The tightening of monetary policy was particularly apparent in the third quarter of 1981, when the rate of growth of the narrowly defined money supply, M1, fell from 9.9 per cent to 6.3 per cent at a time when net borrowing by public

[7] Estimate by the UNCTAD secretariat, based on data for January to September 1981 contained in United Nations, *Monthly Bulletin of Statistics*, April 1982. The total excludes exports from the socialist countries of Eastern Europe and China.

TABLE 2

Current-account balances:[a] major countries and country groups, 1980-1983
(Billions of US Dollars)

Country or country group	Year			
	Actual 1980	Estimate 1981	Forecast 1982	Forecast 1983
Developed market-economy countries[b]	−48.6	−3.4	24.7	22.4
North America	8.1	6.7	10.3	−3.6
of which:				
United States	10.2	11.8	16.7	4.5
Western Europe	−42.6	−9.1	6.3	6.9
of which:				
France	−6.2	−5.3	−5.7	−8.0
Germany, Fed. Rep. of	−9.5	−1.0	12.8	19.5
Italy	−9.4	−7.0	−5.6	−5.9
United Kingdom	11.1	19.0	14.1	9.8
Japan	−9.5	7.3	13.2	21.8
Other countries	−4.7	−8.4	−5.0	−2.7
Developing countries and territories[c]	35.9	−15.1	−77.4	−81.8
Countries with current-account surpluses[d]	97.0	96.8	42.4	42.2
Countries with current-account deficits	−61.1	−111.9	−119.8	−124.0
of which:				
Net oil-importing countries[e]	−64.5	−69.9	−71.1	−74.7
Exporters of manufactures[e]	−28.0	−26.4	−26.0	−26.8
Least developed countries	−7.1	−7.8	−8.1	−8.7
Memo item: MSA countries	−17.4	−20.7	−20.7	−23.6
China	−1.2	0.7	0.0	0.0
Socialist countries of Eastern Europe	−2.2	−3.2	−2.0	−1.0
Statistical discrepancy[f]	−16.1	−21.0	−54.7	−60.4

Source UNCTAD secretariat calculations, based on official national and international sources

[a] Goods, services and private transfers

[b] OECD countries (excluding Yugoslavia) plus Israel and South Africa

[c] All countries and territories not included in other groups

[d] Includes all countries with current-account surpluses in two of the four years shown

[e] For definition see the note to annex table A 1

[f] The total statistical discrepancy is composed of a positive discrepancy on merchandise trade due to timing asymmetries and a negative discrepancy on services reflecting, in the main, under-reporting of interest income, receipts for sale of transportation services, and remittances While the latter discrepancy has been increasing systematically over time, the timing asymmetry has tended to increase during periods of accelerating inflation and to decline in periods of decelerating inflation It is the declining rate of price increases of traded goods in the period 1982-1983 compared with 1980-1981 which accounts for a reduction in the timing asymmetry and consequently an increase in the overall statistical discrepancy in those years

authorities increased by $21 billion.[8] The federal funds rate was accordingly driven up to 19 per cent in July. Perhaps not altogether coincidentally, corporations in the United States turned to the Eurocurrency market for funds, signing medium-term Eurocredit agreements for $44 billion during the same quarter, when the total of medium-term Eurocredits amounted to $68 billion.

17. This increased activity was, however, associated with an increase in average interest rates and a shortening of maturities, although spreads were reduced marginally for borrowers from OECD countries and increased slightly for those from developing countries. The combined and interrelated effects of tighter monetary policies in the United States and an increase in demand relative to supply for Eurocurrency credits resulted in an historic peak in three-month interest rates of 18.4 per cent on the London Eurodollar market during the third quarter of 1981 and an annual average rate of 16.5 per cent for the year as a whole, compared with 14.4 per cent in 1980. Since the average GDP deflator for the OECD area increased by 9.5 per cent in 1980, falling to 9 per cent in 1981, the real rate of interest was as high as 6 per cent in 1980 and 8.5 per cent in 1981. While interest rates in nominal terms increased in 1981 for the fifth consecutive year, maturities, which had averaged more than 9 years during the first half of 1980, decreased to less than 8 years during the second half of 1981.

18. The change in the position of oil-exporting developing countries as a group from net suppliers of funds to international capital markets to net users of funds during the period 1982-1983 is bound to alter the pattern of the flow of funds in international capital markets. While it is true that the reduction of surpluses registered by one group of countries must have as a counterpart an equal reduction in the deficits and/or increase in the surpluses of other countries, this latter development is expected to be largely confined to the developed market-economy countries. This improvement in the current account of their balance of payments would imply a reduced demand for funds on their part accompanied by a reduction in the supply of funds from the formerly surplus countries to international capital markets. The overall impact of these shifts on liquidity and interest rates is not clear, particularly since they coincide with developments in national monetary and fiscal policies, particularly in the United States, which are probably of greater importance in determining the level of interest rates. As a greater than hitherto proportion of new loans extended by banks would therefore flow to non-oil exporting developing countries which have, in general, somewhat lower credit ratings than borrowers in developed market-economy countries, spreads might be expected to increase, whatever the direction of overall interest rates.

19. Trends in the amounts of some other types of long-term capital flows may be gleaned from the balance of payments of developed market-economy countries. Net direct investment abroad by these countries fell by 28 per cent in nominal terms in 1980. The generally low level of profits and the attractive interest rates in international capital markets make it unlikely that a significant increase occurred in 1981, and the generally high levels of excess capacity prevailing in the developed market-economy countries would not seem to warrant optimism regarding an expansion of these flows in 1982. New foreign loans extended by the non-monetary sectors of developed market-economy countries to other countries fell somewhat between 1979 and 1980 after exhibiting continuous growth in nominal terms from 1972. Repayments, on the other hand, increased in 1980. Consequently, net provision of

[8] For a more detailed discussion of United States fiscal and monetary policy, see paragraphs 76 to 79 below.

loans from the non-monetary sector fell substantially, by about 30 per cent, in 1980, and this trend appears to have continued in 1981.

20. One large component of official government loans consists of official export credits, in respect of which a hardening of terms has recently been agreed within OECD. The impact of this agreement on developing countries is expected to be less than that on developed market-economy countries and the socialist countries of Eastern Europe. The agreement provides that interest rates on loans to countries in Category 1 are to increase from a range of 11 per cent to 11.25 per cent per annum to a range of 12.15 per cent to 12.40 per cent. Developing countries are classified in two groups according to *per capita* income. For the middle income group of countries (Category 2) interest rates are to be increased by about one-half a percentage point to a range of 10.85 per cent to 11.35 per cent, while the rate of 10 per cent applicable to the relatively poor group (Category 3) is not to be increased. [9] However, for a number of countries reclassified from Category 2 to Category 1, interest rates may rise by at least one percentage point.

21. Compared with current interest rates on international bank loans, the proposed interest rates would still be attractive. Moreover, the maturities — 5.5, 8.5 and 10 years for categories 1, 2 and 3, respectively — are longer on average than for international bank loans. None the less, these changes will increase the cost of borrowing for a large number of developing countries on an important category of loans.

[9] In fact, European OECD governments in the negotiations had taken the position that the rate for Category 3 countries should be lowered to 9.5 per cent.

Chapter 2

THE SHORT-TERM WORLD ECONOMIC OUTLOOK

A. Developing countries and China

1. Recent developments and prospects for economic growth in 1982-1983

22. Since 1973 net oil-importing developing countries have made strenuous efforts to adjust to the deterioration in the external environment brought about by two severe world recessions and a dramatic and continuing deterioration in their terms of trade. These efforts were in the main successful during the period 1975-1979 for a number of countries, primarily exporters of manufactures, who sought to adjust by accelerating export volume growth. This process, which placed emphasis on increasing supply, was facilitated by the availability of capital in international capital markets and the establishment within the International Monetary Fund of an oil facility. Other countries, whose exports consisted mainly of primary commodities and were thus unable to accelerate export volume growth, availed themselves of international finance to maintain moderate growth in import volumes. In some cases a policy of import substitution was pursued with a certain degree of success, but in others the necessary adjustment was simply postponed. The current economic crisis, which began in 1979, has involved most developing countries in significant losses in their terms of trade and greatly reduced the short-term prospects for a rapid expansion in export volumes.

23. Moreover, in view of the heavy volume of debt which accumulated in the aftermath of the 1974-1975 crisis and the emergence of historically high interest rates, international capital markets could not play the same role during the second crisis. Increased balance-of-payment pressures narrowed the policy options available to governments in 1979 and 1980, many of which were also concerned with the acceleration of inflation due in large part to the rapid increases in the prices of imports of fuel and manufactures. Consequently, many developing countries were left with no option but to alter their economic policies by placing greater emphasis on measures to reduce demand rather than on efforts to increase supply. The result has been a marked reduction in GDP growth during the three-year period 1980-1982 as compared with the period 1975-1980. Indeed, in 1981 the growth performance of oil-importing developing countries was the worst in the post-war period (see table 3).

24. The widespread nature of the economic crisis facing developing countries is illustrated by the large number of countries which have taken deliberately restrictive policy measures to reduce internal demand. For example, 15 among the 25 developing countries for which data were readily available for the years 1980 and 1981 reduced the amount of fiscal stimulus provided by the public sector in at least one of these years,[10] despite the fact of falling or negative GDP growth rates in 70 per cent of the cases. In nearly all cases the reduction in stimulus took the form of expenditure reductions rather than increased revenues, which in all probability has meant reductions in public investment programmes.

TABLE 3

World output by major countries and country groups,[a] 1975-1983
(Percentage change)

Country or country group	Year or period: Actual 1975-1980 (Annual average)	Actual 1980	Estimate 1981	Forecast[b] 1982	Forecast[b] 1983
World	3.9	1.9	0.9	1.2	3.7
Developed market-economy countries[c]	3.4	1.2	1.3	0.9	3.2
North America	3.5	−0.2	2.1	0.0	3.8
Western Europe	2.9	1.4	−0.2	1.3	2.5
Japan	5.1	4.2	2.9	2.0	4.0
Others	2.6	2.2	0.7	1.4	2.6
Developing countries and territories[d]	5.0	2.8	−0.8	1.6	5.5
Major oil-exporters	3.7	−3.4	−6.4	−2.6	6.3
Oil sector	0.0	−11.4	−17.8	−16.3	4.9
Non-oil sector	8.1	5.3	3.8	7.2	7.1
Other oil-exporters	6.5	6.7	6.7	5.0	6.4
Net oil-importing countries	5.3	4.9	1.5	3.8	4.7
Exporters of manufactures	6.6	6.7	−1.5	3.6	5.2
Least developed countries	3.9	2.8	2.8	3.2	3.4
Memo item: MSA countries	4.2	5.0	4.5	3.7	4.0
China[e]	4.9	5.0	3.0	4.0	5.9
Socialist countries of Eastern Europe[e]	4.3	3.0	1.9	2.8	3.2

Source UNCTAD secretariat calculations, based on official national and international sources

[a] For definition of country grouping see the explanatory notes at the beginning of this report and the note to annex table A 1

[b] See footnote [c] to annex table A 1

[c] Gross domestic product/gross national product

[d] Gross domestic product

[e] Net material product

[10] International Monetary Fund, *International Financial Statistics*, May 1982.

25. As shown in table 3 and annex table A.1, there were marked differences in the growth performance of different groups of countries. The rate of growth of GDP in net oil-importing countries, which was already below 5 per cent in 1980, fell to 1.5 per cent in 1981. Within this group, exporters of manufactures actually experienced a decline in output in 1981 after having registered rates of GDP growth of more than 6 per cent per year during the period 1975-1980. This dramatic decline was substantially affected by negative growth rates in Argentina and Brazil, two countries with a large weight in the total output of the group. Net exporters of oil not classified as major oil exporters, on the other hand, experienced buoyant growth in both 1980 and 1981.

26. For most major oil-exporting developing countries, the years 1974-1981 have entailed structural adjustment problems of a rather different nature since in most of those years there was no binding balance-of-payments constraint; and in their case non-oil output grew rapidly, accompanied by a tendency toward accelerating inflation and, for many countries, difficulties in coping with labour scarcity.[11] However, the impact of energy conservation, inter-fuel substitution, and increased production in other countries, together with the current world recession, has dramatically reduced demand for crude oil produced in most oil-exporting countries.

27. Production of crude oil by countries members of OPEC, for example, will have fallen in six of the nine years from 1974 to 1982, and continuously during the period 1979-1982. In 1983 it is expected that there will be an end to this trend of absolute declines, as demand for oil picks up with the forecasted economic recovery and the draw-down of inventories is completed. However, the level of OPEC production will remain far below capacity (for a detailed discussion see part III, chapter 7). Since no more than moderate price increases in nominal terms are expected in 1983, export earnings will increase only moderately. Consequently, all but a very few major oil-exporting countries are expected to aim at rates of growth slower than those in the late 1970s in their non-oil sectors in order to slow the rate of growth of import volumes as external financial constraints take on significance for an increasing number of countries in this group.

28. The most seriously affected (MSA) countries registered an average GDP growth rate in 1981 of 4.5 per cent, as compared with 5.2 per cent a year earlier, while for least developed countries the GDP growth rates for both 1980 and 1981 were 2.8 per cent — a rate which did not even keep pace with population growth. In 1981 poor harvests (which had been partly responsible for low growth rates in 1980) were of less importance, since far fewer countries were affected by unfavourable crop conditions. Preliminary figures suggest that the combined cereal production in MSA and least developed countries grew by about 3 per cent in 1981. The outlook for agricultural production in 1982 does not appear to be worse than that in 1981 — when about one-fifth of the 50 countries classified as MSA or least developed faced unfavourable crop conditions. However, an additional 14 countries in these groups are suffering from food shortages owing to the lack of sufficient carry-over from previous years, inadequate transport with which to distribute imported food, and significant numbers of refugees or displaced persons.

29. GDP performance in major geographic regions (see annex table A.1) reflects the economic characteristics of the larger countries in each region. Thus, developing countries in the Western hemisphere show a marked decline in GDP growth rates in 1981 due to the large weights of Argentina and Brazil, although declining growth rates were widespread. Countries in East Asia, of which a large number are exporters of manufactures, performed much better than the average. Sub-Saharan African countries (excluding Nigeria), which were most affected by adverse developments in commodity markets, registered particularly unsatisfactory growth rates of around 2 per cent in both 1980 and 1981, well below the rate of population increase.

30. With the decline in rates of growth of economic activity, the rate of growth of investment has been falling as well. In the private sector, producers of goods for domestic markets and foreign markets alike have been confronted with weak demand. Moreover, increases in interest rates and quantitative credit restrictions, and delays in obtaining import licenses which are usually associated with balance-of-payments difficulties, increase costs and tend to discourage investment further. Again, reductions in government expenditure often tend to fall disproportionately on capital outlays.

31. Data on exports of machinery and transport equipment from developed market-economy countries to developing countries reflect the decline in the pace of investment in non-oil-exporting developing countries.[12] During the five-year period 1975-1980, the growth rate of such exports in real terms had averaged about 4.7 per cent per year, compared to nearly 10 per cent per year in the period 1970-1975 (see table 4). Moreover, imports of investment goods have fallen even more dramatically among the small and medium-size developing countries in the Western hemisphere and sub-Saharan Africa. On the other hand, the relatively small energy-importing MSA countries increased their imports of investment goods during the second half of the 1970s, while the least developed countries, with small levels of such imports, were able to maintain relatively high growth rates during the same period. This was apparently due to substantial increases in the flow of develop-

[11] See part II, chap. 4, below.

[12] The fall in the rate of investment may be less than is implied by the trade data presented here since machinery and transport equipment exported by other developing countries and by the socialist countries of Eastern Europe are not included. The fall also would be overstated if there has been a shift in the composition of investment toward activities such as road construction and agricultural infrastructure, with lower import requirements. It should be noted that while the rate of growth of investment may have slowed, the ratio of investment to GDP has tended to increase. This point is discussed extensively in part two, chap. 2 below.

TABLE 4

Trends in the volume of investment goods[a] imported from developed market-economy countries by selected groups of developing countries
(Annual growth in per cent)

Group	1970-1975	1975-1980
Developing countries, excluding countries members of OPEC	9.9	4.7
of which:		
Oil-importing developing countries in Western hemisphere (excluding Argentina and Brazil)	5.2	2.1
Sub-Saharan Africa	11.3	−4.4
East Asia	9.3	10.0
Memo items		
MSA countries[b]	3.9	9.4
Least developed countries	13.0	10.9
Imports of developing countries (excluding members of OPEC) from world	9.6	5.9

Source: UNCTAD secretariat calculations based on data of the United Nations Statistical Office.

[a] Machinery and transport equipment (SITC 7).

[b] Excluding India and Egypt.

ment assistance to them, but it seems unlikely that these trends continued in 1981 and even less likely that they will continue in 1982 in view of the increased pressure on their balance of payments.

32. The constraints on GDP growth described above are expected to continue throughout most of 1982. Even in 1983, GDP growth for these countries is unlikely to exceed 5 per cent, since many of them are expected to use the increase in export earnings associated with the moderate upturn forecast in world demand to avoid increasing unduly their reliance on private capital flows.

2. TRADE BALANCES AND TERMS OF TRADE

33. The export performance of developing countries in 1981 displayed wide divergences. The sharp decline in the export volumes of most oil-exporting countries is expected to be accentuated in 1982, with positive growth expected only in 1983. Net oil-importing developing countries as a group increased their export volumes at rates above the world average, although this growth was well below the trend rates realized during the first half of the 1970s.

34. Within the group of net oil-importing developing countries there were also major differences. In 1981, despite near-stagnant demand in most world markets, fast-growing exporters of manufactures in general and countries in East Asia (many of which belong to this category) achieved remarkably high rates of growth in their export volumes. They are expected to continue to achieve considerably higher-than-average rates of growth in 1982-1983, though markedly lower ones than those attained during 1970-1979.

35. In 1981 growth in export volumes in the Western hemisphere was also higher than the average for all developing countries. This reflected large increases for the second successive year by Brazil (25 per cent) and an increase of 12 per cent in both Mexico and Argentina, all large countries. Two other countries, with much smaller economies, experienced growth of about 15 per cent in export volumes, but 7 actually registered declines.[13]

36. Although a few countries in South Asia experienced substantial rates of increase, the rate of growth of exports for the region as a whole was negative in both 1980 and 1981, reflecting declines in India and Bangladesh. Low average growth rates are expected to prevail in 1982, with some improvement likely in 1983. Low prices, labour disturbances and power shortages adversely affected production of textiles in India and jute fibres in Bangladesh, while adverse weather conditions in the former country and low prices resulted in shortfalls in the production of tea and coffee.

37. Least developed countries, the majority of which are located in sub-Saharan Africa, recorded growth rates in export volumes in 1981 which were lower than the average for all oil-importing countries and lower than their own average performance during the period 1979-1980. This was due in large measure to continued weak demand for cotton and coffee, which constitute about 50 per cent of the exports of these countries.

38. Supply conditions also affected export performance. In some cases poor weather was responsible; in others balance-of-payments difficulties led to shortages of intermediate products; and for some producer prices may not have been sufficiently remunerative. However, the most important factor affecting the export performance of the non-oil-exporting developing countries was the slow growth of their export markets.

39. The mainly unsatisfactory developments in the growth of exports in 1981 was accompanied by a decline of about 6 per cent in the terms of trade of most groups of developing countries, following three years of even larger average annual rates of decline. Further deterioration is foreseen in the period 1982-1983. Countries whose exports were essentially tropical beverages, fats and oils, rubber, timber, and copper experienced greater-than-average terms-of-trade declines in 1981, since prices of those commodities in relation to prices of manufactured exports fell considerably. Prices of cereals and petroleum, on the other hand, which account for a large share of the imports of those countries, increased at rates equal to or greater than the prices of manufactured exports. Among the net oil-importing developing countries, the MSA and least developed countries experienced greater-than-average terms-of-trade declines in 1981. Countries for which sugar is a major export commodity benefited from large price increases in 1979 and 1980. Such gains will, however, be largely reversed by the price decline in 1981 and the further decline expected for 1982.

40. The combination of deteriorating terms of trade and lower-than-average rates of growth in export volumes resulted in absolute declines in the

[13] Of 14 countries for which recent estimates were supplied to the UNCTAD secretariat by the secretariat of the Economic Commission for Latin America.

purchasing power of exports in 1980 and 1981 for most groups of developing countries. The least developed countries experienced particularly large declines in 1981. Exporters of manufactures, on the other hand, experienced a substantial increase in the purchasing power of exports in that year, exceeding in absolute value the decline registered in 1980. Since for most developing countries the terms of trade are expected to fall further in 1982 and to remain at these low levels in 1983, the anticipated moderate rates of growth in exports expected in those years will mean that the purchasing power of exports will grow by less than 3 per cent in 1982 and by 4-5 per cent in 1983.

41. Developing countries have endeavoured to adjust to the growing pressure on the balance of payments by taking steps to reduce the rate of growth of imports and to increase the share of exports in GDP. In order to finance the additional investments required to undertake structural adjustment and to sustain minimum import levels, many developing countries have sought an increase in the net flow of external finance. Different patterns of adjustment can be seen in chart II, which depicts the interrelationships of growth in export volumes, import volumes and the purchasing power of exports for three groups of net oil-importing developing countries.

42. An adjustment strategy aimed at increasing exports has enabled major exporters of manufactures to maintain more satisfactory rates of growth of output and employment than most other developing countries. During the 1960s, export volumes and GDP increased at about the same rate on average, exceeding the growth of imports by about 1 per cent. From 1975 to 1981, the growth of exports exceeded that of imports by more than 6 percentage points annually (see panel B of the chart). The rapid growth of export earnings of these countries enhanced market perceptions of their creditworthiness, and enabled many of them to increase their borrowings from international capital markets, thus greatly facilitating the adjustment process. Their ability to sustain high rates of export growth while slowing the rate of growth of imports would have resulted in an elimination of the trade gap if prices of both imports and exports had remained at 1975 levels. This achievement is all the more impressive since it was accomplished in spite of generally slow growth in world demand and frequently involved strong domestic policy measures to restrain the growth of internal demand.

43. By the early 1970s rapidly rising exports, particularly of manufactures, had become a viable adjustment strategy for many countries which had built up a relatively large industrial base, a pool of skilled labour, and sizeable cadres of engineers and managers. Some countries accomplished this through the pursuit of export-oriented policies during the preceding 25 years, others by emphasizing import substitution during at least part of that period. In the mid-1970s these conditions did not, however, apply to the majority of the net oil-importing developing countries, which were still largely dependent on primary commodity exports, while their export volumes continued to show substantial growth in the second half of the decade. This was at a lower average rate than in the first half because of the general weak state of demand in world commodity markets (see panel D of the chart). Nevertheless, remarkable progress was made in restoring external balance on the merchandise trade account and these countries may succeed in eliminating the trade gap measured in 1975 prices by 1982. But this improvement will have been accomplished by a substantial decline in import volumes since 1978, which has inevitably been associated with a marked deceleration in their GDP growth rates.

44. Least developed countries have been unable to expand export volumes significantly over the decade of the 1970s (see panel C of the chart). However, they were able to reverse the downward trend of the first half of the decade. Despite improved export performance since 1975, terms-of-trade losses have been so severe that the purchasing power of exports has tended to stagnate. Their plight would have been even more desperate had not increased amounts of external assistance financed import levels substantially above those that could have been sustained from export earnings alone.

45. Balance-of-payments constraints have thus resulted almost everywhere in significant reductions in the rate of growth of imports, and, in some cases, absolute declines, although with significant variations from one group of countries to another. In 1981 these constraints were particularly marked (see annex table A.2). For example, the level of import volumes fell in absolute terms for the MSA and least developed countries and for the oil-importing developing countries as a group. While the rate of growth in import volumes slowed for both the major oil exporters and other net oil exporters, it was still quite high, at 12 and 15 per cent, respectively.

46. In 1982 and 1983 import volume growth rates are expected to average 4.5 per cent for the net oil-importing countries, but there is likely to be considerable variation among country groups, as may be seen from annex table A.2. For example, due to lower growth rates in the purchasing power of exports and the limited access to international capital markets of most of them, least developed and MSA countries are expected to experience growth of only about 2.5 per cent per year in import volumes. Even these modest expectations will entail increases in their current-account deficits, for which additional financing in the form of capital flows on concessional terms is being sought through the implementation of the Substantial New Programme of Action for the 1980s which was finalized at the United Nations Conference on the Least Developed Countries in September 1981.

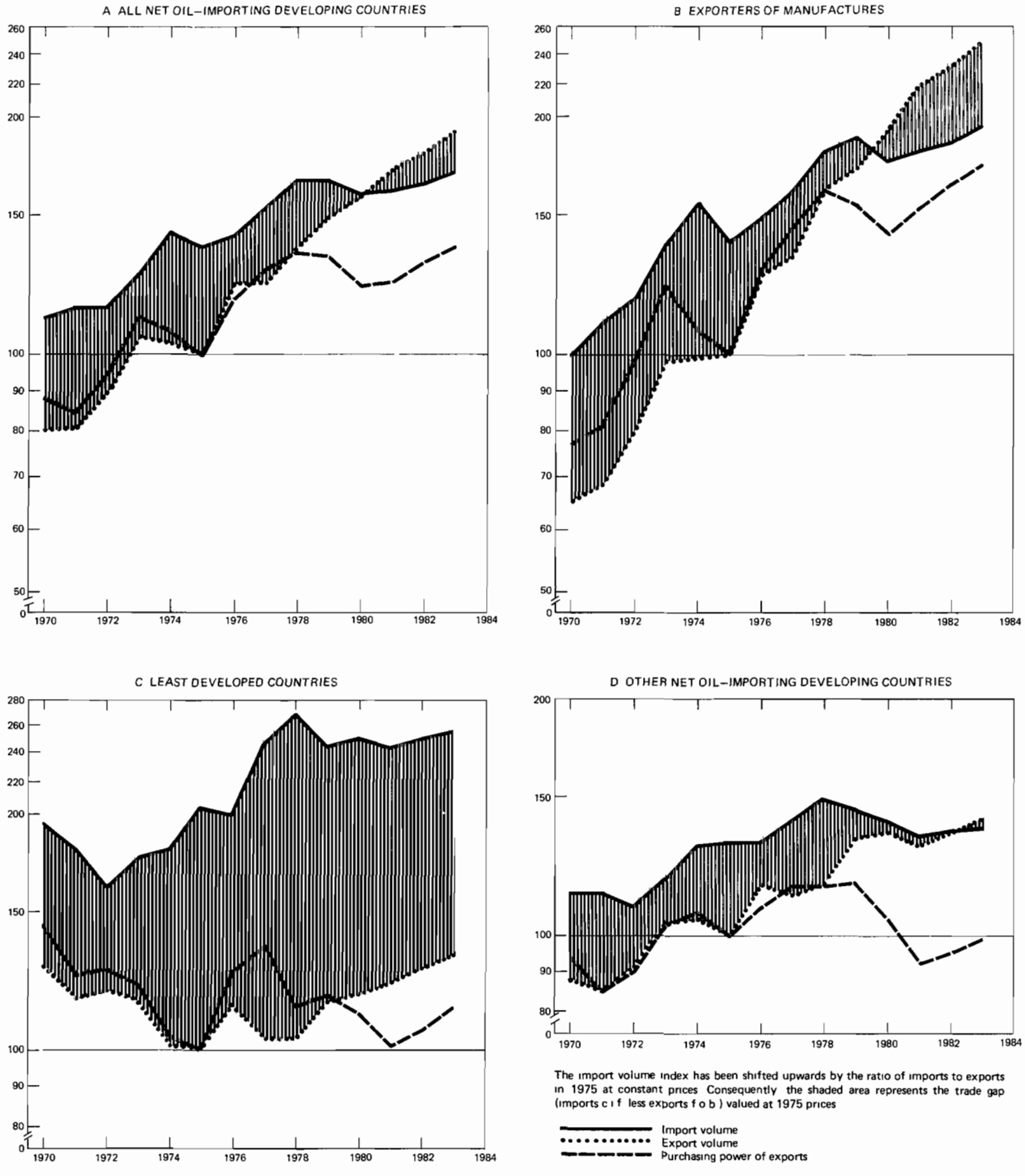
3. The balance of payments

47. For developing countries as a whole, the balance-of-payments surplus on current account registered in 1980 was converted into a deficit in 1981, and this aggregate deficit is expected to increase quite substantially in 1982 and 1983. This overall movement is, of course, associated with a change for

CHART II

Adjustment of trade balances: selected groups of net oil-importing developing countries, 1970-1983

(Index numbers (1975 = 100) logarithmic scale)



The import volume index has been shifted upwards by the ratio of imports to exports in 1975 at constant prices. Consequently the shaded area represents the trade gap (imports c i f less exports f o b) valued at 1975 prices

several countries from a large surplus in 1980 to an expected deficit in 1982 and the maintenance of large deficits in most others.

48. As already mentioned, the major oil exporters experienced a substantial reduction in their surpluses between 1980 and 1981 due to a significant reduction in their export volumes, offset only partially by higher average export prices in the latter year, and to continuing rapid growth in import volumes (see annex table A.2). The continuation of the world economic recession well into the second half of 1982 and the effects of conservation and inter-fuel substitution are expected to result in a further large reduction in their export volumes in 1982, while export prices are also expected to fall slightly in nominal terms. Despite efforts made by most oil-exporting countries to slow the rate of growth of import volumes, a substantial increase is nevertheless expected.

49. Developments in the services account also tended to reduce the balance-of-payments surplus. The negative balance on non-factor services is expected to increase substantially but to be partially offset by an increase in the positive balance on investment income. Accordingly, the surpluses of the major oil-exporting countries as a whole — around $77 billion in 1981 — are expected to fall to about $14 billion and $13 billion in 1982 and 1983, respectively.

50. Net oil-importing developing countries as a group had a deficit of about $65 billion in 1980, which increased to around $70 billion in 1981. Only small increases in this deficit are expected for 1982 and 1983. As may be seen from table 2, exporters of manufactures, which accounted for about half of the aggregate deficit of this group of countries in 1980 and 1981, are expected to account for a slightly smaller share in both 1982 and 1983. The least developed countries, which accounted for about one-tenth of the deficit in 1980 and 1981, are expected to account for a slightly larger share in 1982 and 1983. A number of net oil-exporting developing countries, including some of the major oil exporters, also recorded current-account deficits in 1981, amounting to about $42 billion. The aggregate deficits of developing countries with current-account deficits thus amounted to about $112 billion in 1981.

51. A large negative item in the current account of developing countries other than major oil exporters is net investment income, an item particularly affected by the high levels of debt incurred in recent years. The large increases in this item in 1981, however, also reflect the high level of interest rates on debt subject to variable interest rates. For example, LIBOR, on which most Eurocurrency lending is based, rose from 8.7 per cent in 1978 to 16.5 per cent in 1981. This increase meant that interest payments on medium- and long-term debt in 1981 were about $11.5 billion higher than they would have been if interest rates had remained at the levels prevailing in 1978. By 1983, the deficit on net investment income account is expected to exceed $45 billion, i.e., nearly one-half of the aggregate current-account deficit of this group of countries.

4. Financing the current-account deficits of developing countries, 1980-1983

52. The principal means of financing the deficits of developing countries are shown in table 5, together with certain indicators of the implications of these financing patterns for the level of external indebtedness and the burden of debt service. International capital markets are projected to increase their medium- and long-term loans exposure to developing countries, but this excess of lending over repayments is barely equivalent to payments of interest on the balance of such loans outstanding. This leaves an amount equal to the deficit on goods and non-

Table 5

Developing countries with current-account deficits:[a] net capital flows, debt service and debt-service ratios, 1980-1983
(Billions of US dollars)

	1980	*1981*	*1982*	*1983*
A. *Source of financing of deficit*				
Current-account deficit	76.5	91.9	90.3	94.6
Increase in official reserves	−5.4	−7.9	−1.1	2.6
Total net capital flows	71.1	84.0	89.2	97.2
Official bilateral flows on concessional terms	15.7	17.3	19.0	21.0
Grants[b]	11.0	11.2	12.0	13.3
Medium and long-term loans	4.7	6.1	6.5	7.0
Other medium and long-term official bilateral loans	3.7	4.1	4.5	5.0
Multilateral institutions	9.1	9.9	10.5	11.1
Private medium and long-term flows	33.2	47.0	50.5	53.9
Direct investment	7.4	8.0	9.0	10.0
Export credits	8.7	14.0	15.5	13.0
Bilateral portfolio investment	3.2	3.5	3.8	4.0
Other international bank lending	13.9	21.5	22.2	22.9
IMF lending (net)	1.0	4.6	5.0	5.0
Short-term capital, unrecorded flows and errors and omissions	8.4	1.1	−0.3	1.2
Memo item:				
Total interest[c] and profit remittances	31.9	39.6	43.2	50.1
Net transfer	42.1	46.7	46.7	45.8
B. *Debt outstanding, debt service and debt-service ratios*				
Debt outstanding, end of period[d]	334.4	398.1	466.6	539.3
Debt service				
Medium and long-term loans	61.0	72.7	81.1	94.1
IMF lending	2.1	2.0	2.4	3.0
Total loans	63.1	74.7	83.5	97.1
Profit remittances	7.9	8.0	8.5	9.0
Debt service plus profit remittances	71.0	82.7	92.0	106.1
of which				
Debt amortization	39.1	43.1	48.8	56.0
Ratios (percentages)				
Medium and long-term loans outstanding to exports[e]	107.7	121.3	133.3	135.2
Interest on medium and long-term loans to exports	7.1	9.0	9.6	10.0
Debt service plus profit remittances to exports	22.9	25.2	26.3	26.6

Source UNCTAD secretariat calculations, based on international sources

[a] Excluding major oil exporters

[b] Excluding technical assistance

[c] Balance-of-payments basis, does not include interest on short-term debt or on IMF drawings

[d] Medium and long-term only, including IMF drawings outstanding

[e] Goods and services

factor services to be raised through private sector flows such as direct investment, export credits and short-term borrowing and through official capital flows, including credits extended by the International Monetary Fund.

53. Because medium- and long-term loans raised on private capital markets, net of repayments on past borrowings, rose by much less than the current-account deficits of the non-oil exporting developing countries during 1980 and 1981, reserves and short-term borrowings financed an unusually large share of these deficits. However, this trend is not likely to continue in 1982 and 1983, since only small increases are expected in most categories of medium- and long-term flows, while current-account deficits are expected to remain approximately at current levels. Bilateral and multilateral financial flows on below-market terms, however, are not likely to increase substantially. The flow of official development assistance in the form of concessional bilateral loans and grants may have increased by nearly $2 billion from 1980 to 1981 but maintaining these levels constant in real terms appears to be as much as can be expected, despite the efforts of some DAC donors to increase their ODA as a percentage of GNP. Moreover, the virtual disappearance of the current-account surpluses of OPEC member countries expected in the course of 1982 and 1983 would seem to imply difficulties for them to increase significantly their net capital flows to other developing countries (see annex table A.4).

54. Flows from multilateral lending institutions increased at a rate of 13 per cent per year from 1975 to 1981 and an increase of about 6 per cent per year is expected in 1982 and 1983. Compared with the rate of price increase of manufactured exports from developed market-economy countries, there has been little increase in real terms up to mid-1982, a trend which is expected to continue in 1982 and 1983. The average rate of interest on loans has also been increased by most institutions. The World Bank, for instance, in its regular lending programme increased the average interest rate of loans from 9.4 per cent in fiscal year 1981 to 11.3 per cent in fiscal year 1982 and the ratio of IDA loans to regular loans fell from 40 per cent to 25 per cent during the same period. Thus, the rise in the average interest rate faced by developing countries is expected to increase even more than the rise in interest rates for loans from the Bank's regular resources would indicate.

55. In the late 1970s, the International Monetary Fund embarked upon a substantial expansion of its lending activity in recognition of the urgent need for additional balance-of-payments finance, particularly for developing countries with only limited access to international financial markets. This has resulted in an increase in total drawings on the Fund from SDR1.8 billion in 1979 and SDR3.8 billion in 1980 to SDR7.1 billion in 1981. Against these drawings must be offset repayments on earlier drawings, which amounted to SDR2.1 billion in 1981. Thus, net lending by the Fund in 1981, the bulk of which was provided to net oil-importing developing countries, reached SDR 5 billion. In view of the size of undrawn balances in connection with agreements under the upper credit tranche facilities reached by end-March 1982, net lending by the Fund in 1982 could exceed 1981 levels. Fund resources appear to be adequate to sustain a similar amount of lending in 1983. However, actual disbursement of such amounts can take place only if the conditions associated with present agreements or those which are reached in the course of the next 18 months can be met by developing countries. This is likely to be especially difficult given the highly adverse external environment which these countries currently face.

56. Official export credits may increase by 10 per cent per year in nominal terms in 1982 and 1983, although, as mentioned in chapter 1, their average terms are expected to harden. Official flows with varying degrees of concessionality and conditionality are thus expected to continue to finance about 40 per cent of the total current-account deficits of developing countries in 1982 and 1983.

57. Although the total outstanding and disbursed debt of developing countries is expected to continue to increase, the rate of increase may well be less than the rate of growth of export earnings, particularly in 1983. If at the same time interest rates on international capital markets decline in 1982 and 1983 from their 1981 average levels while the share of official loans with lower interest rates increases slightly, the ratio of debt service plus profit remittances to exports may stabilize in 1982 and 1983, at around 26 per cent.

58. Evidence that debt servicing has grown to claim an excessively large share of export earnings, particularly in low-income[14] countries, is provided by the growing number of countries that have sought to negotiate rescheduling of their external public and publicly-guaranteed debt. Compared with the period 1970-1979, when seven countries rescheduled their debts, there were 13 such countries in the period 1978-1981, of which six have either rescheduled more than once or indicated their intention to do so in the near future. The difficulties most of these countries have had in resuming normal debt servicing have been associated with the failure of export earnings to revive in 1981 after the widespread declines in 1980.

59. These high levels of debt and debt service relative to export earnings will continue to render many developing countries highly vulnerable to sharp fluctuations in their export earnings or to abrupt changes in market perceptions of their creditworthiness. The total outstanding medium- and long-term debt of developing countries other than major oil exporters is expected to reach $539 billion by the end of 1983, amounting to 135 per cent of export earnings, compared with 121 per cent in 1981. The inclusion of short-term debt, about which information is extremely tenuous, could add as much as $100 billion to this figure. The net outstanding and disbursed medium- and long-term debt of major oil

[14] For example, of the 13 countries recently involved in debt rescheduling negotiations, 8 were MSA countries, least developed countries or countries with a *per capita* income of less than $600 in 1978. Without exception, all of these countries had introduced strongly deflationary policies or pledged to do so in order to reduce their current-account deficits and resume debt-service payments.

exporters is also large in absolute terms, although small in relation to export earnings. Inclusion of this debt, which is expected to reach $125 billion by 1983, would lead to a projection for the net outstanding and disbursed medium- and long-term debt of all developing countries of $600 billion by the end of 1983.

60. In general, those major oil-exporting developing countries which are expected to have current-account deficits in 1982 or 1983 are in a good position to finance their needs by drawing down their net foreign assets or by borrowing, since debt service currently absorbs only a small portion of their export earnings.

5. China

61. For the past three years China has been engaged in the implementation of major economic reforms due to the emergence of bottlenecks, inflation, difficulties in absorbing a growing labour force, and reductions in the efficiency of investment. While the first phase of the readjustment period was completed in 1981, continued implementation of the reforms is expected to characterize economic policy in the foreseeable future. The reforms aim to reduce the share of investment in total output in favour of an increase in consumption and agricultural output, to reduce the budget deficit, and to increase efficiency in the use of existing plants. Among the measures taken to achieve these objectives were reductions in capital construction investment allocations, increasing the degree of enterprise autonomy, introduction of cost-benefit analysis in the choice of investment projects, imposing a user charge for capital, and encouraging the use of material incentives for workers.

62. Significant progress has been made toward the attainment of these objectives. In 1980 and 1981 gross output of heavy industry registered low or negative rates of growth in real terms, while that of light industry grew at rates of 18.4 and 14.1 per cent in 1980 and 1981, respectively. Gross agricultural production, which was adversely affected by drought and floods in both of the last two years, nevertheless registered significant increases, approaching 6 per cent in 1981. The growth of net material product (NMP) continued its planned deceleration from 6.9 per cent in 1980 to 3 per cent in 1981.

63. In implementing the planned shift toward output of consumer goods difficulties were encountered in matching increases in the output of these goods with wage increases. Consequently, consumer prices increased from 1.4 per cent per year during the period 1975-1979 to 7.5 per cent in 1980 before receding to 2.5 per cent in 1981. According to the Chinese authorities,[15] the widespread evidence of disguised price increases arising from the sale of low-quality goods at prices normally associated with goods of higher quality also reflected pressure on consumer goods. The problem of excess liquidity has been addressed by further reductions in government budgets, the issue of bonds to absorb surplus purchasing power and the reinstitution or tightening of price controls.

64. The change in the planned composition of output as between heavy and light industry entailed significant changes in the demand for intermediate goods. For instance, energy consumption per unit of industrial output fell by 6 per cent in 1981. Production of coal, crude oil and natural gas was either stagnant or fell below 1980 levels, while electricity output increased by less than 3 per cent. Large declines were also registered in the production of pig iron and steel, heavy machinery and transport equipment.

65. Since renewed growth in heavy industry is planned for 1982 as well as continued substantial expansion in agriculture and light industry, growth of total net material product is expected to be somewhat more balanced, with economic planners aiming for a rate of growth of 4 per cent. This growth rate is intended to accommodate a rate of growth of consumption of 5.7 per cent and of investment by 3.2 per cent. These growth rates would seem to be well within reach, provided the agricultural sector does not suffer another year of poor weather conditions. For 1983 planned figures are not available, but an acceleration of growth in NMP to 5.9 per cent has been forecast by the econometric model of China incorporated in Project LINK (see annex table A.5) on the assumption that a continuation of present policies will lead to a resumption of growth in gross industrial output of 8 per cent.

66. The rate of growth of both exports and imports decelerated in 1981, but the growth rate of the former was twice that of the latter, with the result that the f.o.b. trade balance was in surplus by about $1.8 billion, compared to a slight deficit of $0.2 billion in 1980. In volume terms, exports are estimated to have increased by 18 per cent, with greater-than-average growth registered by manufactured exports. Import volumes grew by 5 per cent, reflecting reductions in imports of plant, machinery and equipment in consequence of the reduction in investment mentioned above. In 1982 exports and imports are both projected to increase at approximately 9 per cent, implying a trade surplus of about the same order of magnitude as in 1981. A negative balance on invisibles (including insurance and freight) of about $1.1 billion is expected to partially offset the trade surplus, resulting in an overall current-account surplus of about $700 million.

B. The developed market-economy countries

1. Output, prices, and employment

67. In response to persistent inflationary pressures in the 1976-1979 period which were reflected, for example, in the sharp rise in consumer prices in 1979 and 1980, governments adopted restrictive monetary policies and in most cases neutral fiscal policies in the latter year. These anti-inflationary policy stances were maintained in 1980, when private consumption slowed in response to terms-of-trade losses and interest-sensitive categories of expenditures such as construction and business

[15] As reported in *Xinhua News Agency*, 29 April 1982.

inventories, declined. Private fixed investment slowed in response to both the deceleration in final demand and the rise in interest rates.

68. Indeed, the beginning of a normal cyclical upturn in the first half of 1981 involving all the above expenditure components was met by further intensification of restrictive monetary policies, particularly in the United States, since inflationary pressures remained strong. Consequently, interest rates reached historically high levels in both nominal and real terms, leading to declines in the same interest-sensitive factors adversely affected in 1980. National and international multiplier effects further weakened consumer spending, while the growth of public expenditure was further curtailed. Thus, growth in the developed market-economy countries has barely exceeded 1 per cent for the second successive year, while unemployment rates increased steadily. The only countercyclical influence of any significance in the second half of 1981 was the buoyant demand for exports by developing countries, particularly the oil-exporting countries and fast-growing exporters of manufactures. Indeed the strength of this demand for the exports of the developed market-economy countries helped sustain demand in 1980 and made an important contribution to the beginning of the short-lived recovery in the first half of 1981.

69. GDP growth rates among developed market-economy countries exhibited considerable variation in 1981. Thus, while they were higher than average for Japan (2.9 per cent) and North America (United States 2 per cent, Canada 3 per cent), they were either negative or negligible in the case of the major European countries.

70. The pace of economic activity during 1981 displayed a notable lack of synchronization among the developed market-economy countries, which may well continue in 1982. For example, growth slowed in the United States and Japan during the second half of 1981, while there was a small upturn in economic activity in the major European countries. In the United States the decline in economic activity was concentrated in the sectors particularly sensitive to high interest rates but was also due in part to the loss of competitiveness in the export sector because of the appreciation of the United States dollar. In Japan the deceleration in growth was due in large part to declines in housing construction and a less buoyant export performance. The mild acceleration in growth in the major European countries was led by a rebound in private consumption.

71. In 1981 the slow growth in output resulted, not surprisingly, in high rates of unemployment. While employment levels rose in North America and Japan, they fell in most major European countries during the year. Meanwhile, the labour force continued to grow in most developed market-economy countries, leading to worsening rates of unemployment, which in the OECD countries increased from 6.2 per cent in 1980 to over 7 per cent in 1981. The number of unemployed workers in the OECD countries is estimated to have reached 25 million in 1981.[16]

[16] *OECD Economic Outlook*, No. 30, December 1981 (table 6).

72. Unemployment rates also exhibited substantial variation among the major OECD countries in 1981 (see annex table A.1). Thus, in the United Kingdom they were well above the OECD average, while in the Federal Republic of Germany and Japan they were much lower than average. Rates of the other major OECD countries clustered around the average.

73. Although the achievement was accomplished at a high cost in terms of output and employment, inflation abated in 1981. For example, the rate of increase of the private consumption deflator declined to around 9.5 per cent in 1981 from 11 per cent in 1980. The decline was very marked in the United States, Japan and, particularly, the United Kingdom (from 16 to 11 per cent). Contributing to the easing of inflationary pressures in 1981 were steady declines in the prices of primary commodities, a principal element in the poor outlook for developing countries as discussed elsewhere in this Report. Wage increases in many countries also slowed as unemployment rates rose.

74. A somewhat unusual feature of 1981 was the persistence of high interest rates in the face of sluggish growth and high unemployment, a phenomenon unprecedented in the post-war period. High interest rates, as already noted, have adverse effects on major sectors of activity such as housing and stock-building. And while their precise impact on private fixed investment cannot be measured, they are certainly not conducive to investment in a climate characterized by a large number of bankruptcies. In fact, should high interest rates persist in the second half of 1982 and 1983, the modest rebound in economic activity expected in the developed market-economy countries during that period may be jeopardized.

75. While it is not possible to deal exhaustively with all the causal factors germane to an assessment of the prospects for real interest rates over the next 18 months, the very high and rising United States public sector deficit is certainly a major one. Thus, in spite of substantial surpluses at the state and local government levels, the consolidated budgets of the public sector showed deficits of $32.1 and $25.6 billion in 1980 and 1981, respectively, after having been approximately in balance in 1978 and having registered a surplus of close to $12 billion in 1979 (see table 6). The public sector deficit can be expected to

TABLE 6

Government surplus or deficit and gross private saving in the United States, 1978-1981

(*Calendar years*)
(*Billions of dollars*)

	1978	*1979*	*1980*	*1981*
Government surplus or deficit (GSD)	−0.2	11.9	−32.1	−25.6
Gross private saving (GPS)	355.4	398.9	432.9	480.4
GSD/GPS (per cent)	−0.1	3.0	−7.4	−5.3
Memo items:				
GSD/GNP (per cent)	–	0.5	−1.2	−0.9
GPS/GNP (per cent)	16.5	16.5	16.5	16.4

Source: United States Department of Commerce, *Survey of Current Business*, various issues.

increase dramatically in the months to come. Indeed, for fiscal 1983, the authorized federal budget deficit is expected to reach approximately $100 billion and the actual figure may prove to be even higher. This compares with federal budget deficits of about $60 billion in both 1980 and 1981 (calendar years). Moreover, federal government deficits in those years were partially offset by the budget surpluses of state and local governments, which are not expected to be significant in 1982. The expected continuation of a restrictive monetary policy implies the financing of the whole of this deficit in capital markets, thus involving competition with private borrowers for a limited supply of savings and loanable funds as investment demand associated with the resumption of growth begins to increase. In particular, commercial banks, which have been a major source of financing these deficits during recessions, may meet strengthened demand for loans from private corporations and may wish to liquidate rather than to acquire more government securities.

76. The size of public sector deficits in the United States may be viewed in a better perspective by expressing them as percentages of gross private savings (see table 6). The combined deficits of local, state and federal government were negligible in terms of their ratio to gross private saving in 1978. There was a surplus equal to 3 per cent of gross private saving in 1979. Subsequently, the combined deficits as a share of gross private saving increased significantly in both 1980 and 1981. These deficits would not normally be considered important if the intent of policy makers was to conduct counter-cyclical policy. In such circumstances, an accommodating monetary policy would be indicated, involving the monetization of a large portion of the deficit. However, this is far from being the case and it is the combination of relatively large deficits with restrictive monetary policy and the prospect of further growth of these deficits which is felt to be a major factor in explaining the current level of interest rates. If this combination is indeed the most important factor responsible for the current high level of real interest rates, there would not be any reason to expect them to decline significantly in the near term.

77. An examination of the principal monetary aggregates reveals the extent to which United States monetary policy has been restrictive. The efforts of the authorities to slow the growth of the money supply are reflected in the declining growth rates of the money supply narrowly defined (M1), whereas the effectiveness of this policy can be evaluated by the movements in the broader monetary aggregates. As shown in table 7, the fourth-quarter-to-fourth-quarter growth rate of M1 has declined steadily since 1978 to a rate of 2.3 per cent in 1981, i.e., somewhat more than one percentage point below the lower end of the target range. At the same time, however, the growth rate of M2, which is a somewhat broader measure of the money supply, increased after two years of approximately constant growth by approximately half a percentage point in both 1980 and 1981 and actually exceeded the upper end of the target range set for the latter year. Moreover, the growth was very rapid toward the end of 1981 and in early

TABLE 7

Money supply in the United States
(Percentage change from fourth quarter to fourth quarter)
(In current dollars)[a]

Concept of money[b]	*1978*	*1979*	*1980*	*1981*	*Target ranges* *1981*	*1982*
M1	8.3	7.5	6.6	2.3	3.5-6.0	2.5-5.5
M2	8.3	8.4	9.1	9.4	6.0-9.0	6.0-9.0
M3	11.3	9.8	9.9	11.3	6.5-9.5	6.5-9.5

Source *Federal Reserve Bulletin*, February 1982 .

[a] Growth rates of M1 for 1980 and 1981 have been adjusted for shifts to other cheque deposit accounts since the end of the preceding year

[b] *M1* 1 Currency outside the Treasury, Federal Reserve Banks, and the vaults of commercial banks,

2 Travellers' cheques of non-bank issuers, demand deposits at all commercial banks other than those due to domestic banks, the United States Government and foreign banks and official institutions, less cash items in the process of collection and Federal Reserve float, negotiable order of withdrawal (NOW) and automatic transfer service (ATS) accounts at banks and thrift institutions, credit union share draft (CUSD) accounts, and demand deposits at mutual savings banks

M2 M1, plus savings and small-denomination time deposits at all depository institutions, overnight repurchase agreements at commercial banks, overnight Eurodollars held by US residents other than banks at Caribbean branches of member banks, and money market mutual fund shares

M3 M2, plus large-denomination time deposits at all depository institutions and term RPs at commercial banks and savings and loans associations

1982. The continued efforts of the Federal Reserve System to slow the rate of growth of the money supply have taken the form of the net selling of United States securities in the open market in order to reduce the monetary base. Thus, the selling of securities by the United States Treasury in order to finance the federal deficit has been competing directly with other borrowers in the United States capital markets and exerting an upward pressure on interest rates.

78. Barring unexpected developments, little real increase in the growth of the economies of the developed market-economy countries is expected in 1982 as a whole, although growth may accelerate slightly during the second half of the year and in 1983. For 1983 as a whole, growth over 1982 in the OECD area is expected to be 3 per cent. However, as in 1981, growth rates among individual countries are likely to exhibit divergent trends in 1982. While they are expected to accelerate a little in most countries, they are expected to decelerate in Japan; and in the United States no change in output is likely for the year as a whole. The recovery in 1982-1983 which has already begun in some countries and is expected to begin in the second half of 1982 for others looks like being led by increased personal consumption, increases in business inventories and increases in housing construction, with a rise in private fixed investment in other sectors lagging behind. However, should high real interest rates persist, recovery is likely to be weak and short-lived. In the United States some recovery in private consumption may be forthcoming in response to tax cuts scheduled for both 1982 and 1983. In the major European countries increases in private consumption and stock-building are also expected to be the main causal factors, whereas in Japan growth is expected to accelerate beginning in the second half of 1982, propelled by both increased business investment and private consumption.

79. The inflation-dampening factors mentioned above are expected to continue to operate throughout the second half of 1982. Further reductions in inflation rates seem unlikely in 1983 as capacity utilization rates begin to increase, possibly leading to significantly higher wage demands and upward revisions of expected rates of inflation.[17] Thus, the rate of increase of the private consumption deflator for OECD countries as a whole could show steady declines of about 1 percentage point per year in both 1982 and 1983 from the average of 9.5 per cent recorded in 1981. The unemployment rate, however, is expected to worsen further in both years and may well average close to 9 per cent in 1983, implying an average of some 30 million unemployed people in that year. However, in the second half of 1983, unemployment can be expected to decline as the expansion of output accelerates.

2. Trade and current-account balances

80. The combined current-account balances of the OECD countries recorded an improvement of over $40 billion in 1981. This resulted more from changes in trade volumes than from improvements in the terms of trade. Import volumes declined because of sluggish economic activity, while export volumes, sustained in part by the demand of the oil-exporting developing countries, exhibited buoyant growth. The largest improvement in the current balance was in Japan, although the external payments positions of the Federal Republic of Germany and the United Kingdom also improved substantially in 1981. However, apart from the movement from deficit to surplus of Japan's current account and the continued surpluses of the United Kingdom and the United States, all the other major OECD countries, and especially the smaller countries, experienced deficits in 1981.

81. Improvements in the current-account balance of the OECD countries expected in 1982 will be due more to price movements than to changes in trade volumes. It seems unlikely that the volume of exports to non-OECD countries will continue to grow as rapidly as in 1981, in view of the increasingly severe balance-of-payments constraints affecting developing countries and a reduction in the volume of credit extended to the socialist countries of Eastern Europe. On the other hand, the import volumes of the developed market-economy countries, although still expected to be on the low side, will probably not decline as fast as in 1981 because of the expected revival in business activity toward the end of 1982. As seen earlier in this chapter, primary commodity prices are expected to fall in nominal terms, while the prices of manufactured exports from developed market-economy countries are expected to rise. As a result of these terms-of-trade gains, OECD countries as a whole are expected to show a current-account surplus in 1982. The surplus is, however, likely to be confined to a few major countries. The combined current-account balance of the smaller countries is expected to remain in deficit, albeit at considerably lower levels than in 1981. These imbalances in the trade and current-account balances among the OECD countries have rekindled protectionist pressures which could impede the resumption of orderly world economic expansion.

82. No major changes in the current-account positions of the developed market-economy countries considered together are expected in 1983. As economic activity in these countries is expected to be more buoyant, growth in import volumes might exceed that in export volumes. These volume effects will very likely be offset, however, by further terms-of-trade gains, since primary commodity prices will continue to be weak in 1983.

C. Trends and prospects in the socialist countries of Eastern Europe

83. The average planned rate of growth of net material product in the socialist countries of Eastern Europe for 1981 was set at the historically low figure of 3.2 per cent, reflecting the constraints on more rapid growth imposed in part by the nature of the major structural adjustment under way in all countries of the region as well as by the unfavourable conditions prevailing in the world economy. Due mainly to the events in Poland, but also to growth rates markedly lower than planned in Czechoslovakia and Romania, NMP increased by only 1.9 per cent in 1981. If Poland is excluded from the overall average, the increase was 3.1 per cent.[18] This was, however, mainly due to the performance of the Soviet Union, where growth was close to the planned rate.

84. Difficulties in increasing agricultural output, due in large part to poor weather, has been one of the factors responsible for relatively low growth rates of overall output in recent years. For the region as a whole, agricultural output declined for the third successive year, mainly reflecting disappointing harvests in the Soviet Union, notwithstanding important increases in output in Bulgaria, the German Democratic Republic, and Poland. Planned rates of growth of gross output in industry were also reduced in 1981, to 4 per cent, reflecting among other things a planned reduction in the rate of investment during the current five-year plan. The actual increase of 2.1 per cent was even lower than planned but was significantly better (3.4 per cent) if Poland is excluded.

85. The new five-year plans (1981-1985) reflect a shift in investment priorities while lowering the present ratio of investment to NMP. The emphasis on rationalization of resource allocation and on increasing productivity is a reflection of steadily slower growth of the labour force and the recent realignment of world energy prices. Many countries which had been pursuing a development strategy of

[17] Because inflation rates are expected to decrease between the first and second halves of 1982 and not to increase significantly in 1983, the latter year will show an improvement over 1982 on a year-to-year basis.

[18] "Review of trends and policies in trade between countries having different economic and social systems: report by the UNCTAD secretariat" (TD/B/912), para. 3.

increasing output for domestic consumption and dependence on imported energy and raw materials were hit by the increases in energy prices that gave rise to growing balance-of-payments deficits. A large part of these deficits was financed by Western credits. In an effort to improve the external balance, the proportion of investment allocated to energy production and export-oriented industries is being increased. At the same time, the share of investment allocated to research-intensive and high-technology sectors is being increased to address the problem of the slow growth of the labour force.

86. In 1981 the rates of increase of both exports and imports decreased sharply compared with previous years, but exports increased faster than imports, with the result that the trade balance of the socialist countries of Eastern Europe as a whole continued to improve. The situation was, however, quite different for the Soviet Union, where the large trade surplus was reduced as imports, reflecting large grain purchases, among other things, increased faster than exports. The other countries of Eastern Europe, due in part to the external credit squeeze which they have been facing, reduced the value of their imports by nearly 3 per cent in value, while maintaining exports at about the same level as in 1980.

87. Trends in the volume of exports in 1980 and 1981 for the socialist countries of Eastern Europe[19] reflected demand conditions in world markets and the widening of restrictive trade policies by certain developed market-economy countries, as well as supply difficulties in Poland. The slow or negative growth of import volumes reflected decisions to reduce trade gaps and the more limited availability of credit. The volume of exports of the smaller socialist countries of Eastern Europe, which increased by 4 per cent in 1980, actually declined by 2 per cent in 1981. Trends in the export volumes of the Soviet Union showed a similar pattern, increasing by 2 per cent in 1980 and declining by 3 per cent in 1981. Trends in import volumes were, however, quite different as between the Soviet Union and the other socialist countries of Eastern Europe. Whereas the volume of imports of the former increased by 7 per cent in 1980 and 9 per cent in 1981, that of the other socialist countries of Eastern Europe increased by only 1 per cent in 1980 and declined by 6 per cent in 1981.

88. Despite the substantial overall trade surplus registered by the socialist countries of Eastern Europe as a group, the negative balance on invisibles due mainly to higher interest payments on external debt was even larger, resulting in a current-account deficit of $3.2 billion in 1981. This represents an increase of $1 billion over the deficit recorded in 1980 and $2 billion more than that recorded in 1979.

89. For some years now deficits in trade with developed market-economy countries have been financed by increased credits from them, although drawings on reserves financed some of the deficit in 1981. The total net debt[20] of the socialist countries of Eastern Europe to creditors in developed market-economy countries, which was estimated at $72.4 billion at the end of 1980,[21] appears to have increased only slightly by the end of 1981. One major component of this net debt, that owed to commercial banks reporting to the Bank for International Settlements increased by only $1.8 billion. This increase was due to a small reduction in deposits of the socialist countries of Eastern Europe in the banks of developed market-economy countries and a small increase in new loans. Developments in Poland led to a sharp reduction in the extension of credits to the socialist countries of Eastern Europe as a whole in 1981. Of their total net liabilities outstanding at the end of 1981, $46 billion are estimated by the BIS to have been borrowed from commercial banks. These may be broken down into liabilities of $61 billion, offset by assets of $15 billion. The balance of the net external liabilities consists mainly of net export credits. The high interest rates which prevailed in international capital markets in 1981 are estimated to have resulted in payments by the socialist countries of Eastern Europe of $8.5 billion in 1981.[22]

90. The trade surplus of the socialist countries of Eastern Europe with developing countries was reduced by more than $2 billion in 1980 as compared with 1979 and by a further $500 million in 1981. These trends were dominated by trade with the Soviet Union, the value of whose imports from developing countries increased faster than that of exports in both 1980 and 1981, reflecting, perhaps, increases in the prices of foodstuffs and natural gas in 1980, but also increases in the volume of imports of the former. In trade with the other countries of Eastern Europe, however, imports in value terms fell in 1981, reflecting reductions in the German Democratic Republic, Poland and Romania. In view of the large number of international agreements concluded between the socialist countries of Eastern Europe and developing countries in 1981, the volume of this trade is expected to exhibit somewhat greater growth in 1982.

[19] This paragraph is based on information provided by the secretariat of the United Nations Economic Commission for Europe (ECE).

[20] Gross debt includes all liabilities. Assets include only deposits in Western banks. Net debt equals gross debt less assets.

[21] ECE, *Economic Survey of Europe in 1981* (United Nations publication, Sales No. E.82.II.E.1), p. 311.

[22] Bank for International Settlements, *Fifty-second Annual Report* (Basle, June 1982).

Part II

THE INTERNATIONAL ENVIRONMENT AND DEVELOPMENT: RECENT EXPERIENCE

Chapter 1

THE INTERNATIONAL ECONOMIC ENVIRONMENT

91. It is generally recognized that the external economic environment is of particular importance for developing countries. This is not only because their economies are open in the sense that external trade and financial flows are large relative to overall economic activity, but also because these external transactions play a significant role in supplementing domestic savings and securing the investment goods necessary for development. For both these reasons the international economic environment has had a decisive impact on the economic performance of developing countries during the second half of the 1970s and the early 1980s. This environment has been characterized by a significant deceleration in the growth of output in developed countries, a decrease in the growth of world trade and an acceleration in the rate of price increases throughout the world economy. These developments have led directly to lower rates of growth of export volumes and to a deterioration in the terms of trade of most developing countries.

92. The salient feature in the changed international economic environment has been the acceleration of price inflation and sharp changes in relative prices that have taken place over the past decade. International price movements affect developing countries in a variety of ways. Where countries have current-account deficits, inflation in the prices of their imports and exports increases the external imbalance, thereby increasing external financial requirements. When inflation is accompanied by a deterioration in the terms of trade, the negative impact on the current-account deficit and financial requirements is accentuated. Changes in import and export prices affect importantly the gains which developing countries derive from engaging in world trade. Inflation and changes in relative prices also affect the burden associated with servicing existing debt obligations.

93. In addition to their impact on the external accounts, price changes in world trade have a direct influence on the domestic economy. Import price increases contribute directly to changes in the domestic price level; during the 1970s the acceleration of import prices accounted for a very large proportion of the acceleration in domestic price inflation. In many developing countries export proceeds play an important role, either directly or indirectly, in generating budget receipts. Changes in export prices can, therefore, have a direct influence on government expenditure and/or the budget balance. Moreover, because changes in import and export prices influence the real disposable income that results from any given level of domestic production, they will be an important determinant of domestic savings performance and investment behaviour.

94. Because of the pervasive importance to developing countries of prices of their imports and exports, some of the issues that arise in this regard are taken up and examined in detail in chapter 2.

95. The external pressures resulting from slower growth and price inflation in the world economy were met by developing countries in a variety of ways. In many countries strong efforts were undertaken to increase the volume of exports and to constrain the growth of imports, particularly as regards non-essential imports. This was accompanied in many instances by major additions to, and changes in, investment programmes, designed to alter the structure of production in ways which would overcome the unfavourable external developments. The capacity of developing countries to undertake such changes, however, was far from uniform, and for a large number of them the extent of such adjustment that could be brought about in a relatively short period of time was limited. Countries also sought external financing on a larger scale to provide them with bridging finance and to augment the resources available for their investment programmes. Indeed, the rapid expansion of financial flows to many developing countries, particularly those with access to private capital markets, was a key factor in allowing adjustment to go forward in the context of reasonably satisfactory growth. However, where both the scope for internal adjustment and access to external financing were limited, developing countries had no choice but to compress imports and reduce growth.

96. The policy reactions of developing countries to the deterioration in the international economic climate and the role of external financing in fostering adjustment and growth are taken up in detail in chapter 3. Chapter 4 then examines the development problems of oil-exporting developing coun-

tries, who also faced the need for rapid structural change and transformation of their economies.

97. The deterioration in the international economic environment was not, of course, of importance only to developing countries. The acceleration of price inflation, higher levels of unemployment and lower rates of growth of productivity and output were clearly matters of great concern in the developed market economies themselves. This concern was translated into policies designed to deal with the phenomenon of stagflation which, if successful, would be of benefit not only to the developed market economies themselves but also to developing countries. Those policies at the moment show only weak signs of success, however, and a number of the measures designed to address domestic problems and pressures created by slow growth and inflation have had important negative consequences for developing countries. Nowhere is this more evident than as regards the impact of increases in interest rates in the major capital markets on the external accounts of developing countries: it has been estimated that each percentage point increase in interest rates in the Eurocurrency market now results in additional annual interest payments by developing countries of $2 billion.

98. The pressures exerted by inflation and unemployment have also led developed market-economy countries to take measures in the trade field that have gradually altered the character of the system, and this in ways that have caused particular problems for developing countries and increased the uncertainties and risk of engaging in international trade.

99. In recent years the world trading system has become increasingly discriminatory and less transparent, with greater emphasis placed on non-tariff regulation of trade, often negotiated outside the appropriate institutions and/or entailing conditions imposed unilaterally on trading partners. There has been an increased reliance on export restraint and market-sharing arrangements designed to protect traditional markets without conforming to multilaterally agreed safeguard procedures. The importance of these and other non-tariff barriers has increased, partly because successive rounds of tariff-cutting negotiations have considerably reduced the role that tariffs play in directing international trade. This has greatly changed the nature of the world trading system. In the past, most-favoured-nation (MFN) tariffs have constituted a fixed level of protection common to all exporters receiving MFN treatment.

100. Thus, to the extent that MFN treatment is granted, the tariff is non-discriminatory between suppliers. Further, such tariffs are completely transparent as they are published in national tariff schedules, and to the extent that they are bound and subject to concessions they provide a degree of certainty in their effect on price formation. They are amenable to multilateral negotiation, as they lend themselves to calculations of reciprocity, and an exchange of concessions between trading partners is facilitated. They also provide a clear reference point for preferential treatment in favour of developing countries.

101. In the light of rapid shifts in international competitiveness, and the attendant difficulties in bringing about the changes in the structure of production required by these shifts, many governments seem to now have a preference for certainty about the volume of imports (quantitative restrictions) or the price of imports (minimum price arrangements) rather than certainty about the price margins that domestic producers have over foreign suppliers (i.e., tariffs). Tariffs are slow to act, with uncertain outcomes as to the quantities of imported goods or the supplying countries. There is evidence that some governments have a preference for less transparent forms of protection and are less willing to engage in MFN or other non-discriminatory trading arrangements or to promote the sort of domestic adjustment leading to a more efficient use of domestic resources implied by these arrangements. This situation would seem to reflect a crisis in confidence among the major trading countries as to their ability to compete in world, or even, for that matter, their own domestic markets and the ability of their industries to adjust to shifts in international comparative advantage. It also appears to reflect a preference for situations in which the terms and conditions of bilateral trading arrangements reflect the relative bargaining strength of the parties concerned.

102. The decline of the tariff as an effective trade policy instrument has been coupled with an increased reliance on what have been described as "flexible" or "contingent" measures of protection applied in response to certain conditions. In recognition of this phenomenon, much attention was devoted during the Tokyo Round of multilateral trade negotiations to refining the criteria and conditions for the application of measures of this nature, such as anti-dumping and countervailing duties and, unsuccessfully, safeguard actions. In addition to these traditional measures, there is, as noted above, an increased reliance on measures falling outside multilateral disciplines—notably, the so-called "voluntary" export restraints.

103. The classic example of an arrangement that has evolved outside the rules and one which is of special significance to developed and developing countries alike is the Arrangement Regarding International Trade in Textiles (the Multifibre Arrangement or MFA). For developing countries the Arrangement covers almost one-third of their exports of manufactured goods. This share is concentrated in a small number of countries, but given the special role that trade in textiles and clothing has played historically in the process of economic development, any arrangement regulating international trade in these products is of importance to all developing countries, regardless of the present level of their trade. For the international community at large the continued extension and enlargement of the MFA should be of concern to all trading countries as it provides an example of a marketing arrangement which institutionalizes the discriminatory treatment which now characterizes a large part of international trade. Exports of developing countries are quantitatively restrained as a safeguard procedure to avoid market disruption in the major developed market-economy countries, even if they are supplying a neg-

ligible share of the domestic market. Exports from developed countries are exempt from quantitative restraint arrangements on the basis that they do not fall into the category of "low cost suppliers" and are thus incapable of causing "market disruption".

104. Despite the fact that all countries appear to attach considerable importance to reaching agreement on an acceptable safeguard code of behaviour, this remains one of the most important unresolved issues from the Tokyo Round of multilateral trade negotiations. The failure to reach agreement has caused a general uncertainty in international trade relations.

105. In earlier years, when the tariff was the key trade policy instrument, upon which the GATT was based, safeguard action was designed to constitute temporary emergency action to deal with sudden increases in imports arising from the acceptance of tariff concessions or other commitments. If the situation proved to be of a longer-term nature, the appropriate course of action was the renegotiation of the tariff concession which had given rise to the increased imports.

106. The current proliferation of protective measures, although usually described as "safeguards", reflects a different situation, as the restrictive measures are rarely phased out and yet there is little attempt to renegotiate trade concessions. The measures seem to reflect a combination of structural rigidities, an inability or unwillingness to take positive adjustment action, and a desire to pass on the costs to foreign countries while at the same time minimizing the implications of such action on international trade relations, especially with major trading partners. The result has been less respect for multilaterally agreed rules and principles, which in any case may not be relevant to the situation encountered, and a greater reliance on bargaining considerations. In such a scenario all countries emerge as losers, but the major burden is borne by the developing countries.

107. As is spelled out in chapter 3 of this part, there are now signs that the erosion of the multilateral trading framework may be paralleled by an erosion of the systems of multilateral development and payments finance. In these cases also, the major burden of the erosion will be borne by developing countries. These tendencies reflect a decline in the spirit of international co-operation for development that characterized the 1960s and the early 1970s. This decline is itself increasingly becoming a determining factor in shaping the international economic environment facing developing countries, since a good part of the policies and practices designed to allow the trade, financial and monetary systems to be more supportive of development—policies that often represent many years of careful consideration and negotiation by the international community at large — are being called into question.

Chapter 2

INTERNATIONAL PRICES AND EXTERNAL TRANSACTIONS: SELECTED ISSUES

108. The recent collapse of commodity prices, which was reviewed in detail in part I, chapter 1, has again focused attention on the role played by international prices in influencing the pace of development. International prices affect developing countries in a wide variety of ways: they determine the extent of the benefits derived by those countries from international trade; they influence the magnitude of external financing requirements; and they affect the rate of growth of domestic prices and real income, to mention but a few of the more important considerations. The present chapter seeks to explore some of these issues. The first section examines the behaviour of prices of internationally-traded goods. The second brings out the implications for the terms of trade, and reviews several different concepts of the terms of trade and their relevance to developing countries. The third looks at the effect of price movements on the current-account balance of developing countries, while the fourth analyses the implication of price changes for the burden of international debt servicing. The fifth section examines the impact of changes in the terms of trade on real income and savings efforts in developing countries. In addition to analysing the impact of prices of internationally-traded goods in all those areas, the chapter shows that important compensatory movements have occurred, largely as the result of the efforts of developing countries themselves: unfavourable price movements for traded goods have been offset to some extent by increases in export volumes, and the reduced real value of external savings has been partly compensated by increased domestic savings.

A. Price behaviour of internationally-traded goods: the postwar experience

109. The behaviour of the prices of internationally-traded goods is governed by very complex and interrelated forces which vary quite substantially from commodity to commodity. Because the short-term demand for and the supply of most primary commodities are relatively price-inelastic, market prices tend to be very sensitive to relatively small changes in demand and supply. Of course, the pattern varies considerably from commodity to commodity, depending upon individual production characteristics and end uses. Further, the relative ease with which stocks of many primary commodities may be kept means that speculation also plays a role. For example, the current low level of many commodity prices reflects pessimism regarding the pace of expansion of current demand, coupled with the attractiveness of financial instruments bearing high rates of return.

110. On the other hand, prices for manufactured goods have become less and less sensitive to changes in demand and are governed increasingly by cost developments in countries exporting such goods; consequently, export prices for manufactures are generally closely linked to the level of inflation in developed market-economy countries. A direct effect of the difference in the price mechanisms governing primary commodities and manufactures is that the terms of trade of primary commodities with respect to manufactures are highly sensitive to fluctuations in the pace of overall economic activity. As a result, developing countries that are exporters of primary commodities may be generally expected to suffer large terms-of-trade losses during bouts of stagflation in the developed market-economy countries.

111. Notwithstanding these broad observations, prices of internationally-traded goods behaved rather differently during the 1970s than in the 1950s and 1960s (see annex table A.7). First, the terms of trade of primary commodities with respect to manufactures did not deteriorate markedly during the 1970s, in contrast to the earlier postwar experience,[23] although the terms of trade of primary commodities with respect to machinery continued to deteriorate. Secondly, the prices of traded goods rose relatively fast during the 1970s. The largest increases were for petroleum prices which, reversing the trends of the 1950s and 1960s, rose nearly eight times as fast as unit values for exports of manufactures. At the same time, the unit value index of manufactured exports increased at an annual average rate of 11.1 per cent during the period 1970-1980 as against 1.9 per cent during the period 1950-1970. Thirdly, fluctuations in international prices were more pronounced than in earlier periods. In a continuation of past patterns, however, fluctuations in food prices were larger than those in most other traded goods.

112. After a sharp rise in 1951, the decade of the 1950s was a period of declining prices for primary commodities in general, resulting in a decline in the terms of trade of those commodities with respect to manufactures at an average annual rate of about 2.8 per cent between 1950 and 1960. On the other hand, during the 1960s, while there was a perceptible deterioration in the terms of trade of primary commodities relative to manufactures, it was not highly significant in view of the substantial fluctuations that typically characterize primary commodity prices. In contrast to other commodity prices, however, petroleum prices continued to fall or stagnate in nominal

[23] In the early 1980s, however, the terms of trade deteriorated markedly. See part I, chap. 1.

terms throughout the 1960s. Moreover, the terms of trade of petroleum relative to manufactures fell at an annual average rate of 3.4 per cent over the period 1955–1970.

113. With the advent of the 1970s, the prices of traded goods began to accelerate as inflation took hold in industrialized countries. After a sharp decline in 1971, concentrated in beverages and metals, the prices of primary commodities increased dramatically over the period 1972-1974. In particular, the unusually synchronized expansion of industrial production in the developed market-economy countries led to sharp price increases for fibres, beginning in mid-1972, and for metals a few months later. Petroleum prices rose by 27 per cent in 1971, followed by a somewhat smaller rise in 1972, and then more than trebled in 1974. Food prices had already started to rise vigorously by the end of 1971 in response to crop failures in a number of countries and sharply increased fertilizer costs. They were still climbing in the first part of 1974, when the developed market-economy countries had already entered a severe recession and prices for many other commodities were falling sharply.

114. In 1975, with both industrial production and GDP in developed market-economy countries declining, the price index for primary commodities excluding petroleum fell by 18 per cent. Nevertheless, the prices of their imports of manufactured goods increased by more than 10 per cent. However, starting in mid-1975, food prices rose steeply and prices for many other major primary commodities began to recover by the end of the year as the developed market-economy countries expanded from the low point of the recession. Petroleum prices, on the other hand, after the sharp increases of 1973 and 1974, continued to increase only in nominal terms.

115. Both 1977 and 1978 were years of strong fluctuations in food prices and in general of an increasing disparity in the movements of prices for manufactures and for primary commodities. However, in the course of 1979 primary commodity prices recovered, peaking in early 1980. The subsequent decline has been extremely pronounced.[24]

116. It is clear from even this brief historical outline that primary commodity prices in general behave quite differently from manufactures prices in the short run. This conclusion is borne out by empirical investigation, which shows that changes in aggregate demand have a particularly strong impact on the prices of raw materials, both agricultural and non-agricultural, but have no significant impact on price movements for manufactures. Further, the rate of inflation has a highly significant and close relationship to prices of manufactures, illustrating the proposition of cost-plus pricing behaviour in this sector.[25]

117. While the above results give a clear picture of the behaviour of primary commodity prices relative to those of manufactures over the business cycle, it is less clear whether a deterioration in the prices of the former relative to the latter can be identified as a longer-term trend.

118. In table 8 trend rates of growth of unit values of world exports (excluding socialist countries) for six major commodity groups are given for the two subperiods 1955-1970 and 1970-1979, as well as for the period 1955-1979 as a whole.[26] The subperiods were chosen so that the second would coincide roughly with the period of slow growth and high inflation in which the world economy is currently immersed.

119. As can be seen from the table, the trend growth rate of the unit value of all export flows taken together accelerated markedly, from only 0.5 per cent during 1955-1970 to 13 per cent during 1970-1979. At the more disaggregated level, it may be noted that over the subperiod 1955-1970 the trend growth rate averaged less than 1 per cent for all commodity groups except machinery and transport equipment (SITC 7), for which it was close to 2 per cent, and raw materials, fuels and chemicals, for which it was negative. Over the subperiod 1970-1979 the trend growth rate accelerated for all major commodity groups, to around 11 per cent, with the exception of fuels, for which it exceeded 25 per cent.

120. It is clear from these figures that the terms of trade of non-fuel primary commodities (SITC 0+1+2+4) with respect to machinery and transport equipment (SITC 7) and also to other manufactures deteriorated over the period 1955-1979, although the deterioration with respect to manufactures as a whole (SITC 5-8) was minimal. Nevertheless, there are significant differences between the two subperiods. The changed terms of trade of petroleum is the most striking, moving from -2.8 per cent over the subperiod 1955-1970 to 13.9 per cent over the subperiod 1970-1979. Food and raw materials also performed relatively better in the second subperiod, although still showing a slight deterioration with respect to machinery and transport equipment.

B. Terms of trade of developing countries

121. The terms of trade concept used above refers to changes in the ratio of prices of different categories of goods. This concept has attracted a great deal of attention since most developing countries export primary commodities and import manufactures. However, the dichotomy between these two categories is becoming increasingly irrelevant as developing countries penetrate export markets for manufactures. The *net barter* terms of trade, i.e., the ratio of a country's export price index to its import price index, is directly applicable to analyses of trends in the foreign trade of developing countries. This concept is analytically important since a deterioration in the net barter terms of trade necessarily involves increased pressures on the balance of payments. Further, the real income effect of changes in the net barter terms of trade can have a profound influence

[24] See part I, chap. 1.

[25] *Ibid.*

[26] Trend rates of growth are used here in an attempt to minimize the influence of year-to-year fluctuations.

on the pattern of expenditure and saving in countries with relatively large foreign trade sectors.

122. Developing countries faced with adverse movements in their net barter terms of trade can offset the effects on their trade balances by export promotion efforts. This consideration has led to the use of a second concept of the terms of trade, known as the *income* terms of trade, which measures changes in the purchasing power of exports in terms of command over imports. The income terms of trade, defined as the net barter terms of trade multiplied by the volume of exports, is of special relevance to developing countries whose economic development programmes are constrained by inadequate foreign exchange availabilities. When such countries succeed in offsetting a deterioration in the net barter terms of trade by expanding the volume of their exports, this involves an increased diversion of real resources which, to that extent, reduces the resources available for domestic development.

123. A deterioration in a country's income terms of trade will not necessarily have unfavourable consequences if it results from an increase in productivity in its export industries. In that case, the reduction in unit costs, and consequently in export prices, will improve the country's competitive position on the world market, and thus lead directly to additional export sales.[27] Moreover, the incorporation of productivity changes in the exporting country into the concept of the terms of trade (to derive a measure known as the *single factorial* terms of trade) provides a useful indicator of changes in the amount of real resources, in the form of capital and labour services, which a country must give up in order to purchase a given volume of imports.

124. Also of interest is the wider concept of the *double factorial* terms of trade, in which changes in productivity in both trading partner countries are taken into account in order to estimate the division of the real gains from trade. The double factorial terms of trade thus vary proportionately with the net barter terms of trade and with productivity in the export sector, but inversely with productivity embodied in imports. Paragraphs 125-135 which follow present some empirical information on the behaviour of the net barter, income and double factorial terms of trade over the last 25 years.

1. Net barter and income terms of trade

125. The extent to which the decline in the terms of trade of primary commodities relative to machinery and transport equipment and, to a lesser extent, to manufactures as a whole, has been translated into a deterioration of the net barter terms of trade of the developing countries depends on the commodity composition of their exports and imports. Annex table A.8 presents information on the commodity composition of developing country trade for three benchmark years (1955, 1970 and 1979). As can be seen, the change in the structure of

Table 8

Trends in world export unit values, 1955-1979[a]
(Trend rates of change by commodity group)[b]
(Percentage)

Commodity group	*1955-1970*	*1970-1979*	*1955-1979*	*Terms of trade*[c]
Food and beverages (SITC 0+1)	0.4	11.2	4.4	−1.2
Raw materials (SITC 2+4)	−0.2	11.0	4.0	−1.6
Fuels (SITC 3)	−1.0	25.7	9.0	3.4
Chemicals (SITC 5)	−1.6	11.7	3.4	−2.2
Machinery and transport equipment (SITC 7)	1.8	11.8	5.6	.
Other manufactured goods (SITC 6+8)	0.9	10.5	4.5	−1.1
TOTAL	0.5	13.0	5.2	.

Source United Nations, *Statistical Yearbook* various issues

[a] Excluding socialist countries

[b] The trend rates have been calculated by means of a log-linear regression

[c] Refers to the terms of trade of the commodity group with respect to exports of machinery and transport equipment for the period 1955-1979

exports and imports during the years under consideration is remarkable. For example, the combined share of exports of non-fuel primary commodities in value terms dropped from 61.6 per cent of their total exports (excluding exports to socialist countries) in 1955 to 19.9 per cent in 1979. The counterpart of this decline is the more than twofold increase in the share of fuel exports to 57.2 per cent in 1979 from 24.9 per cent in 1955 and 34.6 per cent in 1970. The share of manufactures (SITC 5 — 8) also expanded significantly, from 13.1 per cent in 1955 to 22.3 per cent in 1979. The increase in the share of manufactures is particularly striking when fuels are excluded from the total, the shares then being 17.4 per cent in 1955 and 52.1 per cent in 1979.

126. The behaviour of developing country import shares, on the other hand, is somewhat more stable, although the same pattern of changes involving the rise in relative importance of manufactures and fuels at the expense of non-fuel primary commodities is also evident. For example, the share of non-fuel primary commodities declined from 23.2 per cent in 1955 to 16.2 per cent in 1979, while the share of manufactures rose from 59.8 to 66.0 per cent and that of fuels from 12.1 to 15.9 per cent during the same period. It may also be noted that consumer goods imports, roughly corresponding to SITC 0 + 1 and 6 + 8, have decreased as a percentage of non-fuel imports, from 50.3 per cent in 1955 to 40.8 per cent in 1979.

127. On the basis of these broad aggregates certain conclusions may be drawn with respect to the trade patterns of developing countries as a group. In particular, the diminishing importance of non-fuel primary commodities in the exports of developing countries implies that price movements of these commodities will have a smaller impact on the trade balances of many countries than in the past, although a substantial number of developing countries continue to depend entirely on primary commodities for their export earnings. However, the increased importance

[27] Whether, and to what extent, this will result in an increase in export earnings will depend on the price elasticity of demand.

TABLE 9

Selected indicators of export performance by main country groups, 1955-1980

(Trend[a] rates of growth)

(Percentage)

Group	1955-1970			1970-1980		
	pe	*ev*	*bt*	*pe*	*ev*	*bt*
Developed market-economy countries . .	7.9	7.4	0.5	4.2	6.0	−1.8
Developing countries						
Major oil exporters	5.8	6.0	−0.2	15.1	−0.6	15.7
Fast-growing exporters of manufactures	4.7	5.2	−0.5	7.3	11.4	−4.1
Least developed countries	3.0	4.0	−1.0	−1.3	−0.9	−0.4
All others	4.2	3.9	0.3	3.3	5.4	−2.1

Source UNCTAD *Handbook of International Trade and Development Statistics* various issues

Note pe purchasing power of exports (income terms of trade)
ev export volume
bt barter terms of trade

[a] The trend rates have been calculated by means of a log-linear regression

of fuel imports in value terms implies that oil-importing countries' trade balances will be increasingly sensitive to movements in energy prices.

128. Of course, there are considerable differences in trade structures among developing countries. Consequently, an examination of the terms-of-trade experience of developing countries is better carried out at a somewhat disaggregated level. Table 9 contains relevant statistics for four broad country groups, namely, the major oil exporters, the fast-growing exporters of manufactures, the least developed countries, and the remaining developing countries, which are largely traditional exporters of non-fuel primary commodities.[28] It can be seen that, in the subperiod from 1955 to 1970, the performance of the developed market-economy countries outpaced that of all major developing country groups with respect to both export volume growth and improvement in the barter terms of trade. On the other hand, a deterioration in the barter terms of trade was observed for the major oil exporters, the fast-growing exporters of manufactures and the least developed countries during this subperiod.

129. The performance of the country groupings over the period 1970-1980 was, however, more varied. The fast-growing exporters of manufactures have done well in penetrating international markets in manufactures in recent years. Indeed, owing to a relatively rapid growth of export volume, their income terms of trade grew at a trend rate of over 7 per cent per annum in spite of a substantial deterioration in the net barter terms of trade. The performance of the major oil exporters, on the other hand, has been characterized by a considerable improvement in the barter terms of trade and declining or, at best, sluggish export volume growth. The other developing countries, excluding the least developed, recorded somewhat slower growth in volume than the fast-growing exporters of manufactures, but nevertheless showed an improvement over the preceding period. The least developed countries suffered a decline in both export volumes and net barter terms of trade.

2. THE DOUBLE FACTORIAL TERMS OF TRADE OF PRIMARY COMMODITIES WITH RESPECT TO MANUFACTURES

130. While the net barter terms of trade accurately reflect potential pressures on the current account in the short to medium term, the double factorial terms of trade are more appropriate for indicating the relative advantage derived from production and trade of a given basket of goods over the longer run. Changes in the double factorial terms of trade consist of three elements, namely, movements in the net barter terms of trade, productivity changes and changes in employment.[29] Since productivity alters at different rates in different countries, the trends of the net barter and the double factorial terms of trade may diverge, perhaps substantially.

131. In the case of developing countries exporting primary commodities, it is often argued that the opportunity costs of employment in the exportable goods sector are negligible. If this is the case, then increases in employment should be assigned the same weight as increases in productivity in "employment-corrected" double factorial terms of trade (ECDFTT).[30] If this is taken into account, together with the fact that demand for many primary commodities is relatively inelastic with respect to price and income, there are strong reasons to expect the ECDFTT for primary commodity exporters to deteriorate. For example, if output of both manufactures and primary commodities were to increase proportionately, the relative price component of the ECDFTT for primary commodities vis-à-vis manu-

[28] The country group definitions are those of the UNCTAD *Handbook of International Trade and Development Statistics*. (See also the explanatory notes at the beginning of this report).

[29] The discussion in this chapter of the double factorial terms of trade summarizes some of the salient features of a recent study for UNCTAD carried out by Professor John Spraos, of the University of London, to be published later in 1982 or early 1983.

[30] A number of other subsidiary assumptions are also required to reflect fully differing conditions in developed and developing economies (Spraos, *op. cit*).

factures would fall because income demand for the former is relatively inelastic. If output of primary commodities grows at a slower rate than that of manufactures, the possible positive movements in relative prices would be at least partially offset by slower growth in productivity or employment in the commodity sector. On the other hand, if output of primary commodities were to grow faster than that of manufactures, the concomitant increases in either employment or productivity would be offset by declines in the relative prices. Thus it can be argued that the terms of trade of commodities have deteriorated vis-à-vis manufactures, on the basis of the existence of relatively inelastic demand for commodities.

132. This argument ignores a number of complicating factors. In particular, there are two issues which would tend to prevent the employment-corrected double factorial terms of trade of primary commodities from deteriorating, namely, exhaustible resources and the possible production of substitutes for primary commodities. With respect to the first, the existence of a pure rent element in the prices of exhaustible resources as compensation for resource depletion could induce the net barter terms of trade to decline less severely or even to increase. In the second case, the existence of substitutes would also work to counteract the tendency for the terms of trade of primary commodities to deteriorate, since the increased output of the primary commodities would tend to displace output of the substitutes. Consequently, adverse movements in the relative prices of the primary commodities might be mitigated.

133. The data problems associated with an empirical test of the above argument are indeed formidable.[31] Nevertheless, existing information does not contradict the hypothesis of a secular decline in the ECDFTT of primary commodities. The indices of this measure have been calculated for exhaustible commodities (minerals) and reproducible commodities (agricultural products) and for subgroups including non-ferrous metals, cocoa, coffee, cotton, natural rubber, sugar and tea. While data were available for the period 1960-1978, the terminal year actually chosen was 1977 since that year marked a significant peak in all of the agricultural price indices.[32]

134. The results indicate that the ECDFTT of minerals with respect to manufactures did not exhibit a significant trend over the period under consideration (see annex table B.6). It may be noted, however, that in the case of exhaustible resources a stable ECDFTT is not neutral. Moreover, the ECDFTT of the six agricultural commodities showed significant deteriorations, ranging from 2 to 3.8 per cent annually depending on the precise assumptions made. In addition, for the subgroup of cocoa, coffee, natural rubber and tea there was a strong deterioration, from 3.5 to 4.5 per cent, a result perhaps due to the fact that, except for natural rubber, these commodities do not face substitutes produced in the developed market-economy countries.

135. Thus, on balance, the evidence suggests that the deterioration in the net barter terms of trade of primary commodity producers has been accompanied by a deterioration in their double factorial terms of trade. This implies that the existing pattern of trade between the developed market-economy countries that are producers of manufactures and the developing countries that are producers of primary commodities is likely to continue to exert a downward pressure on the ECDFTT of the developing countries until they substantially diversify their economies.

C. The impact of the international economic environment on the current-account balance of developing countries

136. Irrespective of the direction of the longer-term trends in the terms of trade of developing countries, it is clear that the 1970s have witnessed relatively large-scale fluctuations in prices and volumes of internationally-traded goods. A number of factors have been influential over this period, not the least of which are stagflation in the developed market-economy countries and changes in energy prices. The former factor has tended to depress both the net barter and the income terms of trade by depressing demand for developing country exports and raising prices for imports of manufactured goods.

137. With regard to the volume of exports, it should be noted that movements in the volume of exports from developing countries are fairly closely related to movements in aggregate demand in developed market-economy countries. Thus, decreases in export volumes in developing countries in the years 1971, 1974, 1975 and 1980 correspond to downswings of business cycles in industrialized countries during those years. In contrast, increases in export volumes in developing countries in 1972 and 1976 coincided with upswings in industrialized countries.

138. However, for the period as a whole, the deterioration in the current account of developing countries, excluding major petroleum exporters, was largely due to adverse terms-of-trade movements. This may be demonstrated by the fact that the movement of import prices accounted for $144 billion of the cumulative change in the current account of this group, whereas export price changes accounted for $82 billion. On the other hand, growth of import volumes accounted for only $13 billion, as compared to an export volume expansion of $33 billion. Thus, import volumes have been compressed significantly compared to export volumes.

[31] The unreliable nature of information on employment and productivity in many developing countries is well-known. Even figures on production and trade cannot always be accepted at face value. Further, there are fundamental conceptual problems in devising an accurate price index for manufactures of developed market-economy countries. In particular, the nature and rapidity of changes in the quality of manufactured goods is difficult to capture in indices of price and volume. For a detailed discussion of the problems associated with the empirical testing of the hypothesis of a secular decline in the ECDFTT of primary commodities see Spraos, *op. cit.*

[32] A shorter period, from 1960 to 1974, was also considered. However, no significant differences could be found in the results.

139. The conclusion is that the large deficits in the current account of developing countries that have entailed increased borrowing have been due largely to adverse price movements. While the relation of price movements to the burden of debt is taken up in the next section, it is worth noting here that factor payments have also been a contributing element to the deterioration in the current account of developing countries. This was most striking in 1980, when there was a substantial increase in interest payments mainly owing to a sharp rise in the average interest rate.[33]

D. Inflation, terms of trade and the debt burden

140. While price movements have increased the need for external financing of the deficits of developing countries, it is frequently argued that these same movements reduce the burden of servicing the external debt as a result of this financing. It is undeniable that the real value of fixed-interest assets is eroded by unanticipated inflation. However, it does not necessarily follow that the financing burden of a capital-importing developing country is reduced. In the case of anticipated inflation it has even been argued that the debt-servicing burden over the short term may be increased.

1. Unanticipated inflation and its impact on financing requirements

141. Inflation may be said to reduce the burden of debt service when it leaves the debtor with greater command over real resources than before. Thus, if all incomes and prices were to double while debt-service payments remained fixed, a debtor would be able to meet his debt-service payments and purchase more goods and services than previously, and the burden of making the service payments would clearly be reduced. When inflation is accompanied by changes in relative prices, however, the outcome is less clear, and will depend on the relationship of changes in the debtor's earnings to changes in the prices of the commodities he purchases.

142. Thus, an examination of the impact of inflation on the debt burden of developing countries can be carried out by asking whether, after debt-service payments are deducted from export earnings, the remaining earnings will finance a larger volume of imports.[34]

143. A study published in 1977 by the UNCTAD secretariat made an empirical investigation of 71 developing countries for which the relevant data were available for the years 1973, 1974 and 1975.[35] It may be recalled that 1973 was a year of commodity price inflation in which most developing countries had a very good export performance. Nevertheless, 18 countries saw their debt burdens adversely affected by the price boom in that year. In 1974, with the world economy sliding into a recession while inflation was accelerating, the general picture was bleaker, with 33 countries being adversely affected. By 1975, a year exhibiting the highest rates of inflation and the severest curtailment in production so far in the post-war era, 75 per cent of the countries included in the sample experienced negative consequences.

2. Anticipated inflation and its impact on the debt-service burden

144. It has been argued that in a world of perfect foresight inflation would not have a direct impact on the burden of debt service or on the unintended transfer of resources from creditors to debtors or vice versa, since the anticipated rate of inflation would be taken into account in setting the interest rate. However, it should be borne in mind that the definition of inflation relevant to the creditor is unlikely to be the definition relevant to the debtor, so that there cannot be a single nominal rate of interest which exactly offsets the impact of inflation on both lender and borrower. It follows from the argument in the preceding section that a rate of interest that just offsets the impact of inflation for the creditor would result in serious losses to the debtor if the inflation leads to a significant deterioration in the debtor's terms of trade.

145. This point takes on particular relevance for developing countries in the current situation, in which interest rates on their debt are governed by the rates of inflation and associated monetary policies of the major reserve currency countries. The resulting interest rates are high when measured relative to prices in those countries and the prices of commodity exports of developing countries have dropped precipitously.

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[33] The calculations in annex table A.18 of the net effect of changes in interest rates are based on medium- and long-term public and publicly-guaranteed debt, and may somewhat understate the effect of the actual increase in interest rate, which would also reflect payments on short-term and private non-guaranteed debt.

[34] More formally, a developing country's financing burden would be lightened when the following inequality holds:

(1) $(PX' * QX - DS)/(PM' * QM) - (PX * QX - DS)/(PM * QM) > 0$

where:

PX = price index for exports of goods and non-factor services;

PM = price index for imports of goods and non-factor services,

DS = interest and amortization due on outstanding debt;

QX = volume of exports;

QM = volume of imports;

$'$ = refers to value after an inflationary episode.

Rearranging terms:

(2) $PX' * QX - DS - (PX * QX - DS) * PM'/PM > 0$

(3) $(PX' * QX - PX * QX) + (PX * QX - DS) - (PX * QX - DX) * PM'/PM > 0$

(4) $(PX' - PX) * QX - (PX * QX - DS)(PM' - PM)/PM > 0$

Finally:

(5) $((PX' - PX)/PX)/((PM' - PM)/PM) - (1 - DS)/(PX * QX) > 0$

[35] "Some aspects of the impact of inflation on the burden of debt of developing countries: note by the UNCTAD secretariat" (TD/AC.2/4). The secretariat is in the process of updating the study.

146. Even abstracting from problems of differential movements of prices, there is reason to believe that anticipated inflation still has an impact on the nature of the debt servicing burden. For example, it has been pointed out that an increase in the rate of inflation has the tendency to shorten the average amortization of a given loan expressed in real terms.[36] From this it has been concluded that a rise in the rate of inflation will add to the debt-service burden in the short run, thus increasing the ratio of rollover financing to net new financing. This would tend to increase a country's vulnerability to unforeseen fluctuations in trade and capital markets.

147. The most serious problem that floating rate debt instruments pose for developing countries, however, is the fact that interest rates are governed largely by inflation rates and associated monetary policies of the major reserve currency countries. Given the fact that exchange rates are affected as much by short-term capital movements as by relative rates of productivity reflected in the real costs of tradeable goods and services, it is clearly quite possible for real interest rates to differ substantially as between debtor and creditor countries.

E. The impact of the international prices on domestic saving

148. One extremely important aspect of the deterioration in the net barter terms of trade of the developing countries is the fact that it has a direct effect on real incomes associated with any given level of domestic production. Thus, the deterioration in the terms of trade of non-oil-exporting developing countries during the 1970s meant that real income in those countries advanced much less rapidly than real output. This, in turn, had important consequences for their capacity to mobilize the resources needed to meet current production and investment requirements. It would normally be the case, for example, that savings would be determined by levels of income, so that changes in savings would follow closely the changes in income resulting from movements in the terms of trade.

149. This is precisely what occurred in the case of the developed market-economy countries. As may be seen from chart III, average annual rates of growth of gross domestic saving and average annual changes in an index of the real income effect of the terms of trade for these countries moved in parallel fashion throughout the period 1960-1978. Changes in the rate of savings for these countries thus do not reflect changes in saving behaviour, but rather the income effects emanating from the terms of trade.

150. In contrast to the experience of the developed market-economy countries, the long-term trends in saving behaviour and terms-of-trade movements diverge in developing countries, excluding net exporters of petroleum. While there is a close annual correlation between fluctuations in the two series, as can be seen from chart IV, the real income effect has shown a steady decline over the 1970s, while real saving rates have increased markedly. Thus, the developing countries appear to have improved their performance in spite of the adverse terms-of-trade movements, by means of a marked shift in the structure of real expenditure.

151. Further, as may be seen from annex table A.27, the improvement in rates of saving out of GDP is evident in all the developing country groupings examined except the least developed. Of course, the major oil exporters showed the greatest improvement, owing to the large real income effects of the improvement in their terms of trade. On the other hand, the fast-growing exporters of manufactures showed a very significant improvement in saving performance, in spite of a major decline in their net barter terms of trade.

[36] See IMF, *External Indebtedness of Developing Countries* (Occasional paper No. 3, Washington D.C., May 1981), appendix II.

CHART III

Savings and the terms of trade: developed market-economy countries, 1960-1978

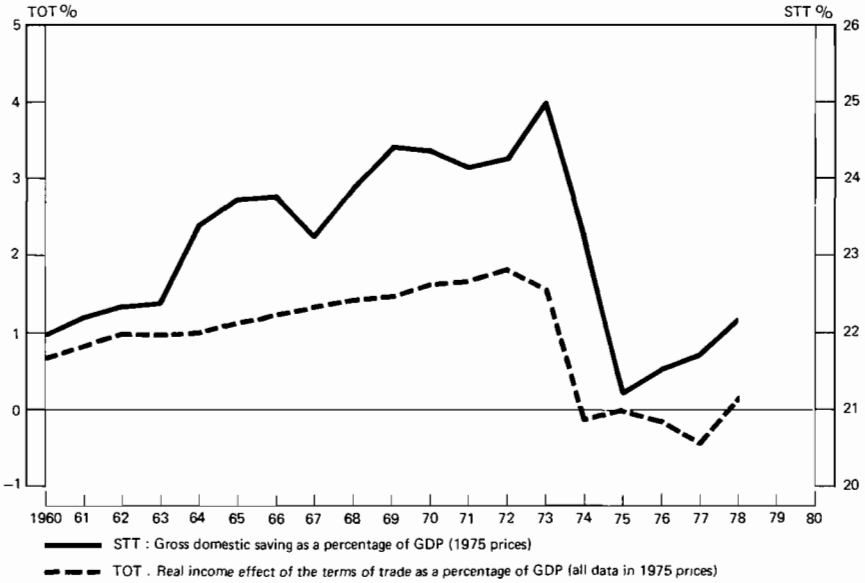


CHART IV

Savings and the terms of trade: net oil-importing developing countries, 1970-1978

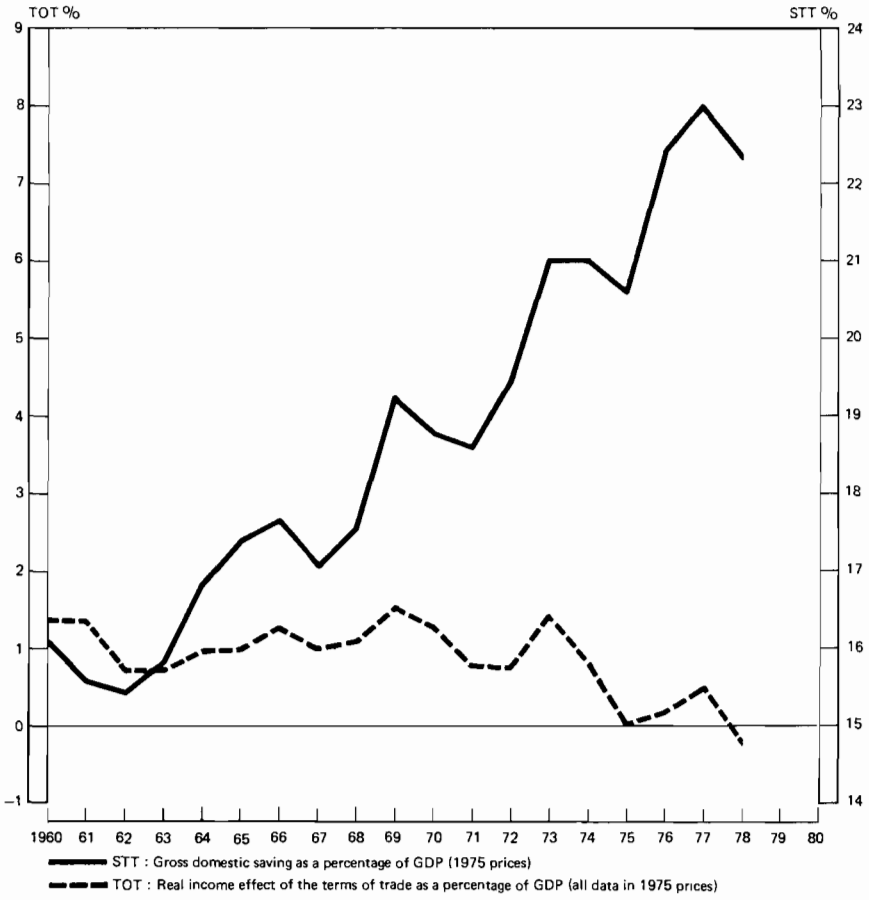
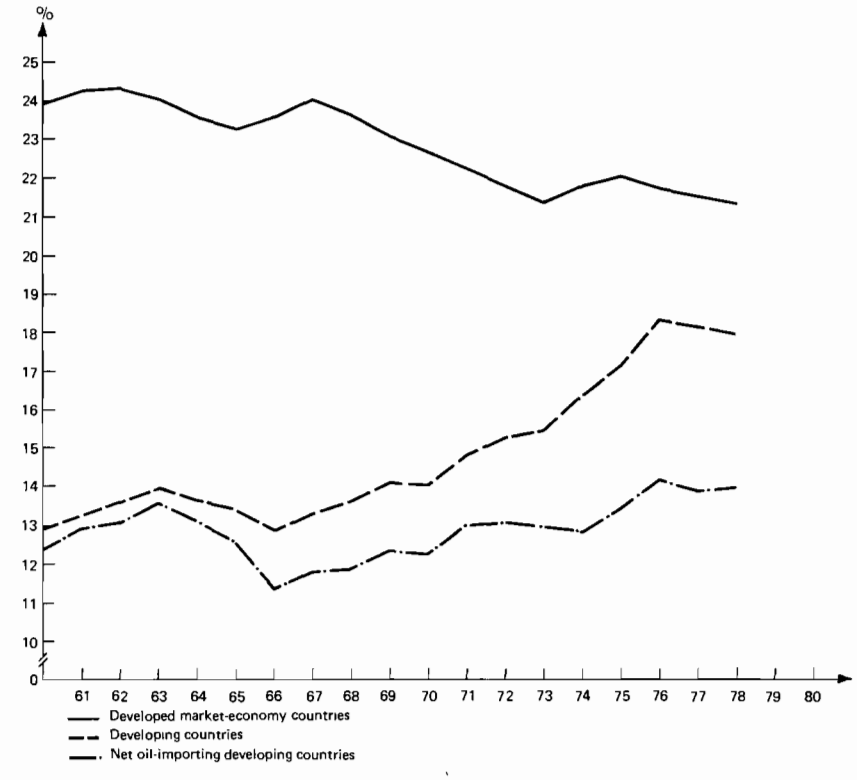


CHART V

Share of government in total consumption in developed market-economy and developing countries, 1960-1978



152. As mentioned above, the fact that developing countries improved their savings performance in spite of a decline in their terms of trade was due to substantial changes in their patterns of expenditure. Therefore, it is of some interest to look at the average propensities to consume, to export and to invest to see how they correlate with movements in gross domestic saving. In this respect the differing consumption patterns of developed and developing countries are particularly illuminating. The developing countries have shown a substantial decrease in private consumption as a percentage of GDP, the figure in 1960 being 71.5 per cent as compared to 59.9 per cent for 1978. On the other hand, public consumption increased by just under 2.5 percentage points over the same period. In contrast to the success of developing countries in reducing consumption as a proportion of GDP, the developed market-economy countries have shown a slight increase in the share of private consumption, particularly in recent years. In 1960 the proportion was 59.3 per cent, in 1973 it was 58.9 per cent and in 1978 it increased to 61.2 per cent. On the other hand, with respect to public consumption, there was a modest but steady decline over the period 1960-1978. The net oil-importing developing countries also significantly reduced private consumption as a percentage of GDP while maintaining public consumption virtually unchanged over the period. Chart V shows the change in consumption structures, in particular the increased importance of public consumption in total consumption in developing countries.

153. An examination of a regional breakdown of consumption rates for developing countries demonstrates that a reduction in the propensity to consume is quite widespread, with most regional groupings achieving some such reduction. Indeed, among the regional groupings examined, the only one which showed an undiminished consumption propensity was that of arid Africa, and in that case the increase was from 88.7 per cent of GDP in 1960 to 90.4 per cent in 1978. Of course, this result is symptomatic of the particular economic, climatic and social problems facing the poorest developing countries. An examination of the consumption propensity of the least developed countries shows a similar pattern, with private consumption behaving somewhat erratically but nevertheless showing a marginal decline, while public consumption shows a moderate increase. It should be noted in this context that decreases in consumption levels for countries in this group are often an indication of famine.

154. Thus, the role of the prices of internationally-traded goods was not decisive in determining the savings performance of developing countries. The available evidence, which runs through the end of 1978, indicates that savings grew rapidly despite the unfavourable effects of the terms of trade on income, and that this occurred because of a sharp contraction of private consumption in relation to total expenditure.

155. While the data necessary for a thorough examination of later years are not yet available, there are indications that non-oil-exporting developing countries were unable to sustain their performance in the face of the substantial deterioration that occurred in their terms of trade in 1980-1982, and that savings performance and investment activity have weakened. If these indications are borne out, the capacity of these countries to sustain growth and transform their economies will have been curtailed.

Chapter 3

DEVELOPMENT, FINANCING AND THE EXTERNAL ENVIRONMENT

A. Introduction

156. Since 1945 the developing world as a whole has witnessed a steady growth of GDP and of its major components, as well as improvement in social and economic conditions, as portrayed by a variety of indicators. Thus, during the two decades of the 1960s and the 1970s real GDP of developing countries as a group increased at an annual average rate of about 5.5 per cent, while the corresponding growth rates for value added in industry and of exports were more than 7 per cent and almost 5 per cent, respectively. At the same time, there were increases in the share in GDP of gross domestic investment and savings, in the extent of urbanization, and in the percentage of the labour force working in industry, as well as improvements involving life expectancy and other aspects of health, increased school enrolment, and higher levels of literacy.[37] However, the incidence of such changes among developing countries was highly uneven. For example, extremely high growth rates were registered by a number of countries whose terms of trade improved or for whom manufactures bulked relatively large in their exports, but in general developing countries' growth was largely offset by the rise in population, so that living standards in many cases scarcely improved or even declined. Manufacturing output in developing countries increased at an average rate of about 6.5 per cent per annum during both the 1960s and the 1970s, but much of this growth took place in a few countries, where exports of manufactures expanded rapidly. In 1978 these few countries accounted for almost half the value added in the industrial sector in the developing world.

157. As shown in the previous chapter, the 1970s witnessed major shifts in the pattern of exports and imports. Relative prices of internationally-traded goods underwent substantial changes, those of petroleum rising markedly over the decade while those of other primary commodities fluctuated sharply. Exports from developing countries also changed in composition, largely owing to the dynamism of exports of manufactures and increases in the price of oil. Owing to the tightness of the labour market in several oil-exporting developing countries, workers' remittances became a much more significant source of foreign exchange earnings for other developing countries, notwithstanding slackening demand for foreign workers in industrialized countries.[38] Changes in relative prices, including those of manufactured goods exported by developed countries, were unfavorable for non-oil-exporting developing countries taken as a whole. In addition, periods of recession in developed market-economy countries affected the exports of developing countries. However, the extent of the impact of these factors varied, depending on such variables as the degree of foreign trade dependence and the commodity composition of exports and imports. Ability to adjust to adverse changes in the terms of trade also differed from country to country, being greatest where exports of manufactures or of labour could be rapidly increased, and least where the scope for diversifying out of primary commodities or into indigenous energy sources was limited (or both). For non-oil-exporting developing countries as a whole the volume growth of imports slowed down, except in the case of the fast-growing exporters of manufactures, and the decline was particularly steep for the least developed countries.

158. The current-account deficit of non-oil-exporting developing countries jumped from $12.5 billion in 1971 to $67 billion in 1980. It is generally recognized that external events, in particular the fall in the terms of trade, made a significant contribution to this deterioration. For example, in an analysis of 47 such countries classified into four categories, the World Bank estimated that the net adverse impact of external shocks on the prices and volume of their exports and the prices of their imports was a deterioration of their balance of payments on current account during the years 1974-1978 ranging from about 1.5 per cent to more than 3.5 per cent of GDP.[39]

159. Movements of prices and quantities in international trade for individual countries have reflected not only varying conditions in world markets, but also the effects of government policies, and of fac-

[37] For further details concerning the matters covered in this section see *Trade and Development Report 1981* (TD/B/863/Rev.1), United Nations publication, Sales No. E.81.II.D.9, part II, chap. 3, sect. A.

[38] The growth of net private unrequited transfers (which consisted mainly of migrants' transfers and workers' remittances) for a number of developing countries during 1970–1979 is given in *Trade and Development Report 1981, op. cit.*, annex table A.9. For some instances in which workers' remittances were adversely affected by the recession of the mid-1970s see B. J. Cohen and F. Basagni, *Banks and the Balance of Payments: Private Lending in the International Adjustment Process* (London: Croom Helm, 1981), pp. 213 and 217.

[39] World Bank, *World Development Report, 1981* (New York: Oxford University Press, 1981), pp. 64–66. It should be noted that the definition of "developing countries" used by the World Bank differs from that generally used in UNCTAD.

tors such as the impact of weather conditions on crops, the loss of fishing stocks, and the costs and disruption caused by wars.

B. Some aspects of adjustment in developing countries during the 1970s

160. One manifestation of the impact of the deteriorating external environment was the decline in the rate of growth of non-oil exporting developing countries. For a sample of 78 countries for which data are available the average rate of growth of GDP fell from 4.8 per cent in 1965-1973 to 3.7 per cent in 1973-1978 (see annex table A.15); the latter figure is only slightly above the rate of population growth. The performance of individual countries and of different country groupings showed considerable variation. The average growth rate in the higher-income category (GDP *per capita* in 1977 exceeding $1,000) fell from 6.3 per cent to 3.3 per cent; that of the lower-income category (*per capita* GDP under $500) fell from 3.7 per cent to 3.0 per cent; while that of the middle-income category (*per capita* GDP of $500-1000) remained roughly constant at around 6 per cent. The deterioration in the international environment had a widespread adverse impact on both prices and living standards in developing countries. For example, a study of a smaller group of developing countries than that just mentioned shows that the influence of the change in the terms of trade on national income between 1971 and 1974-1976 was unfavourable in 10 out of 13 cases, the extent of the deterioration varying from about 4 per cent to almost 20 per cent.[40] The same study also found that in 1974 import prices were responsible for one-third or more of observed inflation in 9 countries, and that during 1972-1977 10 countries witnessed substantial declines in at least some years in the real wages or real earnings of major economic groups of the population.[41]

161. The deterioration in the terms of trade and slowdown in export growth imposed a major adjustment burden on developing countries. The form and extent of the adjustment varied according to the dependence on foreign trade and the internal structure of the economies on which they were imposed, the policy reactions of their governments, the strength of their initial payments positions, and their access to different forms of international financing, public and private. Countries with diversified structures of output (especially in manufacturing), skilled and adaptable labour forces, and good access to funds from abroad were best placed in this respect. Such countries or territories included the fast-growing exporters of manufactures (Argentina, Brazil, Hong Kong, Mexico, Republic of Korea and Singapore) as well as a number of other developing countries, such as India and the Philippines, which possessed at least some of these characteristics. On the other hand, rigidities on the demand or supply side made adjustment more difficult. Such rigidities frequently characterize lower-income developing countries and those whose economies are heavily dependent on a limited range of exports of primary commodities. For these countries, the adjustment problem was most acute. However, even within major groupings of developing countries neither the adjustment experience nor the policy reactions were uniform.

162. In the case of the fast-growing exporters of manufactures the high average rates of growth of variables such as GDP, domestic investment and exports for the group as a whole during 1973-1978 (shown in annex table A.15) were due to the performance of four countries or territories (Brazil, Hong Kong, the Republic of Korea, and Singapore). Each was highly vulnerable to world inflation during 1973-1974 because of its dependence on foreign trade. For Hong Kong and Singapore this dependence was associated with a high degree of openness of their economies, while for Brazil and the Republic of Korea large-scale programmes of industrialization required substantial imports of energy, capital goods, and various other inputs and resources. During the period after 1973 there were substantial reductions in the rates of growth of export and import volumes for both Brazil and the Republic of Korea. In the case of Brazil the average volume growth of exports fell from 15 per cent in 1965-1973 to 5 per cent in 1973-1978, and that of imports from 19 per cent to 5 per cent. The corresponding figures for the Republic of Korea were 35 per cent and 20 per cent for exports, and 28 per cent and 19 per cent for imports. As shown elsewhere in this report (see table 27), both countries suffered a decline of their terms of trade during 1973-1980, so that in the case of Brazil the purchasing power of its exports actually fell during this period, while for the Republic of Korea there was a large reduction in the average annual rate of increase, from 37 per cent in 1963-1973 to 8 per cent in 1973-1980.

163. Policy reaction differed somewhat among the four countries. In three of them the greatest emphasis was on continuing export promotion. For example, in the Republic of Korea the policy response comprised devaluation, improved credit terms to importers of raw materials that were to be used for export production, support for overseas sales on a deferred-payment basis, the expansion of export zones, and other efforts to promote exports.[42] These steps were supplemented by various measures aimed at restricting imports. By contrast, in Brazil, although export promotion was pursued, the principal effort consisted in encouraging substitution. This involved, among other things, investment in indigenous energy sources and in the metal, capital-goods, and chemical industries, as well as the expansion and diversification of agricultural output.[43]

[40] S. Dell and R. Lawrence, *The balance-of-payments adjustment process in developing countries* (N.Y., Oxford, etc.: Pergamon Press, in co-operation with the United Nations, 1981), pp. 54-56.

[41] *Ibid.*, pp. 60-65. The reductions of real wages or earnings in some instances amounted to more than 20 per cent, and only in four countries was there a rise over the period 1973-1976 as a whole.

[42] Cohen and Basagni, *op. cit.*, pp. 200-201.

[43] *Ibid.*, pp. 192-193, and E. L Bacha, "The experience of Brazil", in *The balance-of-payments adjustment process in developing countries: studies of the experience of selected developing countries in the 1970s. Supplement to the Report to the Group of Twenty-four* (UNCTAD/MFD/TA/5), vol. I, pp. 10-14.

However, all of them sought to bridge the payments gap by expanding productive capacity. They were able to do this owing to the level of industrialization they had already attained and the access to capital markets which they commanded. In fact, all of the fast-growing exporters of manufactures raised substantial sums from the international capital markets in the period after 1973, and all but one (Singapore) were among the largest borrowers in the Eurocurrency market.

164. Developing countries lacking flexible production structures and opportunities to expand and restructure their economies by borrowing from international capital markets fared much less well. Annex table A.15 shows that for countries with *per capita* GDP of less than $500 in 1977 the growth of major components of GDP markedly decelerated between 1965-1973 and 1973-1976 with the exception of agricultural output (which is not directly affected by changes in foreign-exchange availabilities). For the least developed countries the pattern was similar except in the case of private consumption, for which there was higher growth in 1973-1976, largely due to agriculture.

165. The adjustment problems which widely characterize countries at a lower stage of development have been extensively discussed in the literature.[44] Amongst the problems worthy of mention are the relatively undiversified pattern of exports and output, the limited adaptability of human and material resources, inadequate social and economic infrastructure, and the limited powers of the government in areas such as taxation. In such circumstances the effectiveness of the price mechanism as a means of allocating resources is greatly restricted, and changes in relative prices will often give rise to unwanted shifts in the distribution of income which are difficult to redress through fiscal measures. Considerations of this kind will often limit the usefulness of devaluation as an instrument for improving the balance of payments. An undiversified structure of output may also cause other complications. For example, it will frequently result in situations where many economic activities, especially in manufacturing industry, are dependent on imported inputs. In such cases the need to restrict imports on account of the balance of payments tends to be associated with low levels of capacity utilization. In this context it is interesting to note that steep falls were recorded in annual average rates of growth of manufacturing output between 1965-1973 and 1973-1978 for the developing countries in annex table A.15 with GDP *per capita* of less than $500 in 1977 and specifically for the least developed countries. No doubt these falls were in many cases the result of payment pressures. many cases these falls reflected payments pressures.[45] Moreover, for developing countries, a substantial proportion of whose output consists of primary-commodity exports, fluctuations in prices and in quantities demanded in international markets may lead to a situation in which there is a strong correlation between changes in a given direction of the national product and of the external payments position. In such circumstances, economic management faces periods when a recession is superimposed on the pressures resulting from a deterioration of the balance of payments.[46]

166. Reference was made earlier to a number of non-oil-exporting developing countries which borrowed large sums from the international capital markets during the second half of the 1970s (much the greater part of this borrowing being Eurocurrency credits). The circumstances surrounding recourse to the capital markets varied, and there were times when access to these markets became difficult for developing-country borrowers.

167. For example, borrowing by Mexico from the capital markets was already substantial before the rise in its oil production and the devaluation of the peso in the mid-1970s, and during the rest of the decade, in view of the improved economic prospects due to the energy sector, it expanded still more rapidly. In the case of Argentina, Brazil, and the Republic of Korea there is no doubt that access to financing from the capital markets made it possible for their governments to cushion their economies to some extent against the effects of the external shocks of the 1970s. In Argentina the borrowing was closely associated with the stabilization programme initiated in 1976, and in the other two countries it was used in support of the adjustment programmes described above. In Peru adjustment to the lower export receipts associated with the loss of its anchovy stocks and the fall in the price of copper was initially accompanied by an increase in borrowing in the form of Eurocurrency credits, some of which could be contracted only after negotiations with banks concerning various aspects of the country's economic policy. Subsequently, however, Peru found it difficult to raise further loans on the international capital market and adopted restrictive policies, with the result that the growth of GDP, which had already begun to fall in 1975, became negative in 1977-1978.

168. Among countries with levels of GDP *per capita* of less than $500 in 1977, only the Philippines was a major borrower from the international capital markets. In general, these countries were more dependent on borrowing from official sources. For example, India, Sri Lanka, and the United Republic of Tanzania benefited from a sharp rise in official development assistance in 1974-1975, particularly from countries members of OPEC. However, such increases in concessional flows in real terms, in any

[44] On the problems of adjustment of developing countries characterized by low degrees of industrialization and low levels of income *per capita* (or both), see *The balance-of-payments adjustment process in developing countries...*, chap. 2 and H. C. Wallich, *Monetary problems of an export economy* (Cambridge, Massachusetts: Harvard University Press, 1950), part IV.

[45] It should also be mentioned that in many of these countries a counter-balancing influence was exerted by accelerated growth of agricultural production. Indeed, the annual average rates of growth of this sector improved for both groups of countries between 1965–1973 and 1973–1978, a result due in some cases mainly to favourable weather but also to endogenous changes in the agricultural sector itself.

[46] Such situations are less common in the developed countries, where falls in aggregate demand tend to be associated with improvements in the external balance and vice versa.

case confined to relatively few countries, were not repeated on a similar scale in the later years of the decade. Indeed, during 1976-1977 the level of ODA even in nominal terms tended to stagnate or fall.[47] An important result of the highly uneven distribution among developing countries of financial flows from private and official sources was that a number of lower-income countries had no alternative to adjusting to the adverse shocks of the 1970s through constraining economic growth. This is exemplified by the figures in the right-hand half of annex table A.14 for developing countries with GDP *per capita* of less than $500 in 1977, whose annual (unweighted) average rate of growth of import volume fell between 1965-1973 and 1973-1978. Except in the case of agricultural output, the annual average rates of growth of major domestic aggregates for such countries were lower in 1973-1978 than in 1965-1973, often being well under half those achieved in the earlier period.

169. It is also noteworthy that for certain developing countries the expansion of workers' remittances during the 1970s resulted in their becoming a major item in the balance of payments by the end of the decade. For example, for Egypt and Pakistan they amounted to approximately 90 per cent of merchandise exports in 1978.[48]

170. Although financing was unequally distributed among developing countries during the period after 1973, it made a substantial contribution to facilitating the process of adjustment. Annex table A.14 indicates that for various categories of developing countries higher average annual rates of growth of import volumes in 1973-1978 than in 1965-1973 were associated with faster growth of major domestic economic aggregates. The relationship is a highly approximate one, reflecting as it does the interaction of external events with many different types of economy and policy response.[49] Nevertheless, the marked association between higher average annual rates of growth of import volume and of domestic investment is particularly noteworthy.[50] Even where external financing was used in support of stabilization programmes which were associated, at least initially, with periods of low growth of the major economic aggregates specified in annex table A.14, it is reasonable to assume that it helped to sustain imports at levels higher than would otherwise have been achieved. Indeed, the evidence for the 78 countries included in the table supports the view that the sharp increase in financial flows which occurred in the second half of the 1970s played a major role in supporting the growth of non-oil-exporting developing countries in the face of stagflation in the developed market-economy countries.

C. Some implications of recent trends in the external financing of non-oil-exporting developing countries and in the evolution of international lending facilities

1. Introduction

171. The financing of the current-account deficit of non-oil-exporting developing countries underwent major changes in the 1970s. The share of private flows in the total rose markedly. This reflected the very large borrowings from private capital markets, especially in the form of Eurocredits made by a small number of developing countries whose credit needs could not have been met otherwise. As already mentioned, bilateral ODA rose substantially in 1974-1975. Flows from multilateral financing institutions also rose in those years and, unlike bilateral ODA, did not fall in 1975-1976; nevertheless, in only one year—1977—did they account for more than 15 per cent of the total long-term financing of the current-account deficit. The nominal value of foreign direct investment in such countries rose in most years during the 1970s, although as a proportion of total long-term financing it was subject to substantial fluctuations (for example, reaching more than 20 per cent in 1975 but falling to only about 10 per cent in 1980). Like borrowing from the international capital markets it was unevenly distributed among developing countries, the main recipients being the relatively industrialized ones and the major exporters of certain natural resources.[51]

172. Only a small proportion of the borrowing from the private capital markets was in the form of international bonds on terms fixed throughout the period of the loan. The rest was mainly in the form of bank lending at maturities frequently similar to those available on bonds but at rates of interest which varied according to conditions in the international capital market. Thus, countries which accumulated large amounts of debt in the form of bank loans were vulnerable to the sharp rises in interest rates which periodically characterize the capital mar-

[47] UNCTAD, *Handbook of International Trade and Development Statistics, Supplement 1981* (United Nations publication, Sales No. E/F.82.II.D.11), table 5.3.

[48] World Bank, *op. cit.*, p. 51.

[49] As was illustrated above, the policy response of some developing countries to the external shocks of the 1970s emphasized import substitution. Such a response may well in some cases have affected the relationship between the average annual rate of growth of import volumes and the domestic aggregates specified in the table.

[50] A similar pattern of association is shown in annex table A.15, where rates of growth during 1973–1976 are compared with those in 1965–1973. It is also interesting to note that the Spearman rank correlation coefficient between average annual rates of growth of import volume and of domestic investment in 1973–1978 for the entire group of 78 developing countries covered in annex table A.14 is above 0.7. In the case of the category consisting of developing countries with levels of GDP *per capita* above $1,000 in 1977 in annex table A.14 the relationship mentioned in the text between higher average annual rates of growth of import volumes and of other major domestic aggregates in 1973–1978 partially breaks down. However, it should be emphasized that there were only three countries in this category with a rise of annual average rates of growth of import volume between 1965–1973 and 1973–1978.

[51] For detailed data on the long-term financing of the current-account deficits of non-oil-exporting developing countries during the 1970s see UNCTAD, *Handbook of International Trade and Development Statistics, Supplement 1980* (United Nations publication, Sales No. E/F.80.II.D.10 and corrigendum), and *Ibid., Supplement 1981* (United Nations publication, Sales No. E/F.82.II.D.11), table 5.3.

kets. Nevertheless, although the heavy borrowers from these markets among developing countries incurred obligations to meet debt-service payments which tended to become increasingly onerous with the passage of time, the discussion in the previous section suggests that, like the main recipients of concessional flows, they were better placed to meet their payments deficits without severe economic and social disruption than countries having more restricted access to international financing.

173. Given the strains imposed by the process of balance-of-payments adjustment on the economies of many developing countries after 1973, it might have been expected that countries with little or no access to private capital markets would have had extensive recourse to all available sources of international finance. However, very limited use was made of IMF credit in the 1970s in spite of the Fund's position as the most important multilateral source of balance-of-payments support. One reason for this was undoubtedly the widespread view that the terms on which IMF lending was available were inappropriate and in many cases conflicted with the pursuit of prospective borrowers' economic and social goals. Various points which had been argued in support of this view were brought into particularly strong focus by the disruption of the 1970s and the scale of adjustment which many developing countries were forced to undertake.

174. The following sections take up, first, certain questions concerning the prospect that the private capital markets will continue to be able to provide payments financing for developing countries on a scale similar to that of recent years, and then turn to trends in the use of IMF credit since the late 1970s and to various changes in the lending practices of both the Fund and the World Bank, and conclude by considering the main issues that arise in the context of the present crisis.

2. Borrowing by developing countries from the international capital markets and their financial situation

175. Various considerations underlie current concerns about the prospects for borrowing by developing countries from the international capital markets. The recent slowdown of such borrowing has been accompanied by a number of indications that a return to a rapid rate of expansion may be difficult to achieve. Some of these indications concern the financial system as a whole and may be expected to have consequences for all borrowers from the international capital markets. These will be discussed in the following section. However, future borrowing by developing countries may also be affected by unfavourable trends in certain features of their financial situation.

176. During the period 1976-1979 there was a rapid rise in the amounts raised by developing countries in the form of Eurocurrency credits (by both the group as a whole and its non-oil-exporting members). 1980 witnessed a sharp fall in such borrowing, and the figures for 1981, though substantially higher than those for 1980, are still below the level reached in 1979. It is widely believed that the large sums raised in 1979 were partly of a precautionary character, and that many developing countries rode out 1980 by running down accumulated reserves and drawing on undisbursed credits.[52]

177. These trends in recent years have been accompanied by a sharp rise in the debt-service payments of developing countries. As shown elsewhere in this report (see table 5), the total outstanding debt of developing countries with current-account deficits amounted to about $400 billion at the end of 1981. Annual interest on medium- and long-term loans as a proportion of the value of the exports of such countries was 9 per cent, and the ratio of debt service plus profit remittances to their exports about 25 per cent. Both these ratios have risen sharply since the end of the 1970s, partly as a result of the marked tendency towards higher interest rates in international capital markets. It should be emphasized that these average figures hide considerable variation among countries, the proportion of debt-service payments to exports in some cases being well above 40 per cent.[53]

178. Recently there have also been indications that the liquidity position of many developing countries is deteriorating, and that some of them are increasingly having to depend on short-term borrowing from the capital markets. As shown in annex table A.4, during both 1980 and 1981 there were substantial declines in the foreign-exchange reserves of the non-oil-exporting developing countries. A recent analysis suggests that the decline in 1981 coincided with a situation in which for the first time in some years the balance of developing countries' short-term assets and liabilities vis-à-vis the banking system was unfavourable.[54] Since 1979 there has also been a sharp rise in amortization payments on short-term debt to banks by developing countries. Although the position is not entirely clear, it is possible that part of this rise in the use of short-term credit may not be related to self-liquidating transactions for trade purposes but to problems associated with the refinancing of longer-term debt.[55]

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[52] See, for example, Group of Thirty, *The outlook for international bank lending* (New York, 1981), pp 50–51 Lending to developing countries in the form of international bonds was on a much smaller scale and not such as to offset fluctuations in Eurocurrency credits

[53] For various reasons available figures for debt-service payments should be treated with caution as indicators of the burden of a country's external indebtedness For example, they do not always include all annual payments on account of amortization, and figures in this area often omit debt incurred in connection with military purchases Moreover statistics covering short-term debt positions are often deficient See, for example, Group of Thirty, *Risks in International Bank Lending* (New York, 1982), pp 7–8

[54] Estimates based on data from the Bank of International Settlements in *Amex Bank Review*, 22 February 1982, indicate that in 1981, for the first time in five years, developing countries' debts to banks which were to mature during the year exceeded their deposits with them Moreover, the outstanding undisbursed credit commitments of such countries had also been declining in relation to their short-term repayment obligations

[55] See *Amex Bank Review*, 26 April 1982, which shows a rise in amortization payments on short-term debt to private banks by

(Continued on next page)

179. The situation described above, while it does not in itself presage any major discontinuity in the supply of funds to developing countries from the private capital markets, does nevertheless make it doubtful whether an increase in borrowing at the rates which characterized the late 1970s is any longer sustainable.

3. Some questions concerning the functioning of the international capital markets

180. The prospects for borrowing by developing countries from the international capital markets will be affected not only by trends in their financial position but also by various factors influencing the overall balance of the demand for and the supply of funds. Among these factors general economic conditions and their evolution are of special importance for both developing countries and other borrowers.[56] Moreover, it is certain features of the present economic situation that are largely responsible for the recent increase in concern over the functioning of the capital markets.

181. Among these features are the coincidence of growing levels of indebtedness and high interest rates with low demand for many goods and services as well as the difficulties for portfolio management and financing operations generally caused by fluctuating interest rates.[57] Such conditions are regarded as increasing the likelihood of shocks to the financial system. The concern is that, owing to the interdependence which characterizes the system, problems in one part of it occasioned by such shocks may have a much more widespread adverse impact. The interdependence of the financial system has various aspects, including the global extent of the international interbank market and the great increase during recent years in the number of banks with a substantial involvement in international as well as domestic lending. In such circumstances, even if there arise problems which concern primarily banks' domestic lending, their effects are likely also to be felt in the international capital markets.[58]

182. Since 1974, which was characterized by various destabilizing events in the capital markets leading *inter alia* to serious difficulties for "lower-tier" banks in their attempts to obtain funds in the interbank market, considerable efforts have been made to improve both the supervision and the defences against shocks of the financial system. For example, by October of that year, the members of the Group of Ten, as well as certain other countries, had agreed to subscribe to the Basle accord under which central banks would come to the rescue of banks under their jurisdiction in certain circumstances. Moreover, 1974 also witnessed the establishment of the Committee on Banking Regulations and Supervisory Practices in the framework of the Bank for International Settlements for the purpose of improving the supervision of banks' international operations and the availability of information in this area. However, as was noted earlier, the data concerning some aspects of borrowers' debt positions are still defective. Moreover, the great expansion of the number of countries whose banks are lenders in the Euromarket means that there are still doubts concerning the functioning of lender-of-last-resort facilities in certain kinds of crisis situation. Thus, it is not altogether clear how well the new defensive arrangements would withstand major pressures.

183. While the prospect of a major destabilizing shock to the international capital markets still seems fairly remote, there are none the less other problems which might accompany the onset of more widespread difficulties associated with the debts of particular borrowers. One consequence which might well slow down the rate of new lending (thus possibly causing further debt problems) would be the strain on the human and financial resources of the banking system.[59] Moreover, it is not easy to predict the effect of such a situation on the perceptions of suppliers of funds, who may prefer alternative forms of investment to the international capital markets, thereby reducing the immediate availability of funds for external financing.

184. During recent years private financial institutions have shown considerable resourcefulness in taking advantage of the opportunities presented by developing countries' requirements for external financing. New lending instruments have proliferated, and there has been a substantial geographical extension of the institutions' activities. The under-

(*Footnote 55 continued*)

developing countries (as defined by that Bank) from $42 1 billion in 1978 to $94 7 billion in 1981

[56] It is difficult to forecast the impact of changes in general economic conditions on prospects for borrowing by developing countries It is sometimes argued that an improvement in such conditions will be associated with growing competition for funds from the corporate sector However, the same improvement is likely to result in a rise of the export receipts of developing countries, thus reducing their need for new borrowing

[57] See, for example, Group of Thirty, *Risks in international bank lending* (New York, 1982), pp 10 and 21–22

[58] In discussion of the relative risks of domestic and international lending by banks attention is often drawn to evidence that loan losses have been much lower for the latter See, for example, Group of Thirty, *Risks in international bank lending*, p 7, and T H Donaldson, *Lending in international commercial banking* (London Macmillan, 1979), pp 149–150 and 155 It should be recalled that the widespread bank losses of the early 1970s involved mainly fields such as foreign-exchange operations and real-estate and shipping finance rather than country lending

[59] The complexity of debt rescheduling in response to loan problems which were at least partly the result of the current deterioration in economic conditions is well illustrated by the case of Massey-Ferguson, a transnational corporation whose operations span the agricultural machinery business and various other kinds of engineering in Canada, the United States, the United Kingdom, France, Italy, the Federal Republic of Germany, Australia, South Africa, Argentina and Brazil Here the debt rescheduling involved not only a number of major banks but also various governmental bodies in both the United Kingdom and Canada (in the latter at federal and provincial levels) See, for example, M Lafferty, "The company that had to survive", *Financial Times*, 19 January 1981 The Group of Thirty has drawn attention to the indirect costs of debt-reschedulings to banks "Although most banks say those indirect costs in management time, liquidity, income and portfolio quality have not been high to date, many believe these costs may grow" (*Risks in international bank lending*, p 7), and "Bank reschedulings have been costly and time-consuming Arrangements have taken from 6 months to 4 years to complete" (*Ibid*, p 13)

lying strength of the role of the private capital markets in providing external financing for developing countries depends on the growth of their export earnings in line with debt-servicing obligations. But in circumstances such as the prevailing ones it may also be necessary to reinforce in various ways the arrangements for protecting the markets against shocks, for example, along the lines suggested by various people who have been in close contact with the financial system in operating and supervisory capacities.[60] Moreover, if the problems now facing the world economy with respect to external financing are not to be aggravated, multilateral financial institutions will require enough operational flexibility and sufficient resources to enable them to respond to many different kinds of demand.

4. Payments financing from multilateral sources during the 1970s and the debate concerning IMF conditionality

185. An efficient process of balance-of-payments adjustment may be defined as one in which reductions of economic activity and associated increases in unemployment and in idle capacity are avoided as far as possible, while the other costs involved in the required reallocation of resources are also minimized. In the second half of the 1970s recourse by developing countries to external financing on appropriate terms was clearly capable of contributing to an efficient process of adjustment. It was shown above that for some developing countries increased borrowing from the private capital markets did facilitate adjustment, but often at the cost of a burden of debt-service payments which has risen in response to higher interest rates while in certain other cases greater bilateral ODA helped to reduce balance-of-payments pressures. The limited use of IMF credit during this period, also mentioned above, is documented in more detail in table 10, which shows, *inter alia*, that much of the rise in 1975-1976 was due to borrowing under the Oil Facility and the Compensatory Financing Facility (a point which will be further discussed below). The modest size of this expansion of IMF lending gave rise to intensified questioning of the way in which the Fund was carrying out its role as the main multilateral source of payments finance.

186. IMF lending terms have gradually evolved since the early 1950s. The concept of "conditionality" covers the circumstances in which a country draws from the Fund, the periods for which such drawings may be outstanding, and the policies which the country is to pursue. Member countries can obtain financing from the Fund by means of drawings under their reserve and credit tranches or under various "facilities", some of which were established only during the last decade. A common feature of drawings under the reserve and credit tranches is their short-term character, "repurchases" being required in 3 to 5 years. However, under three of the more-recently established facilities the period before which repurchases are due was extended somewhat, amounting to 4 to 10 years for the Extended Fund Facility (EFF), 3 to 7 years for the temporary Oil Facility, and 3.5 to 7 years for the Supplementary Financing Facility (SFF) and drawings under the "Enlarged Access Policy". Under the arrangements covering use of IMF resources, except those made available through the reserve tranche, a country's drawings are conditional upon its pursuing certain policies. Drawings under the first credit tranche, the Compensatory Financing Facility (CFF) and the Buffer Stock Facility are made at a low degree of conditionality. For other drawings the availability of resources is subject to the observance of various policy conditions, in particular regarding the money supply, taxes and government expenditure, subsidies, payments restrictions, and the inflow of foreign investment. Drawings are conditional on the achievement of targets for certain policy indicators, also called performance criteria, which are established during negotiations with the Fund. The number and content of performance criteria vary to some extent but always include ceilings on the growth of credit. It is common for such criteria also to comprise the abolition or liberalization of restrictions on trade and payments, exchange rate policies, curbs on government spending and borrowing, and conditions relating to policies towards foreign debt and exchange reserves.

187. Both the underlying rationale of typical programmes associated with the use of IMF credit and more detailed issues involving the suitability of policy instruments favoured by the Fund have been subjected to searching criticism from several sources for many years, and have also been extensively reviewed by the Fund staff and Board of Management.[61] In view of the limited recourse by developing countries to IMF resources in spite of the pressures generated in the 1970s, various arguments made in this debate seemed especially pertinent. In the first place, there was the growing criticism of the Fund's reluctance to accept the validity of certain economic and social objectives of some governments among its member countries. At the same time, it could not be denied that a large part of the deficits of the non-oil-exporting developing countries were due to factors beyond their control, and that adjustment policies would need to take those factors into account. Moreover, it became increasingly clear that the adjust-

[60] For a summary of a number of schemes of this kind see "The access of developing countries to capital markets the existing situation and proposed improvements report by the UNCTAD secretariat" (TD/B/C 3/165/Supp 1 and Supp 1/Corr 1), chap III F For some more recent proposals see, for example, the speeches of W Guth and A W Clausen (then President of the Bank of America) at the International Monetary Conference in New Orleans in June 1980, R Ossola, "The vulnerability of the international financial system international lending and liquidity risk", *Banca Nazionale del Lavoro Quarterly Review*, September 1980, and the speech of H J Witteween on the occasion of the Financial Times Conference "The New Sri Lanka – Opportunities for Business", Colombo, 4 September 1980

[61] "See International monetary issues report by the UNCTAD secretariat" (TD/233), reproduced in *Proceedings of the United Nations Conference on Trade and Development, Fifth Session*, vol III – *Basic Documents* (United Nations publication, Sales No E 79 II D 16), chap II B, and *The balance-of-payments adjustment process in developing countries*, chap 3

TABLE 10

Net flow of IMF credits to non-oil-exporting developing countries, 1972-1981
(Million SDRs)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Total net flow to non-oil-exporting developing countries[a]	335	48	1 061	1 488	1 804	−295	−272	341	1 164	4 838
of which										
Under CFF[b]	248	80	75	95	1 063	−23	−2	6	263	570
Under OF[c]	—	—	—	1 129	278	−178	−596	−358	−241	−447
Under EFF[d]	—	—	—	8	90	170	71	132	286	1 449
Under SFF[e]	—	—	—	—	—	—	—	237	1 163	1 767
Number of non-oil-exporting developing countries net recipients of Fund credit	8	5	14	33	41	21	22	26	30	51
Net flow to non-oil-exporting developing countries under TF[f]	—	—	—	—	—	150	691	527	1 256	367

Sources IMF, *International Financial Statistics* (various issues) and *Annual Report*, various years

[a] Member countries' use of Fund credit is determined mainly by their net drawings from their credit tranches and under the various facilities The total net flow excludes flows under the Trust Fund (shown separately in the final row of the table)

[b] Compensatory Financing Facility

[c] Oil Facility

[d] The totals for the Extended Fund Facility are ordinary drawings and (since 1981) drawings under the Enlarged Access Policy

[e] The totals for the Supplementary Financing Facility are drawings associated with stand-by arrangements involving higher credit tranches or with arrangements under the Extended Fund Facility

[f] Trust Fund

ment policies for developing countries which were appropriate to the newly emerging conditions in the world economy had to be of a long-term nature. Thus, if the programmes associated with the use of IMF credit were to contribute to the success of such policies, it was necessary that the Fund should address itself more than before to structural impediments to balance-of-payments equilibrium, especially those on the supply side.

188. During this period Fund practices were modified in various ways and its resources expanded. Of particular interest in the light of the criticisms just described were the introduction of various new facilities, some of which made a significant contribution to the flow of Fund financing to non-oil-exporting developing countries in the second half of the 1970s. Of the new facilities two, the Oil Facility and the Extended Fund Facility, were set up in 1974. The Oil Facility was designed to assist member countries adversely affected by the rise in the price of oil. Resources under this temporary facility (which were financed by borrowings from various oil-producing countries and other countries with relatively strong payments positions) were made available on terms involving a relatively low degree of conditionality, borrowing countries being required *inter alia* to avoid competitive depreciations and the escalation of trade and payments restrictions, and to pursue policies which would sustain appropriate levels of economic activity and employment, while minimizing inflation. In consequence, as noted earlier, drawings under this Facility accounted for a substantial proportion of the total use of Fund credit in 1975-1976, and it seems pertinent to ask why a similar approach was no longer considered relevant during the period of widespread payments pressures after 1979. The Extended Fund Facility was established to provide payments assistance for longer periods and in amounts larger in relation to quotas than under the credit tranche policies, in support of programmes designed to correct structural maladjustments in production, trade and prices, and carried conditions analogous to those under upper-credit-tranche drawings. Much more limited use was made of the EFF in its early years than of the Oil Facility. Between 1974 and mid-1977 only three member countries entered into extended arrangements with the Fund.[62] In view of the extensive recourse of non-oil-exporting developing countries to the financing available under the Oil Facility and the CFF, it is reasonable to assume that reluctance to use the EFF was to a considerable extent the result of the stricter conditionality associated with it.[63]

189. Two other decisions during this period had the effect of making resources available to certain IMF member countries at lower rates of interest. In 1975 a subsidy account was established to reduce the interest cost of drawings under the Oil Facility for the most seriously affected (MSA) member countries. In 1976 a Trust Fund was set up to provide balance-of-payments assistance on concessional terms to eligible developing countries out of profits from the sale of gold by the Fund. As can be seen from table 10, during 1977-1980 net flows to non-oil-exporting developing countries under the Trust Fund exceeded net flows from IMF in the form of drawings on credit tranches and under the various facilities.[64] Table 10 also shows that, apart from the

[62] IMF, *Annual Report, 1977* (Washington D.C., 1977), p. 53.

[63] This impression tends to be supported by the experience of Kenya, one of the three countries making use of the Facility during its early period. Under an extended arrangement, which was approved in July 1975 and was to involve eventual drawings of SDR 67.2 million, Kenya agreed to embark on a programme of measures covering a broad area of government policy. Agreement on the set of policies involved the World Bank as well as the Fund, since Kenya had applied at the same time for a programme loan from the Bank. After an initial drawing of SDR 7.7 million, agreement could not be reached with the Fund on the 1976 government budget. In the meantime Kenya's balance-of-payments situation had greatly improved, and a decision was taken to make no further drawings under the arrangement.

[64] The policy of making IMF resources available at lower rates of interest for certain member countries is to be continued

Oil Facility and the Trust Fund, the other main form in which resources were made available through the IMF to non-oil-exporting developing countries in 1975-1976 consisted of drawings under the CFF. However, during this period drawings under credit tranches fell well short of the resources available. Indeed, during the years 1974-1976 there seems to have been a widespread reluctance to make drawings in the upper credit tranches.

5. Some aspects of recent changes in the lending practices of the IMF and the World Bank

190. Reference was made earlier to recent reconsideration in the Fund of various aspects of conditionality. An important step in this process was a review of the subject which began in 1978 and was concluded in March 1979 with the adoption by the Fund's Executive Board of a decision containing a new set of guidelines on the use of IMF resources. Noteworthy features of the new guidelines are the encouragement to member countries to approach the Fund at an early stage of their balance-of-payments problems, further acknowledgement of the fact that adjustment programmes frequently cannot be completed in a short time, and recognition of the need for the Fund to take account of the domestic social and political objectives and of the economic priorities of member countries in the formulation of such programmes.[65] However, it should be emphasized that the reconsideration of conditionality within the Fund has not apparently led to changes in other areas upon which criticism has frequently focused, such as the typical macroeconomic models that underlie its policy prescriptions or its stance regarding trade and payments restrictions.

191. The question of the time required for a successful process of adjustment is closely linked to that of appropriate supply-side policies. Since it has become increasingly apparent that, under current conditions, demand restriction generally leads to a substantial reduction in output and growth, and that adjustment of external balances often requires a lengthy process of structural change, the Fund has put greater emphasis on such policies affecting the supply side and on closer co-ordination between the Fund and the World Bank in the design of adjustment and development programmes for member countries.[66] In parallel with the new perspectives of the Fund the World Bank initiated in 1980 a new form of financing called "structural adjustment lending". This was an extension of the programme lending which since the period of reconstruction in the years immediately after 1945 had accounted for only a small proportion of the Bank's total lending and in recent years had been generally designed to meet circumstances created by crises such as wars, natural disasters, sudden falls in export earnings and particularly severe adverse movements of a country's terms of trade. Structural adjustment lending was to be used in support of programmes of long-term adjustment and investment in the face of changing world economic conditions and thus complemented the Fund's new emphasis on the supply side.[67] Faced with resource restraints, the Bank is exploring ways to expand co-financing, to finance projects in partnership with the private sector and to find new ways of tapping capital markets.

192. It is not yet possible to give a full assessment of the impact of the recent changes in the lending policies of IMF and the related steps taken by the World Bank. It must be pointed out, however, that the Fund continues to emphasize the need for restricting expenditure, while structural adjustment loans assure the application of a stabilization programme,[68] on the theory that structural adjustment "can only take place effectively in the context of actions to limit aggregate demand and, where necessary, external borrowing".[69]

193. Structural adjustment lending (SAL) by the World Bank has so far been on a limited scale, 10 loans with a value of approximately $1 billion having been approved in the two fiscal years 1980 and 1981.[70] In any event, SAL does not involve an increase in World Bank lending as a whole, although it does speed up the rate of disbursements.

194. In the case of IMF credit, as can be seen from table 10, since 1980 there has been a large rise in net flows to the non-oil-exporting developing countries. However, this rise accompanied not only the Fund's modification of its lending policies but also a deterioration of the payments positions of certain developing countries and changes in the availability of financing from other sources.

195. The rise in the flow of Fund resources to developing countries in 1980-1981 was associated with both an increase of the number of recipient countries and shifts in the distribution of flows among different categories of developing country. These shifts have included a large rise in the proportion of IMF financing consisting of flows to low-

through a subsidy account for the SFF, with funds provided from part of the repayments of Trust Fund loans and from bilateral contributions.

[65] Executive Board decision No. 6056-(79/38) of 2 March 1979, reproduced in IMF, *Annual Report, 1979* (Washington D.C., 1979), pp. 136-138, and *IMF Survey*, vol. 8, No. 6, 19 March 1979.

[66] "While ... adjustment programmes will necessarily continue to include demand management policies to avoid overconsumption in relation to available resources, they will also place greater emphasis on the supply side of the economy .... Such structural programmes can be put in place only over a longer period than has been typical in past Fund standby programmes". IMF, *Annual Report, 1980* (Washington D.C., 1980), p. 71.

[67] On the rationale of structural adjustment lending see World Bank, *Annual Report, 1980* (Washington D.C., 1980), pp. 67-68, E. P. Wright, "World Bank lending for structural adjustment", *Finance and Development*, vol. 17, No. 3, September 1980, and P. M. Landell-Mills, "Structural adjustment lending: early experience", *Finance and Development*, vol. 18, No. 4, December 1981.

[68] See Ernest Stern, Senior Vice-President, Operations, World Bank, *World Bank Financing of Structural Adjustment* (paper presented to the Conference on IMF Conditionality, 24-26 March 1982), p. 3.

[69] *Ibid.*, p.13.

[70] World Bank, *Annual Report, 1980* (Washington D.C., 1980), pp. 111-112, and *Annual Report, 1981* (Washington D.C., 1981), pp. 70-71. A further $1 billion was approved for fiscal 1982.

income developing countries.[71] However, recent events make it clear that various issues raised in the controversy over the Fund's lending practices described above are still far from being satisfactorily resolved.

196. For example, in early 1982 a number of countries, including low-income countries, were unable to meet the performance criteria established under stand-by and extended arrangements and were therefore unable to continue drawing on the Fund. There is widespread agreement that the difficulties experienced by these countries in meeting the targets agreed to stemmed from the deterioration in world economic conditions. A new sense of urgency has therefore been given to the question of whether Fund programmes make proper allowance for the vulnerability of developing countries to circumstances which are beyond their control. The rise in the number of discontinued arrangements with the Fund coincided with pressure to reverse the modifications of the Fund's lending policies since 1979 and even to tighten the low conditionality which has been associated with the use of resources under the CFF. The attempts to impose stricter Fund conditionality accompany a resistance by some countries to proposed increases in IMF quotas and pressure to limit the programmes of both concessional and non-concessional lending of other multilateral financial institutions such as the World Bank and the regional development banks. Thus, stringency in the availability of official payments finance would be superimposed on generally lower levels of official multilateral flows.

197. This prospect is particularly worrisome as regards IDA. IDA commitments are expected to fall considerably short of the amounts previously expected, primarily because of the decision by the United States to make its contributions to the Sixth replenishment over a four-year period. Fortunately, the other donors have not all followed suit, and IDA's commitment authority will fall by somewhat less than the $1.5 billion that would have occurred otherwise. The prospects for the future are not any brighter: a shortfall of $1.4 billion is expected for 1983 and of $2.6 billion for 1984. The shortfall in 1982-1984 would then be $5.5 billion — a cutback of 40 per cent in the Bank's concessional lending to its poorest member countries.

198. Official projections of World Bank lending are not available, but on present indications it would appear very unlikely that such lending will expand as fast as in the past, and it may well expand very little or not at all.

D. The monetary and financial systems and the development crisis

199. The unwillingness to expand significantly the resources of the multilateral financing institutions and pressure to restrict their operating flexibility comes at a particularly unfortunate time. Major adjustments were made in export and import volumes following the crisis of 1974-1975, making further adjustments increasingly difficult, particularly as regards imports; moreover, growth rates were cut and levels of indebtedness increased. As pointed out in chapter 2, the current phase of the crisis which began in 1979 has subjected developing countries to significant new losses. The combination of higher prices for energy and imported manufactures and lower prices for commodities, combined with a sharp increase in interest payments, has put great pressure on the current account of oil-importing developing countries.

200. Given the origins of the deficit and the context in which it occurred, there will be major losses in terms of output and growth unless adjustment can be brought about through enlarged productive capacities and output in export and in import substitution activities. This will require increased levels of investment. Yet, payments pressures are leading to reductions in investment programmes, thereby accentuating the underlying disequilibrium. In order to break out of this vicious circle, external financing on appropriate terms and conditions must be available. However, payments support now appears likely to be forthcoming only on stringent conditions, and longer-term flows have been sluggish or uncertain.

201. In short, payments pressures have been so intense, and the adjustment and financing possibilities so scanty, as to leave developing countries with no option but to curtail expansion. Indeed, in 1981 the growth performance of oil-importing developing countries was the worst in the post-war period.

202. Moreover, increasing pressure is being felt as regards debt servicing. In most developing countries debt-service payments have been proceeding on schedule, but in many this has only proved possible through a compression of imports and a reduction of growth below rates otherwise attainable. In a small but growing number of countries difficulties in servicing debt have become overt. There were 20 instances of debt rescheduling in 1977-1981, as compared with 13 in 1972-1976. In 1977-1981 12 of these instances involved countries initiating debt rescheduling after a period of normal servicing, as compared to 5 in 1972-1976, and the number will probably grow in the coming months. Moreover, the present prospects for the world economy and for private financial flows call into doubt the ability of many developing countries that reorganized their debt in 1980 and 1981 to resume normal debt servicing in 1982 and 1983.

203. The changes in the lending policies and practices of IMF, which were described above, were widely regarded as no more than very tentative steps towards greater flexibility, and further movements in this direction will be required if the Fund is to be capable of responding adequately to the kinds of situation that may arise now that further expansion of the role in payments of financing played by the international capital markets is less assured, while bilateral ODA continues to rise at most rather

[71] For example, according to estimates in Morgan Guaranty Trust Company of New York, *World Financial Markets*, April 1982, pp. 9-10, developing countries with *per capita* GNP of less than $700 in 1978 accounted for more than half of IMF credit outstanding at the end of 1981.

slowly. Failure to modify IMF's lending practices and to expand its resources significantly, as well as those of other multilateral financial institutions, can be expected to have especially adverse effects on the lower-income developing countries. As already pointed out, many of these countries have registered minimal advance during the last decade and undergone prolonged periods of severe balance-of-payments pressure. Owing to the difficulties such countries face in raising funds from the capital markets, their prospects are especially sensitive to moves to confine IMF to a more restricted role in payments financing and to attach stringent policy conditions on programme lending by the Bank. Policy changes at the national level alone are unlikely to be sufficient to the task at hand: greater use of the price mechanism and additional efforts to raise domestic savings and compress expenditures are likely to lead to very modest improvements in the external sector (and relatively significant disruptions of the internal sector) unless accompanied by an enlarged volume of external resources available for channelling into capacity growth. On the other hand, if external flows do expand, there will be less need to curtail the level of expenditure (although the need for changing its pattern and the sectoral distribution of new investment would, of course, remain), and efforts to raise domestic savings and investment and to bring about a sectoral re-allocation of resources, will prove more fruitful.

Chapter 4

OIL-EXPORTING DEVELOPING COUNTRIES: GROWTH PERFORMANCE AND DEVELOPMENT PROBLEMS

204. The oil-exporting developing countries (OECs) have one thing in common, namely, the special importance of the oil sector in their economies. In all other respects their economies differ widely. Some have sizeable populations and broad bases of natural resources, others have tiny populations and, other than petroleum, very meagre natural resources. A few enjoy *per capita* incomes well above the average of middle-income developing countries; the majority, however, are close to or below this average, with one country (Indonesia) falling in the low-income group of less than $400 (1979). Even in terms of balance of payments, and in spite of their self-sufficiency in fuels, only seven oil exporters have enjoyed persistent current-account surpluses in the 1970s (until 1978) that would qualify them as capital-surplus countries. Some of these almost certainly will shed this characteristic in the 1980s with the further rise in their absorptive capacity and the possible continued weakening of real prices of oil.

205. The rationale for a separate consideration of the oil-exporting developing countries is by no means to overplay the significance of their oil assets. Indeed, the majority of them are exceptionally poorly endowed with other natural resources, notably arable land and water. The current abundance of financial assets accumulated by OECs following the sharp rise in oil prices reflects the correction of the previous situation during which for an extended period of time this scarce and depletable resource was underpriced. On the other hand, it is certainly a mixed blessing, as many of these countries have been under pressure to extract oil at a much higher rate than can be justified in terms of their consumption and investment needs. In practically every other respect, they share with other developing countries the typical characteristics of developing countries: weak and fragile production structures, low levels of capital stock and technological capability, narrowness of the infrastructural base and weak socio-economic organization. The study of their special development performance and problems is required precisely to focus on questions of economic development that persist after relaxing the balance-of-payments constraint. For this purpose, two sub-groups of oil exporters are differentiated: one consists of the capital-surplus countries in which oil production has been carried out at a rate exceeding the ability to make full use of oil revenues for domestic development. These countries are designated as low and medium absorbers (LMA) of the real resources available to them from their oil revenues. The other sub-group consists of the high absorbers (HA) which are net importers of capital, although their balance-of-payments problems have been generally less acute than those of the oil-importing developing countries. Of the 11 oil-exporting developing countries which, by virtue of data comparability, have been selected for the present analysis, five belong to the first group (LMA). Of these, two are low absorbers (Kuwait and Saudi Arabia) and three are medium absorbers (Iran, Iraq, Libyan Arab Jamahiriya).[72] Six countries belong to the latter group (HA) namely, Algeria, Ecuador, Gabon, Indonesia, Nigeria and Venezuela. As noted earlier, some countries in the first group will transfer to the second group as development proceeds. In fact, this has probably already happened in the case of Iran and Iraq.

A. Growth and structural change

206. From 1970 to 1973 (i.e. prior to the rise in oil prices in 1973), the annual growth of GDP of the OECs was 8.2 per cent.[73] This rate fell to 4.3 per cent during the period 1973-1978 and to 1.5 per cent in 1978-1980, essentially because the majority of OECs tended in the latter period to limit the expansion in oil production.[74] The slower growth of GDP was compensated by improved terms of trade. GDP adjusted for income effects of the terms of trade thus rose in the three periods by 14.3 per cent, 8.5 per cent, and 9.0 per cent, respectively (see table 11).

207. A better indicator of the economic performance of OECs is the growth in GDP of the non-oil sector.[75] In contrast to the growth rate of total GDP, that of non-oil GDP was considerably higher, averaging about 8.3 per cent in 1970-1973, 8.7 per cent in 1973-1978 and 5.5 per cent in 1978-1980.

208. The sector of highest growth during 1973-1978 was construction, with a growth rate of 14.8 per cent (per annum), a consequence of the high investment rate that is discussed later in this report. Manufacturing industry also expanded at a high rate, averaging 8.5 per cent in the same period.

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[72] Qatar and the United Arab Emirates also belong to the group of low absorbers, but comparable data, particularly for national accounts, are not available for these two countries

[73] See annex table A 12 As noted above, the analysis in this section does not include the United Arab Emirates and Qatar, for which data are not available

[74] Annex table A 37 shows the growth of GDP and its sectoral components for each of these 11 OPEC member countries

[75] The non-oil sector is defined to exclude crude oil and natural gas extraction only Petroleum refining, gas processing, petrochemicals, etc are included in the definition of this sector

TABLE 11

Growth rates of GDP and its components for the low and medium absorbers and high absorbers among 11 selected oil-exporting developing countries, 1970-1980

(Annual average percentage increase, based on values in constant 1975 prices)

	Low and medium absorbers (LMA)			*High absorbers (HA)*			*Total*		
	1970-1973	*1973-1978*	*1978-1980*	*1970-1973*	*1973-1978*	*1978-1980*	*1970-1973*	*1973-1978*	*1978-1980*
Agriculture	2.5	4.1	..	1.5	3.2	..	1.7	3.4	..
Mining	8.6	−0.6	..	7.1	−1.6	..	8.1	−0.9	..
Manufacturing	12.5	8.6	..	8.5	8.8	..	10.1	8.5	..
Utilities	15.8	13.1	..	11.2	12.6	..	13.1	12.8	..
Construction	13.3	17.5	..	23.5	12.3	..	18.3	14.8	..
Services	14.8	10.6	..	6.5	9.0	..	9.6	9.6	..
Total GDP	9.7	3.7	0.0	6.5	5.1	2.7	8.2	4.3	1.5
Non-oil GDP	12.1	10.4	6.5	6.2	7.7	4.9	8.3	8.7	5.5
Total GDP adjusted for effect of terms of trade	17.9	10.7	10.3	10.0	7.8	12.4	14.3	8.5	9.0

Source 1970-1973 and 1973-1978 UNCTAD secretariat estimates, based on data of the Department of International Economic and Social Affairs of the United Nations Secretariat, and United Nations, *Monthly Bulletin of Statistics*, March 1982 1978-1980 UNCTAD secretariat estimates

Note For the classification into and concept of LMA and HA, see text, paragraph 205

Growth in agriculture in the majority of the countries was much more modest, averaging about 3.4 per cent (see table 11). In general, the performance of the group of high absorbers for both total GDP and its principal components improved markedly in 1973-1978 over the earlier 1970-1973 period. The medium and low absorbers performed less well with the exception of agriculture and, more significantly, construction.

209. The remarkable growth of the non-oil sector was engendered by a high rate of saving and investment. Average gross domestic saving relative to gross domestic product increased from the already high level of 34.2 per cent in 1970-1973 to 42.9 and 43.8 per cent in 1974-1978 and 1979-1980, respectively. For the high absorbers the increase was somewhat sharper, from 26.6 per cent to 32.5 and 35.8 per cent, in contrast to an increase in the low absorbers group from 43.2 per cent in 1970-1973 to 51.6 and 50.7 per cent in 1974-1978 and 1979-1980, respectively. A high proportion of these savings was invested in domestic capital formation, which rose from 21 per cent of GDP in the first period to around 28 per cent in the latter period. In this case, the low and medium absorbers group effected the sharper rise, from 18.3 per cent to 26.2 and 27.4 per cent, as against a rise in the high absorbers group from 24.1 per cent in the 1970-1973 period to 31.5 and 28.6 per cent in the latter periods (see annex table A.38).

210. As noted earlier in this report, movements in the barter terms of trade can have a powerful impact on the ability of a country to maintain or increase its savings rate. In that context it was noted that the real income effect of the terms of trade in the oil-importing developing countries had steadily diminished in the 1970s while real savings rates had increased markedly. Thus, these countries have improved their performance, in spite of adverse terms of trade movements, by means of a marked shift in the composition of final demand, in particular a severe compression of private consumption. An examination of the relationship between savings behaviour and terms-of-trade movements in the two groups of oil-exporting developing countries reveals that the capital-importing, high-absorption group responded to gains in the terms of trade with improved savings performance and tended to sustain its savings effort in periods of declining terms of trade (see chart VI). In contrast, the group of capital-surplus, low and medium absorbers did not markedly improve its savings performance in the period of sharply improving terms of trade (see chart VII).

211. The extremely high levels of investment achieved in the OECs suggest a remarkable absorptive capacity of these economies. Measured in terms of constant 1975 prices, gross investment, as a proportion of GDP, increased from 14.6 per cent in 1970-1973 to 27.5 per cent in 1974-1978. In the LMA group the proportion more than doubled, from 10.5 per cent to 26 per cent (see table 12).

212. The increase in the investment ratio was not without cost, however. Limits to infrastructure and

TABLE 12

Gross domestic investment ratio of the low and medium absorbers and high absorbers among 11 selected oil-exporting countries, 1970-1978

(Percentage of GDP based on data in constant 1975 prices)

	Low and medium absorbers (LMA)[a]		*High absorbers (HA)*[a]		*Total*	
	1970-1973	*1974-1978*	*1970-1973*	*1974-1978*	*1970-1973*	*1974-1978*
Investment/total GDP	10.5	26.0	19.3	29.2	14.6	27.5
Investment/non-oil GDP	31.2	58.8	28.1	39.1	29.2	47.0

Source 1970-1978 Calculated from data in United Nations *Handbook of World Development Statistics 1979* (PPS/QIR/5), 1979-1980 based on United Nations, *Monthly Bulletin of Statistics*, March 1982

[a] See the note to table 11

CHART VI

Movement in the terms of trade and the real savings rate in oil-exporting developing countries, 1960-1978: high absorbers

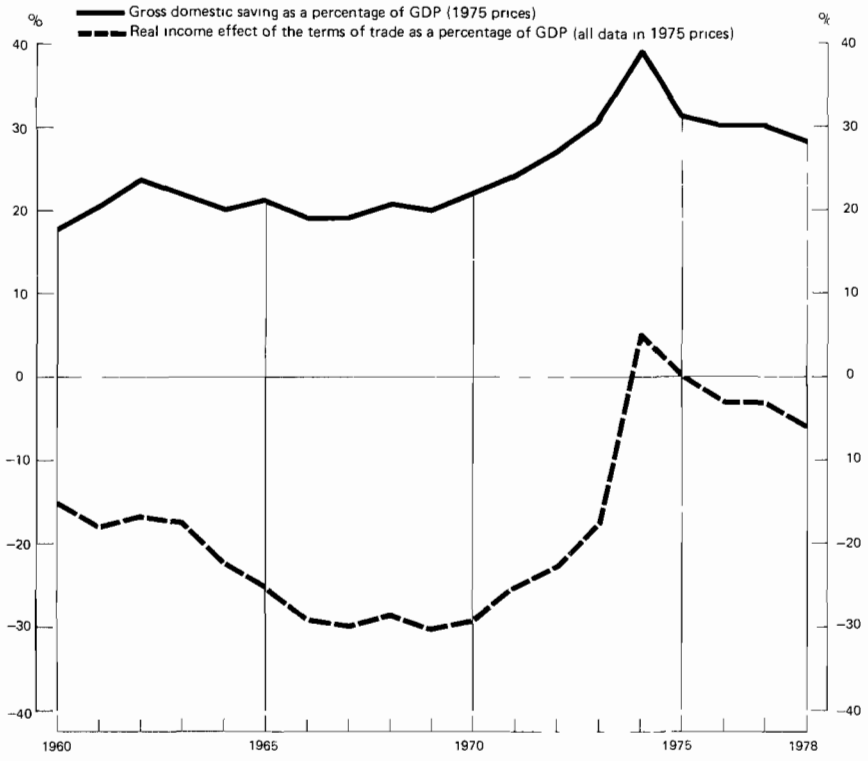
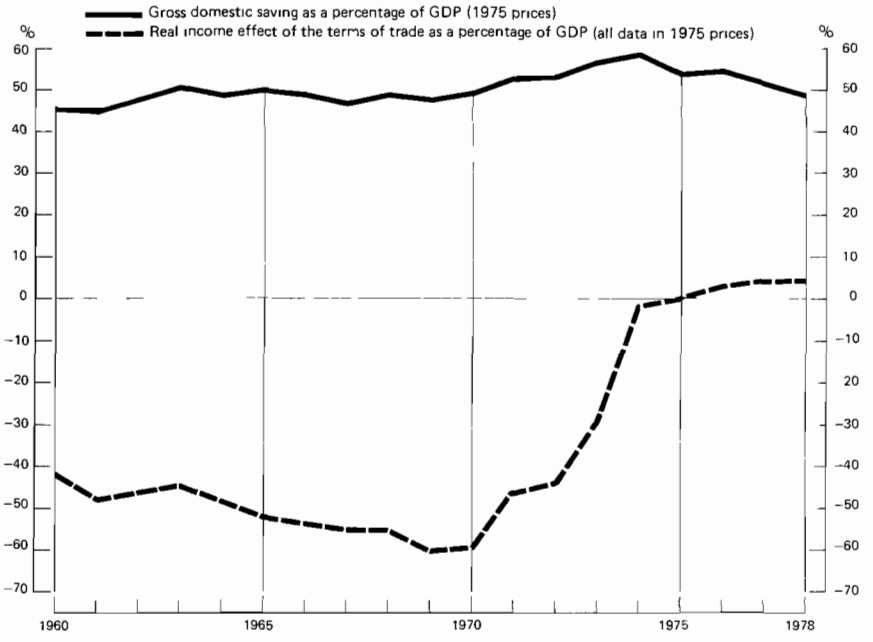


CHART VII

Movement in the terms of trade and the real savings rate in oil-exporting developing countries, 1960-1978: low and medium absorbers



to the supply of other non-tradeable goods and services resulted in severe bottlenecks and shortages in both factor and product markets, leading to domestic inflationary pressures which added to and intensified the adverse effects of world inflation transmitted through imports. An approximate idea of the relative effect of domestic as against imported factors in inflation can be gleaned from a comparison of the import price index and the GDP deflator. The annual rate of increase of the non-oil GDP deflator[76] accelerated from 10.2 per cent in 1970-1973 to 15.6 per cent in 1974-1978. In contrast, the rate of increase of the import price index remained at virtually the same high level of about 12 per cent in the two periods. The divergence of these two rates, which was particularly marked in the capital-surplus, low absorber group, points to the increasing importance of domestic inflationary pressures concomitant with the intensive investment drive in this group of countries after 1973 (see annex table A.39).

213. It also seems likely that the efficiency of investment in terms of resultant output has suffered from the pressure to spend quickly the oil revenues. Moreover, the relentless expenditure drive, in the context of widespread supply bottlenecks, may have involved some uneconomic and wasteful investments. While this cannot be verified without detailed investigation, a tentative indicator would be the behaviour of the incremental capital-output ratio (ICOR). In the capital-importing, high absorber OECs, for example, ICOR (for non-oil GDP) changed very little, from 4.5 in 1970-1973 to 5.1 in 1974-1978. In the capital-surplus, low absorber OECs, however, it rose sharply, from 2.6 to 5.7 (see table 13). This has resulted at least in part from the fact that a large proportion of investment was allocated to capital-intensive projects in the petroleum refining, petrochemicals, fertilizers, basic metals and cement industries. The value of planned investments in such industries in five Arab oil-exporting countries is estimated at about $48 billion in 1977-1980 which is equivalent to 23 per cent of total investment in these countries in the same period.[77]

TABLE 13

Incremental capital-output ratios in the non-oil sector in 11 selected oil-exporting developing countries, 1970-1973 and 1974-1978

Period	*Low and medium absorbers (LMA)*[a]	*High absorbers (HA)*[a]	*Total*
1970-1973	2.6	4.5	3.5
1974-1978	5.7	5.1	5.4

Source 1970-1978 Calculated from data in United Nations *Handbook of World Development Statistics 1979* (PPS/QIR/5) 1979-1980 based on United Nations *Monthly Bulletin of Statistics*, March 1982

[a] See the note to table 11

B. Dependence on the oil sector

214. Production and exports in the OECs are heavily influenced by the predominance of the oil sector. While output and exports in the non-oil sector rose in real terms in the 1970s much faster than output and exports of oil, the rise in petroleum prices in 1973 led to a significant increase in the financial and fiscal importance of the oil sector for the economies concerned. Thus, while value added and exports in the oil sector constituted 27.9 per cent and 88.7 per cent of total GDP and of total exports, respectively, in the early 1970s (1970-1973), the proportions increased to 39.4 per cent and 94.4 per cent in 1974-1978 (see annex table A.41).

215. The question arises whether the increased importance of oil exports has led to a greater or lesser dependence on the oil sector of the economies concerned. Since oil is a non-renewable asset, the use of revenues derived from it to finance the creation of productive assets and diversify the sources of income would assist the economies of OECs to become less dependent on oil. Conversely, the use of oil revenues to finance unproductive private and public consumption would tend to perpetuate such dependence.

216. The OECs have in fact used oil revenues not only to finance investment but also to raise the levels of both private and public consumption. Since the oil revenues accrue to the public sector, they have had a more direct influence on public consumption than on private consumption and their influence became more pronounced after 1973 as they grew dramatically. Thus, at the same time as domestic saving increased, from 34.2 per cent of GDP during 1970-1973 to 42.9 per cent during 1974-1978, government consumption as a share of GDP also increased, from 14.7 per cent to 16.1 per cent. The rise occurred in both groups of OECs, but in contrast, the share of private consumption of GDP, which averaged 51.2 per cent in 1970-1973, was reduced to 41.1 per cent in 1974-1978, and the fall was sharper in the low absorbers (from 39 per cent to 29 per cent) than in the high absorbers (from 62 per cent to 55 per cent) (see annex table A.38).

217. The degree of dependence on oil revenue may be measured by the extent of the contribution of the non-oil sector to savings and investment. Ideally, the bulk of value added in the oil sector should be saved and invested, so that the depleting mineral asset can be transformed into other types of income-generating assets. The contribution of the non-oil sector to this goal is to generate enough income not only to meet consumption requirements arising in this sector, but also to offset consumption requirements arising in the oil sector itself and perhaps leave a margin of net contribution to gross domestic saving. The extent to which this has been taking place can be gauged from the relation between value added in the non-oil sector and aggregate consumption expenditure. Where such value added is larger

[76] The oil sector is left out of account in calculating the deflator since it does not contribute to the domestic supply capacity. It represents a potential demand on the non-oil sector, being a generator of oil revenues only (rent).

[77] Ente Nazionale Idrocarburi (ENI), *The Interdependence Model* (Seminar on Development through Co-operation between OAPEC, Italy and South European Countries, Rome, 7-9 April 1981), vol. III – *Annexes*, annex 2, p. 9. The five countries are Algeria, Iraq, Kuwait, Libyan Arab Jamahiriya and Saudi Arabia.

than total consumption, the implication is that the equivalent of the entire income from oil is saved for investment purposes. Conversely, where the value added is smaller than total consumption, the implication is that the non-oil sector is not being relied upon to meet all consumption requirements and, to that extent, part of the income from oil is being used to finance consumption.

218. Judged by this criterion, and as shown in table 14, the majority of OECs have been successful in increasing the contribution of their non-oil sector to gross domestic saving. The exceptions are four capital-surplus countries, namely, Iraq, Kuwait, the Libyan Arab Jamahiriya and Saudi Arabia, and one country in the capital-importing (high-absorption) group, namely, Algeria, where consumption has largely been financed by oil income. This is understandable in view of the smallness of the non-oil sector in most of these countries. For the entire group of OECs surveyed the net contribution of the non-oil sector to gross domestic saving has, however, increased, from an annual average of $3.2 billion in 1970-1973, to $5.3 billion in 1974-1978.

C. The problem of labour shortage

219. Reference has been made above to the supply bottlenecks in the factor and product markets. As regards products, the shortage has been, by its very nature, a short-term one. Even bottlenecks in infrastructure (ports, roads, telecommunications, schools and hospitals) have largely been overcome. The most serious problem, however, has been and still is that of labour shortage, particularly of skilled labour, faced not only by countries with tiny populations (Kuwait, Qatar, United Arab Emirates) but also by countries with larger populations and broader resource bases.

220. The adjustment to the manpower shortage has had serious and far-reaching consequences, not only in the economies suffering from the shortage, but also in certain other developing countries, particularly the relatively more populous countries in the Middle East.

221. One important effect has been the shift of labour from agriculture to the construction and services sectors. In countries endowed with a large agricultural base, in particular Iraq, Iran and Algeria, this resulted in a serious slowdown of agricultural development, particularly since the exodus from agriculture took place too fast for it to be offset by greater labour productivity. Nor did this involve a movement of manpower from a sector of low marginal productivity to sectors of higher marginal productivity. The construction boom, which created the largest labour demand, has been precipitated by the sudden abundance of liquid funds at the disposal of the central government, with strong concomitant pressures to engage in construction activities of every conceivable kind and little concern for the relative marginal productivity of labour in such activity as against the sectors from which it was being withdrawn. Many observers familiar with the construc-

TABLE 14

Contribution of the non-oil sector to gross domestic saving in 11 selected oil-exporting developing countries
(Annual averages in billions of current dollars)

Country	*Non-oil GDP (1)*		*Total consumption (2)*		*Contribution to saving[b] (1)-(2)*	
	1970-1973	*1974-1978*	*1970-1973*	*1974-1978*	*1970-1973*	*1974-1978*
Low and medium absorbers (LMA)[a]						
Iraq	2.66	7.01	2.75	8.30	−.09	−1.29
Iran	11.95	40.98	12.02	39.06	−.07	1.92
Saudi Arabia	2.68	16.28	2.65	16.28	0.02	0.00
Kuwait	1.62	4.44	1.62	4.82	0.00	−.38
Libyan Arab Jamahiriya	2.17	6.66	2.45	8.60	−.28	−1.94
Total	21.08	75.37	21.50	77.06	−.42	−1.69
High absorbers (HA)[a]						
Venezuela	11.10	24.54	8.82	20.16	2.28	4.38
Algeria	4.63	9.57	4.10	9.84	0.53	−.27
Indonesia	10.35	30.34	9.68	29.06	0.68	1.28
Nigeria	8.42	26.75	8.68	26.40	−.26	0.35
Gabon	0.32	1.48	0.28	0.94	0.05	0.54
Ecuador	1.85	4.74	1.52	4.04	0.32	0.70
Total	36.67	97.42	33.08	90.44	3.59	6.98
TOTAL	57.75	172.79	54.58	167.50	3.17	5.29

Source 1970-1978 Calculated from data in United Nations *Handbook of World Development Statistics 1979* (PPS/QIR/5), 1979-1980 based on United Nations, *Monthly Bulletin of Statistics*, March 1982

[a] See the note to table 11

[b] The figures in these two columns would be identical to gross domestic saving if it is assumed that saving in the oil sector is zero A negative figure indicates dependence on oil income not only for investment but also for consumption purposes

tion boom in the OECs have reached the conclusion that expenditure on infrastructure has often been pushed far beyond what is necessary to support economic activity.[78] The effect of the manpower drain on the output of the affected sectors, particularly farm produce and other wage goods, has not been reflected adequately in higher prices of these products and in associated higher wages, because there was ample foreign exchange to finance the much higher import requirements. Moreover, a large part of the labour force attracted to urban areas by the construction boom is likely to remain there. Thus, there is a serious risk of disequilibrium in the urban labour market or of labour emigration to foreign countries once rates of activity in the construction sector begin to fall, unless this labour can be absorbed in other sectors.

222. The other important adverse effect of the adjustment to the labour shortage has been the increasing and excessive dependence of the capital-surplus (low-absorption) OECs on expatriate labour. In five of the countries concerned, the rate of increase of the expatriate labour force was so much higher than that of the national labour force that by 1980 the numbers of the former were estimated to outnumber the latter by a multiple of 6.3 in the United Arab Emirates, 5.8 in Qatar and 2.2 in Kuwait. In Saudi Arabia and the Libyan Arab Jamahiriya expatriates accounted for roughly half of the total labour force (see annex table A.43).

223. The manpower strains described above inevitably create social and cultural stress in the labour-importing countries. To a considerable extent this cost is offset not only by the benefits derived from the services provided by the migrant labour but also by the significant benefits accruing to the labour-supplying countries through the alleviation of unemployment in these countries and the sizeable remittances of the migrant workers. In seven countries exporting labour to the OECs such remittances increased from $0.7 billion in 1974 to about $7.7 billion in 1980. Their importance in financing the import needs of these countries is reflected in their proportion to the total imports of merchandise, which increased from 10 per cent to 37 per cent between the two years (see table 15).

224. The benefits accruing to the labour-exporting countries are, however, by no means unmixed. Some of them have suffered serious debilitating effects in their agricultural sectors, similar to those described above in the labour-importing countries. Rural areas have proved to be especially susceptible to disruption by the departure of migrant workers. In Oman, for example, the shortage of labour resulting from migration to Saudi Arabia and the Gulf States led to the neglect of the irrigation systems on which Oman's agriculture depends. Consequently, farming systems are more exposed to drought. Once drought affects a community, it becomes an extra push factor causing the departure

TABLE 15

Estimated workers' remittances to selected labour-exporting countries and their relationship to merchandise imports in 1974 and 1980

Country	1974		1980	
	Value ($ million)	*Percentage of merchandise imports*	*Value ($ million)*	*Percentage of merchandise imports*
Bangladesh	11.4	1.2	290.3	12.4
Pakistan	178.5	9.4	2 078.2	38.1
Jordan	75.4	17.4	803.8	37.7
Democratic Yemen	43.9	24.5	(295.0)	(45.3)
Yemen	157.4	81.4	1 273.6	75.6
Egypt	269.0	9.2	2 734.4	39.5
Sudan	3.3	0.6	201.7	12.8
TOTAL	738.9	10.4	7 677.0	37.0

Source: IMF, *Balance of Payments Statistics Yearbook*, Vol. 32, 1981.

of more migrant labourers.[79] Similar effects have been felt in the Yemen Arab Republic since the migrants have also come mainly from rural areas. As a consequence, the standard of husbandry has fallen and the infrastructure is deteriorating.[80]

225. While labour migration from overpopulated developing countries to the oil-exporting countries has in general contributed to the relief of unemployment in the former countries, this favourable effect has in certain cases been offset by a drain of irreplaceable managerial, professional and certain middle-level skills, with adverse effects on the development efforts in the countries concerned. In Egypt and the Sudan, for example, it is believed that migration of key skills has affected the implementation of important development projects. At the same time, the favourable effect on unemployment in the two countries could not have been very great, since a majority of the migrants were skilled workers who left their jobs in search of improved opportunities; they were not adequately replaced by others from the reservoir of the unemployed because of the poor occupational mobility in the labour market.[81]

226. Nor are the services rendered by migrant labour to the recipient countries an unmixed blessing. The facility of massively importing manual and intellectual labour to provide for the full spectrum of services from the most menial to the most sophisticated has adversely affected the productivity and the basic attitude to work of the indigenous population. A considerable part of the national labour force has tended to be absorbed in public administration, constituting disguised unemployment. Many have found endless opportunities to enjoy rentier-type income by associating with expatriate partners in the private business sector.

[78] See Salah El Serafy, "Absorptive capacity, the demand for revenue and the supply of petroleum", *Journal of Energy and Development*, vol. 7, No. 1, Autumn 1981. This conclusion is also supported by the higher ICOR in the period 1974–1978, noted above, for the LMA group in particular.

[79] J.S. Birks and C.A. Sinclair, *International Migration and Development in the Arab Region* (Geneva: ILO, 1980), pp.89–90.

[80] *Ibid.*, p. 90.

[81] See J.S. Birks and C.A. Sinclair, "Human capital on the Nile: development and emigration in the Arab Republic of Egypt and the Democratic Republic of the Sudan" (Geneva: ILO, 1978), World Employment Programme. Working paper WEP 2–26 (WP. 27).

227. To conclude, the indications are that the adjustment to labour shortage at the national and regional levels, which has taken place through large-scale movements of labour, brought not only considerable benefits but also socio-economic disequilibria and disruptions. The movements did not in all cases conform to the conventional economic rationale for labour mobility, namely, movement from sectors with a low marginal productivity of labour to sectors with a higher marginal productivity. The movement into construction in the OECs was, to some extent, induced by higher wages that contained a very large element of rent and thus did not reflect genuine differentials in productivity. In the event, the search for a more cost-effective form of adjustment might, in the future, induce an even larger mobility of capital in the sparsely populated and resource-poor OECs through the setting up of joint ventures in neighbouring developing countries which are relatively better endowed with resources and manpower.

Part III

STRUCTURAL CHANGE IN THE WORLD ECONOMY

Chapter 1

THE MEANING AND RELEVANCE OF STRUCTURAL CHANGE

228. This part is concerned with the longer-term changes in the structure of the world economy, which together constitute the background to the more dramatic short-term changes in output, trade and prices over recent years which have been reviewed in earlier chapters. The concept of "structural change" in the present context is not one which can be defined simply, since it is essentially a multidimensional one.

229. First, in its most common usage, the concept relates to the longer-term and largely irreversible trends in the patterns of production, consumption, trade and relative prices, that is, in the principal elements of the economic system. Since these patterns change at different rates in different countries, this meaning of structural change encompasses shifts in the relative importance of different national economies. In this sense, structural change is an integral part of the process of economic growth itself.

230. A second element of the concept of structural change, to which further references will be made in later chapters, relates to change in the pattern of effective control over the use of resources — an element which is, perhaps, of particular relevance for the economies of developing countries. In industrialized countries economic growth has been accompanied by increasing concentration of production and economic power in a relatively small number of large corporations, while the process of corporate concentration has come increasingly to dominate the international economic system as well. A substantial part of the external trade and financial relations of developing countries has come under the effective control of transnational corporations, which by virtue of their dominant market power are in a position to capture a disproportionate share of the benefits of trade.

231. Thus, shifts in the patterns of production, consumption and trade of developing countries — the first aspect of structural change — do not necessarily indicate unambiguously the resultant economic benefit to these countries, which depends also, and often predominantly, on the division of the benefits of these changes between domestic and external interests. A shift in the balance of control over the use of resources in favour of developing countries, in relation to transnational corporations, would indeed constitute a significant change in the structure of the global economy, not only in its quantitative aspect of providing a more equitable sharing of the benefits of trade, but also because it would allow developing countries to pursue a more autonomous style of development.

232. A third aspect of structural change, when this concept is applied to the international economic system, necessarily comprises change in the institutional framework also, that is, change in the body of principles and rules which govern international economic and financial relations. Just as national policies need to be directed, *inter alia*, at promoting economic growth and smoothing the process of domestic structural change, so too do the international 'rules of the game' need to be reformulated in order to promote economic growth and structural change in the international economy as a whole.[82]

233. The analysis here and in subsequent chapters is, however, confined to the first aspect of structural change, i.e. the longer-term trends in the patterns of production, consumption and trade of developed and developing countries. A detailed analysis of changes in effective control over the use of resources is not yet practicable owing to paucity of relevant data, but references to the operations of transnational corporations in the production and trade of developing countries are made, as appropriate, in later chapters.

234. The postwar period has witnessed major changes in the relative importance of the main sectors of the world economy — particularly as regards the expansion of manufacturing and service activities and the relative decline of the agricultural sector — and in the relative economic position of different groups of countries. Up to the early 1970s, the main contributing factor to change in the relative economic importance of different countries was their different rates of productivity growth. Since that time, unprecedented price and exchange rate movements

[82] For further discussion of the three elements of structural change distinguished here see "Evaluation of the world trade and economic situation and consideration of issues, policies and appropriate measures to facilitate structural changes in the international economy; report by the UNCTAD secretariat" (TD/224), reproduced in *Proceedings of the United Nations Conference on Trade and Development, Fifth Session*, Vol. III — *Basic documents* (United Nations publication, Sales No. E.79.II.D.16).

TABLE 16

Shares in total real output of developed market-economy and developing countries and the effects of changes in the terms of trade, 1963-1980

Country or country grouping	Share of world GDP[a] (per cent)			Changes in terms of trade[b]		Adjusted GDP in 1980[a c] (percentage share)
	1963	1973	1980	1963-1973	1973-1980	
Developed market-economy countries	*85.5*	*84.1*	*81.4*	*0.3*	*−2.9*	*76.2*
of which:						
United States	36.4	33.3	31.8	−0.7	−4.5	30.2
EEC	29.1	27.5	26.0	−0.1	−1.6	24.5
Japan	6.9	10.5	11.0	0.1	−8.4	9.6
Developing countries	*14.5*	*15.9*	*18.6*	*0.4*	*10.1*	*23.8*
of which:						
Major oil-exporters	4.0	5.0	6.0	1.2	22.6	12.6
Fast-growing exporters of manufactures	2.9	3.6	4.5	1.7	−7.2	3.8
Least developed	1.0	0.7	0.8	0.7	−1.6	0.8
Others	6.8	6.5	7.2	0.3	−2.9	6.6
TOTAL	100.0	100.0	100.0	..	..	100.0

Sources UNCTAD, *Handbook of International Trade and Development Statistics* (various issues), IMF, *International Financial Statistics Yearbook 1981*

[a] In terms of constant (1973) prices and exchange rates World GDP excludes the socialist countries

[b] Change in the ratio of export unit values to import unit values

[c] GDP in 1980, adjusted for gains or losses since 1973 due to changes in the purchasing power of exports (see text, para 236)

have had a major impact on the relative rates of economic growth.

235. Over the decade up to the early 1970s, the main changes in relative shares of total GDP of the developed market-economy and the developing countries was the steadily increasing importance of Japan, the major oil-exporting countries and the fast-growing exporters of manufactures. The main reduction in the share of total output of these countries was for the United States, though there was also a relative decline for the European Economic Community. Over this period, the changes in terms of trade were relatively small, and generally reinforced the shifts in output shares (see table 16).

236. Since the early 1970s, the previous trends in volume shares have continued to operate, but for most groups of countries these have been overshadowed by unprecedentedly large changes in the terms of trade. If the GDP figures are adjusted to take account of the resultant gains and losses in the purchasing power of exports, so as to reflect more closely changes in real income, then developing countries as a group dramatically increased their share of world real income (excluding the socialist countries) from one-seventh in 1973 to almost one-quarter by 1980. This increase resulted essentially from the rise in the relative price of oil, the share of GDP accounted for by the major oil exporters more than doubling in real income terms over this period, whereas the comparable increase for the non-oil exporting developing countries was only marginal. All three groups of the latter countries shown in table 16 experienced worsening terms of trade during the 1970s, resulting in part from the increase in prices of their manufactured imports from developed market-economy countries and in part from the rise in oil prices.[83] Consequently, their share of total real income in 1980 (about 11 per cent) was somewhat lower than their share of total GDP in that year (12.5 per cent).

237. These large shifts in the relative shares of real output and income took place against a background of sharp and prolonged economic recession, centred in the developed market-economy countries, whose growth rate over the period 1973-1980 fell to only half that of the preceding decade (see table 17). Growth in developing countries was also adversely affected by changes in the external economic environment, particularly by the recession in the developed market-economy countries and by declining terms of trade.

238. Concomitant with these various changes in levels of and shares in world real output and income, the economies of the major trading nations have become substantially more oriented towards foreign trade. This trend was most marked in the industrialized countries, particularly in Japan and the EEC, and in the United States also, where foreign trade has traditionally been small in relation to GDP (see table 17).

239. Several factors explain this shift towards export activity in developed market-economy countries. First, there has been a notable expansion in

[83] Approximately one-half of the rise in import prices of these countries between 1973 and 1979 was due to imports of manufactures, while rather more than one-third was accounted for by higher fuel prices.

TABLE 17

Exports and gross domestic product in developed market-economy and non-oil-exporting developing countries, 1963-1980

(*Percentage*)

Country or country grouping	Exports/GDP[a]			Annual GDP growth rate[b]	
	1963	1973	1980	1963-1973	1973-1980
Developed market-economy countries	*8.3*	*12.3*	*14.5*	*5.2*	*2.6*
of which:					
United States	3.9	5.3	6.7	4.4	2.4
EEC	12.3	19.5	22.6	4.8	2.3
Japan	5.4	8.9	12.8	9.8	3.8
Developing countries[c]	*14.5*	*15.4*	*16.8*	*5.6*	*5.2*
of which:					
Fast-growing exporters of manufactures	14.6	16.3	21.1	7.9	6.3
Least developed	12.3	9.4	7.4	2.5	3.9
Others	14.7	15.6	15.1	4.8	4.7

Sources: As for table 16.

[a] Derived from data expressed in prices and exchange rates of 1973.

[b] Not adjusted for changes in the terms of trade.

[c] Excluding major oil exporters.

intra-industry trade among these countries,[84] associated particularly with the transnational corporations. A second factor, particularly important in the second half of the 1970s, was the expansion in demand of the oil-exporting countries for capital equipment and other development goods which was met primarily by the developed market-economy countries. Third, the adverse movement in the terms of trade of these latter countries, and the consequent pressure on their external payments positions, stimulated many governments to strengthen existing measures of export promotion and to introduce new ones. In addition, a further element, of a secular nature, was the domination of the export sector by the engineering industries, where productivity growth has normally been faster than in less export-oriented industries.

240. Among developing countries, a similar trend towards exports was apparent only for those few countries defined as fast-growing exporters of manufactures; for the majority of developing countries, which are heavily dependent on primary commodity exports, the share of exports in GDP showed no significant change from 1963 to 1980. So far as the least developed countries are concerned, the share actually declined substantially in both of the past decades, reflecting both the lack of dynamism in world demand for their main export commodities and their internal difficulties of adjustment to rapid changes in the external economic environment.

241. Changes in production and trade patterns among different groups of countries have been paralleled by structural changes within the economies of both developed and developing countries. To a large extent, these national changes are secular in nature, being an integral part of the process of economic growth. But as the current economic recession is deepened and prolonged, these underlying interconnections are likely to be affected by distortions in production and trade patterns due to the recession, as well as by "defensive" government measures designed to protect the external payments position or to minimize employment losses in industries subject to import penetration.

242. The next six chapters analyze the main structural changes that have been taking place in the international economy. Chapters 2-5 focus on structural shifts in the manufacturing sector in developed market-economy countries and their impact on the trade and output structures of developing countries. Particular emphasis is given to the impact of the slowdown in economic growth in the 1970s on the rate of structural change in the developed market-economy countries, on the consequential effects on the trade of developing countries, and on the complementarities of the economies of developed and developing countries. The sixth chapter focuses on the influence on levels of output and structural change in developed countries of their trade with developing countries, and the seventh examines structural changes in the energy sector.

[84] A recent analysis showed that intra-industry trade as a proportion of total trade in manufactures among the developed market-economy countries rose from 54 per cent in 1965 to 64 per cent in 1975 (S. Laird, "Intra-industry trade and the expansion, diversification and integration of the trade of the developing countries", *Trade and Development: an UNCTAD Review*, No. 3, Winter 1981, United Nations publication, Sales No. E.82.II.D.3).

Chapter 2

INDUSTRIALIZATION, ECONOMIC GROWTH AND STRUCTURAL CHANGE

243. It is generally acknowledged that industrialization constitutes the main path to economic development. Indeed, this is the central strategy of the development plans of the great majority of the developing countries, though relatively few of these countries have yet succeeded in achieving a substantial and diversified industrial base.

244. Industrialization has proceeded considerably further in Latin America than in the African and Asian regions. As can be seen from annex table A.30, industrial output in Latin America accounted for some 38 per cent of GDP in 1978, virtually the same as the average level in developed market-economy countries in that year.[85] The corresponding shares were much smaller in Africa (25 per cent) and in Asia/Oceania (29 per cent), while for the least developed countries the share was only 17 per cent.

245. While the share of industry in GDP rises rapidly in the early stages of economic development, at more mature levels the expansion of the services sector becomes increasingly important,[86] so that the industry share appears virtually asymptotic to 40 per cent, apart from the special case of oil-exporting countries. These differences in the degree of industrialization are closely associated with differences in the level of real product per head of the population, as can be seen from chart VIII. A multiple regression covering the three regional groups of developing countries, together with the least developed countries, for the four years 1960, 1968, 1973 and 1978 indicates that the rise in GDP per head tends to accelerate as the share of industry in total output increases (and vice versa), and that for a given industrial share small countries have a consistently higher level of GDP per head than do large countries.[87]

246. Of the three regional groupings, Latin America is considerably more advanced, on average, in terms of industrialization, than either Asian or African countries, while the rate of growth of GDP per head in Latin America was also the fastest of the three regions over the period 1960 — 1978. Though industrialization has progressed in the least developed countries, it has not been accompanied, over the past two decades, by any significant rise on average in real output per head.

247. The direction of causality between industrialization and GDP per head is not, however, one way. The demand for industrial products is income-elastic at all levels of development, and the pattern of output tends to shift in accordance with changes in the structure of demand. The expansion of the market with growth in real income facilitates the establishment of optimal-sized plants as well as the accumulation of human skills and equipment with improved technology. At the same time, structural change — as reflected in the higher level of industrialization — itself constitutes a factor tending to raise the level of real income. To some extent, this results from a shift in the working population from low-productivity sectors (especially agriculture) to high-productivity ones such as manufacturing, but mainly the stimulus to real income growth in developing countries tends to come from a higher rate of productivity growth in the industrial sector than elsewhere.

248. Within the industrial sector manufacturing industry accounts for the greater part of total output in the majority of developing countries, except for those largely dependent on mining or the production of petroleum. In the more industrialized developing countries, the share of manufactures in total industrial output ranges from about two-thirds in large countries like India, Mexico and Chile to over four-fifths for a small territory like Hong Kong. If the share of manufacturing in total GDP is taken as a measure of the degree of industrialization, it is evident that most of the population of developing countries lives in seriously under-industrialized countries. Of the 76 non-oil-exporting developing countries for which the relevant data are available for a recent year (1978), it appears that some 75 per cent of their total population live in countries where the share of manufacturing represents under 20 per cent of GDP (see annex table A.31), their average income per head in that year ($230 at 1975 prices) being only one-quarter of that ($990) for developing countries where the manufacturing share was 20 per cent or above.

249. Though much progress has been made over the past two decades — the number of countries with a manufacturing share of 20 per cent or above has risen from 8 in 1960 to 17 in 1978 — it would seem

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[85] Comparable data are not readily available for the socialist countries of Eastern Europe.

[86] See Part IV, chapter I, below for further discussion of the growth of the services sector at different levels of economic development.

[87] The calculated equation was:

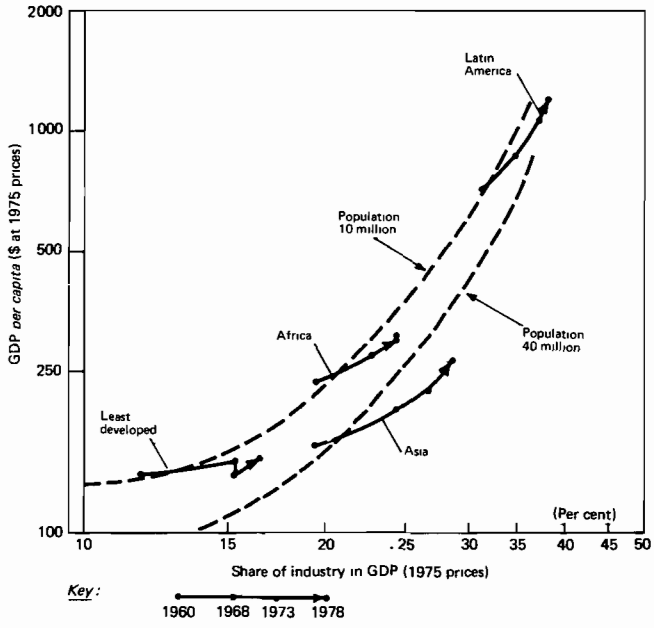
$$\ln(\hat{Y}) = \underset{(10.28)}{18.72} - \underset{(-8.70)}{10.34}\ \ln(S) + \underset{(10.54)}{2.01}\ [\ln(S)]^2 - \underset{(-8.67)}{0.25}\ \ln(P)$$

$$\text{D.W.} = 2.12;\ \bar{R}^2 = 0.989$$

where $\hat{Y}$ = GDP per head ($ at 1975 prices); S = share of industry in GDP; P = mean population size per country (millions); figures in brackets are t statistics.

CHART VIII

Relationship between degree of industrialization and GDP *per capita* in non-oil-exporting developing countries, 1960-1978[a]



Source As for annex table A.30

[a] All developing countries other than major oil exporters. The broken curves shown are based on the regression equation in footnote 87.

that the majority of developing countries remain heavily dependent on the primary sector, particularly agriculture.

A. Sectoral shifts in the economies of developed countries

250. The economic expansion of the present developed countries has been marked by major changes in economic structures, in particular by a substantial increase in the relative importance of industry — particularly manufacturing — and of the services sector, and a concomitant decline in that of agriculture.[88] Since the beginning of industrialization in these countries, economic expansion has been both a cause and effect of faster growth in output and productivity[89] in the manufacturing sector than in other sectors. This productivity differential, which itself has reflected a greater pace of technological innovation in manufacturing industry than in other activities, has been the principal reason for the rapid increase in real income that has accompanied economic growth, particularly since the second World War. Within manufacturing industry itself the rates of productivity increase in different branches over the medium and longer term have been closely related to the respective rates of increase in total output, so that substantial changes in the industrial structure have resulted as an integral element of the process of industrial expansion.

251. In view of the relationship between the economies of developing countries and the economic growth and structural changes proceeding in developed countries, it is important to make some assessment of the impact of the continuing economic recession in the developed market-economy countries on the medium- and longer-term trends in output and productivity.

252. The slowdown in output, which has been a marked feature of the continuing economic recession in all the developed market-economy countries since 1973 has, in fact, been accompanied by an equally marked decline in productivity growth. As can be seen from table 18, the rate of growth in output declined substantially in manufacturing in the United States, Western Europe and Japan after 1973, the slowdown also spreading to the rest of the economy in all cases, though to a lesser extent. This pattern was reflected also in the growth rates of productivity. A similar pattern of slower productivity growth accompanying slower output growth can be discerned for the various branches of the manufacturing sector.[90] A recent analysis of the slackening productivity growth in the various countries of Western Europe and in the United States has shown that, for both the manufacturing and the non-manufacturing sectors, this did not result from changes in the pattern of employment or output, but rather reflected slower productivity growth in individual sectors and industries.[91]

253. The non-manufacturing sector is not, however, a homogeneous one, since it includes agriculture, which continued its decline relative to the rest of the economy, and services of all kinds, which are

[88] See R. A. Batchelor, *op. cit.*, pp. 126 *et seq.*

[89] "Productivity" is here used to denote output per person employed.

[90] See *ECE, Economic Survey of Europe in 1981* (United Nations publication, Sales No. E.82.E.1), pp. 56-60.

[91] *Ibid.*, pp. 46 and 58.

TABLE 18

Average annual growth rates of value added in manufacturing and the rest of the economy in selected developed market-economy countries, 1960-1973 and 1973-1979
(*Percentage*)

Country/sector	Value added (GDP)			Productivity[a]		
	1960-1973	1973-1979	Change	1960-1973	1973-1979	Change
United States:						
Manufacturing	4.7	2.0	−2.7	3.3	1.2	−2.1
Other	3.8	2.7	−1.1	1.2	0	−1.2
Total economy	4.0	2.5	−1.5	1.7	0.3	−1.4
Western Europe:[b]						
Manufacturing	5.9	1.5	−4.4	5.3	2.6	−2.7
Other	4.1	2.9	−1.2	3.7	2.0	−1.7
Total economy	4.6	2.5	−2.1	4.2	2.3	−1.9
Japan:						
Manufacturing	12.9	2.2	−10.7	9.3	3.5	−5.8
Other	9.1	4.2	−4.9	8.4	2.8	−5.6
Total economy	10.1	3.7	−6.4	8.7	3.0	−5.7

Sources *Economic Survey of Europe in 1981* (United Nations publication, Sales No E.82.E.1), chap. 1, United Nations, *Statistical Yearbook* (various issues), ILO, *Year Book of Labour Statistics* (various issues), OECD, *National Accounts Statistics, 1951-1980*, Vol. I — *Aggregates*, Paris, January 1982

[a] Output per person employed

[b] Unweighted means for 10 of the more industrialized countries

becoming of increasing importance. The decline of agriculture began with the onset of industrialization. As table 19 shows, there was a marked decline in the agricultural labour force in the developed market-economy countries over the past two decades: in absolute terms it fell by nearly one-half. Productivity, as measured by output per head, rose faster than in manufacturing, reflecting in part the abandonment of less productive farms and partly the introduction of labour-saving machinery and equipment.[92]

254. Agriculture's share of the total labour force in the developed market-economy countries continued its long-term downward trend, falling to some 8 per cent by 1978, the corresponding share of GDP declining to about 4 per cent.[93]

255. The services sector also constitutes a non-homogeneous group of activities. It includes transport and finance, which are essentially business-related, as well as public administration and personal activities. Taken together, these various service activities account for rather more than 55 per cent of the GDP of the developed market-economy countries, a proportion which has been fairly stable for some decades, the falling share of agriculture being approximately offset by the rising share of manufacturing.

256. In the case of manufacturing there is still a lack of consensus as to the underlying reasons for the slowdown of productivity growth during the 1970s. Among the reasons often put forward are higher rates of inflation, shifts in relative prices, tax structures, changing attitudes to work, the growth of government regulation, changes in the quality of the labour force, a shortage of major innovations, declining research and development activities, and lower output growth. Major problems in assessing the impact of many of these factors on productivity growth are that the operation of cause and effect will often be of a long-run nature or may be discernible only through analyses at a microeconomic level which focus on qualitative changes as well as on statistical data. However, it is interesting to note that a recent analysis by the secretariat of the United

TABLE 19

Trends in agricultural production and productivity in developed market-economy countries, 1960-1978

	1960	1973	1978	1960-1973	1973-1978
	(Indices 1960 = 100)			(Percentage change per annum)	
Agricultural sector:					
Output[a]	100	131	136	+2.1	+0.9
Labour force	100	64	54	−3.6	−3.3
Productivity[b]	100	206	253	+5.7	+4.2
	(Percentage)			(Change per annum)[c]	
Agriculture's share of:					
Labour force	18.9	10.3	8.3	−8.6	−2.0
GDP	6.5	4.5	4.2	−2.0	−0.3

Source As for annex table A.30

[a] Contribution to gross domestic product, based on values in US dollars at 1975 prices

[b] Output per economically active person

[c] Percentage points

[92] In terms of output per hectare, productivity rose much less than in terms of output per economically active person.

[93] For certain developed market-economy countries (e.g., Ireland, Italy and Finland) the agricultural sector is considerably more important than the averages indicated in table 19.

Nations Economic Commission for Europe (ECE) puts particular emphasis on the observed association between trends in output and productivity growth.[94] Although this association may be partly due to other influences affecting both variables, it is argued that it reflects the effect on productivity growth of the exploitation of economies of scale, the stimulation of new investment (including that involving the adoption of technical innovations), and the introduction of more efficient marketing, promotional and organizational methods (all of them likely to be favourably influenced by higher output growth).[95]

B. Industrialization and structural change

257. Historically, the growth of the industrial sector has been the principal driving force behind the economic expansion of the present developed countries. Even though the services sector is now larger than industry in terms of both employment and output in the developed market-economy countries, a substantial proportion of the services performed are industry-related, and are essential to the continued growth of industrial productivity.

258. For the developing countries, the problem of activating the industrialization process is generally much more difficult than it was in the past for the now developed countries during their early years of industrial growth. Unlike many of the latter, the developing countries inherited economic structures from the colonial era which were excessively dependent both on primary commodity exports and on their linkages — in trade, technology, finance and investment — with the developed countries. Over the postwar period, a number of developing countries have successfully achieved a substantial measure of industrialization by pursuing policies encouraging exports of manufactures to the markets of developed countries. The great majority of developing countries, however, remain heavily dependent on primary commodities for their export earnings.

259. For all developing countries, economic progress and the potential for structural transformation of their economies remain largely dependent on the nature and magnitude of the stimuli to economic growth arising from their close linkages with the economies of the developed countries. Even in the period of unprecendented postwar economic expansion of the developed countries, ending in the early 1970s, the resultant stimuli to growth operated very unevenly as between various developing countries. Some benefited from a rapid expansion of exports of manufactures, but the benefit to primary-exporting countries was generally much smaller and, indeed, many such countries suffered from unfavourable movements in the terms of trade.

260. Since then, with the prolongation and deepening of the economic crisis in the developed market-economy countries, the economic position and prospects of both groups of developing countries have deteriorated, in some cases dramatically. The mechanisms through which adverse effects are transmitted from developed to developing countries are essentially macroeconomic in character — reduced levels of trade, falling real commodity prices, rising interest rates, etc. — but there are also effects induced by changing patterns of production and trade, with which the following chapters are particularly concerned.

261. In a period of rapid economic growth, the economies of the more developed countries can be expected to undergo a structural change in so far as resources shift to activities in which these countries have a comparative advantage — in general, industries which are relatively skill-intensive and/or capital-intensive. To the extent that such a shift occurs, and in the absence of significant trade barriers, the less advanced countries can export relatively labour-intensive and less skill- or capital-intensive manufactures in exchange for the more sophisticated manufactures of the economically advanced countries. But the period since the early 1970s has been characterized both by slow economic growth in the developed countries and by a significant extension of trade barriers against manufactured imports from developing countries.

262. A number of questions arise in this context in relation to the impact of these changes on the industrial structures of developed countries and thus, indirectly, on the market for manufactured exports of developing countries and, indeed, on the industrial structures of the latter countries also. Perhaps the central question is whether, and to what extent, the rate of structural change in developed countries has been retarded by the slowdown in economic growth, and to what extent, also, this process has been accentuated by "defensive" policies aimed at protecting less competitive industries against import penetration.[96] A consequential issue relates to the implications of these structural and policy changes in developed countries for the process of industrialization in developing countries, and to the policy options open to the latter countries in this regard in planning their development for the 1980s and beyond.[97]

263. Structural change in developed countries can also be expected to influence significantly the pattern of demand for the primary commodity exports of developing countries. A shift in the pattern of final consumer demand will have a direct impact on the import demand of developed countries for different categories of food and consumer durable goods available for export from developing countries, while a shift in the pattern of industrial output to more capital-intensive products may result, for example, in a shift in demand in favour of min-

[94] *Economic Survey of Europe in 1981, op. cit.* chap.1, sect(vi).

[95] The relationship between output and productivity growth in industry was first formalized by P. J. Verdoorn and is usually known as the Verdoorn Law (see his article, "Fattori che regolano lo sviluppo della produttività del lavoro", *L'industria*, No.1, 1949).

[96] See below, part III, chap. 4, sect. A, for further analysis of this issue.

[97] See below, part III, chap. 4, sect. B.

eral and metal inputs and away from agricultural raw materials. Moreover, technological progress is likely to result in reduced material inputs, whether domestic or imported, per unit of output, in both labour-intensive and capital-intensive industries. Finally, in so far as the development of synthetics is an integral part of the process of structural change in developed countries, this too is likely to have a major impact on both the volume and the pattern of demand for, and trade in, natural industrial materials. These linkages between structural change in developed countries and the exports of primary commodities from developing countries are considered in greater detail in the next chapter, while the corresponding changes in the field of manufactures are examined in chapter 4, section A.

Chapter 3

PATTERNS OF DEMAND FOR FOOD AND RAW MATERIALS

264. Primary commodities constitute the bulk of exports from developing countries. Even if fuels are excluded, primary commodities represent over one-half of the value of developing countries' exports, while in terms of value added the proportion is probably nearer three-fifths. However, the increase in exports of primary commodities from developing countries over the whole post-war period has been significantly lower than for manufactures. As can be seen from annex table A.13, the value of manufactured goods exported from developing countries rose, between the mid-1960s and the early 1970s, by almost 20 per cent a year, on average, whereas for non-fuel primary products, the rate was only some 7 per cent. In the succeeding period, also, the disparity in growth rates was marked.

265. Among primary commodities, export performance has differed widely. Over the first period distinguished in annex table A.13 (from 1963-1965 to 1971-1973), ores and metals achieved the fastest export growth, but in the subsequent period (from the early to the late 1970s) they recorded the slowest growth. For each of the three non-fuel primary-commodity groups the principal reason for increased exports in value terms was the rise in commodity prices; in the second period, the volume of food, beverages and tobacco, and of agricultural raw materials exported, rose only slightly (1 per cent annually); there was also a markedly slower growth in the volume of ores and metals exported. [98]

266. While developed market-economy countries remain by far the largest market for the primary commodity exports of developing countries, a noteworthy feature of the past decade has been an increase in the share of such exports shipped to other developing countries. This trade among developing countries accounted for 15 per cent of the value of primary commodity exports of developing countries in the period 1963-1965, rising to 17 per cent in 1971-1973 and to 21 per cent in 1977-1979. Between the two latter periods, the rise in their intra-trade accounted for almost one-quarter of the total increase in the value of primary commodity exports from developing countries, compared with one-fifth in the preceding period (1963-1965 to 1971-1973). This suggests that the developing countries themselves could provide an important impetus to their exports in the 1980s.

267. For primary commodity exports to developed market-economy countries — which represented over two-thirds by value of all commodity exports from developing countries in 1977-1979 — the changes in this flow of trade can usefully be analyzed in relation to commodity production and consumption in the developed market-economy countries themselves. This can conveniently be done for two broad groups of non-fuel commodities — food, beverages and tobacco and industrial raw materials — comparisons being made for averages of three years in order to minimize distortions resulting from good or bad harvests or other special factors operating in a particular year.

268. It is useful, to begin with, to consider the trends in the consumption of the different commodity groups. As can be seen from table 20, there was a considerable decline in the growth rate of consumption [99] for both broad groups of commodities, from the period up to 1971-1973 to the succeeding period. In the latter period, the volume of consumption of the principal foods, beverages and tobacco rose by only about 1.5 per cent a year (less than 1 per cent in *per capita* terms), compared with some 3 per cent a year (about 2 per cent in *per capita* terms) for the period from the mid-1960s to the early 1970s. For the main industrial materials, the slowdown was much more marked, from 7 per cent a year to only 1.5 per cent. If synthetics are excluded, the growth of consumption for industrial materials (agricultural and mineral), which averaged 4 per cent a year in the earlier period, fell to -0.6 per cent a year, entirely as a result of an absolute decline in consumption of agricultural materials.

269. There were a number of noteworthy changes in the structure of commodity consumption over these two periods — as will be seen later — that had a significant impact on the trade of developing country suppliers. In the food group, perhaps the outstanding changes were shifts in the pattern of consumer demand towards meat, and, to a lesser extent, alcoholic beverages (all having a relatively high self-sufficiency ratio) and away from cereals, sugar and tropical beverages (the latter two with a relatively low self-sufficiency ratio). The shift in consumer demand towards meat, which was particularly marked in the 1960s, involved a corresponding expansion in the demand for coarse grains and other animal feed, including soya meal cake. This latter

[98] If the value increase is deflated by the corresponding increase in the unit value of manufactured goods exported by developed market-economy countries, the rise for all non-fuel primary commodities was 3.5 per cent per annum in the first period and 5 per cent per annum in the second.

[99] Table 20 shows apparent consumption (i.e., production plus net trade) rather than actual consumption. Since three-year averages are taken, changes in stocks (the difference between apparent and actual consumption) are likely to be minimized.

TABLE 20

Apparent consumption of main groups of primary commodities in developed market-economy countries, 1963-1965 to 1978-1980

Commodity group	Consumption in 1963-1965	Consumption in 1971-1973	Consumption in 1978-1980	Change in consumption 1963-1965 to 1971-1973	Change in consumption 1971-1973 to 1978-1980
	($ billion per year at 1971-1973 prices)*			(Percentage per annum)	
Food, beverages and tobacco					
Temperate-zone foods[a]	46.6	58.2	63.4	2.8	1.3
Tropical foods and beverages[b]	3.9	4.5	4.5	1.9	−0.1
Vegetable oilseeds, oils and oilcake[c]	5.7	8.5	11.4	5.0	4.4
Tobacco	2.6	3.7	4.1	4.3	1.6
Total	58.8	74.9	83.5	3.1	1.6
Industrial materials					
Agricultural materials[d]	8.3	11.1	9.9	3.8	−1.6
Ores and metals[e]	9.6	13.3	13.4	4.1	0.2
Synthetic materials[f]	9.0	22.0	28.5	11.8	3.8
Total	26.9	46.4	51.9	7.1	1.6
Total of above primary commodities	85.7	121.3	135.3	4.4	1.6

Sources: United Nations, *Statistical Yearbook, Monthly Bulletin of Statistics* and *Yearbook of International Trade Statistics* (various issues); *FAO Production Yearbook* and *Trade Yearbook* (various issues).

* Production, exports and imports of each commodity have been valued at world average unit values of exports of the commodity in 1971-1973.

[a] Wheat, maize, rice, sugar, beef.

[b] Cocoa, coffee, tea, bananas, pepper.

[c] Groundnuts and groundnut oil, copra and coconut oil, linseed oil, olive oil, palm oil, palm kernels and palm kernel oil, soya beans, soya bean oil and soya bean cake, sunflower seed oil.

[d] Cotton, wool, sisal, jute, natural rubber, tropical timber.

[e] Bauxite/alumina, copper, lead, iron ore, manganese ore, phosphate rock, tin, tungsten, zinc. For the relevant commodities apparent consumption is derived from production of the primary product (e.g. ores) plus net trade in the processed commodity.

[f] Cellulosic and non-cellulosic fibres, synthetic rubber, plastic materials.

effect was a major factor in the rapid expansion of soya bean production in the United States, and for the continuing growth in consumption of vegetable oilseeds and oils at 4 or 5 per cent a year.

270. Among the industrial materials, the major shift in the pattern of consumption was the rapid expansion in the use of synthetic materials (synthetic fibres, synthetic rubber and plastic materials). By the mid-1960s, synthetics accounted for about one-third of the value of all the industrial materials covered by table 20, this proportion rising to almost one-half in the early 1970s and to over one-half by 1978-1980.[100]

271. It is of interest, also, to compare the use of industrial materials with changes in the volume of manufacturing production (excluding food, beverages and tobacco) in developed market-economy countries. Over the first period, from the mid-1960s to the early 1970s, manufacturing output thus defined rose by 5.8 per cent a year, on average, as against 7.1 per cent for materials consumption. Thus, if anything, there was a significant rise in the volume of the materials used (and covered by the present analysis) per unit of output. Over the second period, however, a dramatic reversal took place. While non-food manufacturing production rose, on average, by 2.7 per cent a year, materials consumption rose by only 1.5 per cent a year, so that there was a significant decline in apparent consumption of materials per unit of output.[101] The whole of this decline appears to have been concentrated on natural materials (agricultural and mineral), which together experienced an absolute decline in consumption.

272. For the same selection of primary commodities covered by table 20, the growth rate of the volume of imports into developed market-economy countries from developing countries also fell off sharply during the decade of the 1970s. While over the period from the mid-1960s to the early 1970s the import volume rose by almost 3 per cent a year for food, beverages and tobacco, and by over 5 per cent a year for industrial materials, there was no significant growth in the subsequent period up to 1978-1980 (see table 21).[102] Comparing the growth rates of imports with those of apparent consumption (see table 20) it would seem that there was substantial import substitution during both periods for a range of important commodities: in tobacco (first period) and in temperate-zone foods (second period). Moreover, the continued growing recourse

[100] The proportions would be lower if the many natural materials consumed in small quantities but excluded from table 20 were taken into account.

[101] This may reflect essentially a decline in stocks, rather than in actual consumption, notwithstanding the use of three-year averages.

[102] The differences in the volume changes shown in annex table A.13 and text table 21 reflect mainly the fact that the latter table excludes exports from developing countries to other developing countries and to socialist countries, as well as many commodities traded in relatively small quantities that are covered in annex table A.13.

TABLE 21

Imports by main groups of primary commodities into developed market-economy countries from developing countries, 1963-1965 to 1978-1980

Commodity group[a]	Imports in ($ billion per year at 1971-1973 prices)* 1963-1965	1971-1973	1978-1980	Change in imports (Percentage per annum) 1963-1965 to 1971-1973	1971-1973 to 1978-1980
Food, beverages and tobacco					
Temperate-zone foods	2.83	3.55	2.71	2.9	−3.8
Tropical foods and beverages	3.66	4.37	4.35	2.2	−0.1
Vegetable oilseeds, oils and oilcakes	0.90	1.28	1.92	4.5	6.0
Tobacco	0.66	0.83	1.05	2.9	3.4
Total	8.05	10.03	10.04	2.8	0
Industrial materials					
Agricultural materials	4.49	7.37	6.70	6.4	−1.4
Ores and metals	3.91	5.31	6.09	4.1	2.0
Total	8.40	12.68	12.79	5.3	0.1
Total of above primary commodities	16.45	22.71	22.83	4.1	0.1

Source: United Nations, *Yearbook of International Trade Statistics* (various issues).

* Production, exports and imports of each commodity have been valued at world average unit values of exports of the commodity in 1971-1973.

[a] See footnotes to table 20 for definitions of the various commodity groups.

to synthetic materials clearly brought about a displacement of agricultural and mineral materials in both periods. Contrary shifts, in which imports from developing countries gained a significantly increased share of developed market-economy countries' consumption, occurred for the agricultural materials group (first period), and for tobacco, mineral ores and metals, and vegetable oilseeds and oils, including oilcake (second period).

273. It is not possible to measure precisely the relative importance of the various factors mentioned above — changes in real income in the developed market-economy countries and the associated shifts in the pattern of consumption, the growth in substitution of synthetics for natural materials or of import substitution within the various groups of natural products — on changes in the volume of imports of primary commodities into the developed market-economy countries from developing countries. However, some approximate estimates can be made on the basis of a simple decomposition procedure,[103] and these are summarized in table 22.

A. Food, beverages and tobacco

274. For the food, beverages and tobacco group the major influence on the growth in imports into developed market-economy countries from developing countries over the first period (the mid-1960s to the early 1970s) was the expansion in the total market for these products, reflecting essentially the growth in real income in the importing countries. Over this period, the unit value of developing countries' exports of these products rose by 2.9 per cent a year (see annex table A.13), though there was a slight fall (by 0.5 per cent a year) in terms of the prices of traded manufactured goods. The relative stability in prices implies that, broadly speaking, developing countries managed to expand their output for export approximately *pari passu* with import demand in the developed market-economy countries. However, a shift in the pattern of consumption, reflecting mainly a relatively slow growth in consumption of tropical beverages (which have a very high import content) offset about one-quarter of the effect of overall consumption growth. Working in the opposite direction in this period was an increase in the dependence of the developed market-economy countries on sugar from developing countries, which was the main reason for the $0.3 billion increase in imports shown under the heading "import substitution" in table 22.

275. Over the succeeding period — from the early to the late 1970s — all three factors moved against the exports of developing countries. The growth in total consumption of the foods, beverages and tobacco included in the calculation grew at a very much slower rate (1.3 per cent a year) than in the previous period (2.8 per cent a year), while the favourable impact even of this consumption growth was virtually entirely offset by unfavourable movements in the pattern of consumption and in the substitution of domestic for imported products. The shift in consumption was the more important of the two, offsetting some three-quarters of the effect of consumption growth. This shift essentially reflected declines in the average level of cocoa, tea and sugar consumption over this period and a relatively small rise in coffee consumption, these products being relatively important in the export trade of developing countries.

276. Net import substitution over the period offset about one-quarter of the favourable effect of

[103] As set out in annex C.2 below.

TABLE 22

Relative importance of the principal factors influencing changes in the volume of primary commodity imports into developed market-economy countries from developing countries, 1963-1965 to 1978-1980

Commodity group	Increment in imports		Contribution of increment in imports to growth in total consumption	
	1963-1965 to 1971-1973	1971-1973 to 1978-1980	1963-1965 to 1971-1973	1971-1973 to 1978-1980
	($ billion at 1971-1973 prices)		(Percentage)	
Food, beverages and tobacco [a]				
Change attributable to:				
Growth in total consumption	2.21	1.15	100	100
Change in pattern of consumption	−0.54	−0.87	−24	−76
Import substitution [b]	0.31	−0.27	+14	−23
Total change	1.98	0.01	90	1
Industrial materials [a]				
Change attributable to:				
Growth in total consumption	6.11	1.48	100	100
Change in pattern of consumption of natural materials	1.41	0.68	+23	+46
Import substitution among natural materials [b]	−0.20	−0.01	−3	−1
Displacement of natural by synthetic materials	−3.04	−2.04	−50	−138
Total change	4.28	0.11	70	7
Overall change	6.26	0.12	..	..

Source: Tables 18 and 20. See annex C.2 below for the methodology.

[a] See footnotes to table 20 for definitions of the various commodity groups.

[b] Positive figures indicate an increased share of imports in consumption.

consumption growth on imports from developing countries. There were, however, important offsetting movements. Developing countries increased their share of developed market-economy countries' market for tobacco and soya beans and soya bean products, but there was a larger contrary movement for temperate-zone products, where expanded domestic production displaced an estimated $890 million of imports from developing countries (valued at 1971-1973 average export prices). However, this estimate assumes that additional supplies would have been forthcoming from developing countries, had they maintained their share of the market for temperate-zone foods in 1978-1980 at the same level as in 1971-1973 (6.1 per cent). That is unlikely to have been the case for meat and coarse grains, though it certainly would have been true for sugar.

277. None the less, there seems little doubt that import-substitution has played an important role in limiting the extent of the market for developing countries' exports which compete with domestic agricultural production in developed market-economy countries. A detailed study by the International Food Policy Research Institute has estimated that a 50 per cent reduction in existing trade barriers of developed countries applied to exports of a selection of agricultural products from developing countries would result in an increase of approximately one-third in the value of these exports in 1977, while complete trade liberalization would increase by two-thirds the value of developing country exports of these products.[104] A more recent analysis of imports of agricultural products into EEC countries indicates that, between 1962 and 1979, the proportion of total imports consisting of intra-trade of these countries went up sharply, while the corresponding proportions for "efficient" developed country producers (the United States, Australia and New Zealand) and for developing countries were substantially reduced. As a result, there was an estimated trade loss for developing countries of the order of $3 billion over this period.[105]

B. Industrial materials

278. The major change in the market for industrial materials, comparing the two periods covered by table 22, was the sharply reduced growth of total materials consumption, reflecting essentially the magnitude of the economic recession in the developed market-economy countries. If it is assumed, for illustrative purposes, that the growth rate of materials consumption in the first period (7.1 per cent a year) continued in the second, then the rise in the volume of industrial materials imported from developing countries in the latter period would have been of the order of $4 billion,[106] instead of the marginal increase of $0.1 billion actually recorded.

279. Shifts in the pattern of materials consumption were of some importance in both periods as influences on the volume of imports from developing countries. In the earlier period, developed market-economy countries' consumption of tropical timber (most of which comes from developing countries) rose much faster than average, while during the 1970s bauxite/aluminium and copper and, to a lesser extent, natural rubber accounted for the shift in consumption pattern in favour of imports from developing countries.

280. In the earlier period, some of the change in materials imports from developing countries can also be attributed to import substitution, reflecting in the main expanded production of cotton and copper in the United States, partly offset by an increase in the share of developing countries' exports of iron

[104] A. Valdes, *Trade Liberalization in Agricultural Commodities and the Potential Foreign Exchange Benefits to Developing Countries*, International Food Policy Research Institute, Washington, D.C., 1979. This study, which uses estimates of demand elasticities in relation to assumed changes in trade barriers, relates to trade flows in 1977.

[105] A. J. Yeats, "Agricultural protectionism: an analysis of its international economic effects and options for institutional reform", *Trade and Development: An UNCTAD Review*, No.3, Winter 1981 (United Nations publication, Sales No.E.82.II.D.3), table 7.

[106] Assuming no additional effects of changing consumption patterns of import-substitution among natural materials.

TABLE 23

Production of synthetic materials in developed market-economy countries, 1963-1965 to 1978-1980

Material	Average annual production in (Billion tons)			Growth rate (Percentage per annum)	
	1963-1965	1971-1973	1978-1980	1963-1965 to 1971-1973	1971-1973 to 1978-1980
Synthetic fibres					
Rayon and acetate	3.22	3.55	3.26	1.2	−1.2
Non-cellulosic	1.54	6.50	10.38	19.7	6.9
Total	4.76	10.05	13.64	10.6	4.7
Synthetic rubber	2.75	5.21	5.85	8.3	1.7
Plastic materials	10.59	29.60	38.26	13.7	3.7
Total[a]	..	..	..	12.1	3.8

Sources: United Nations Statistical Yearbook, Monthly Bulletin of Statistics, and *Yearbook of International Trade Statistics* (various issues).

[a] Derived from quantities valued at 1971-1973 average export unit values.

ore. Over the subsequent period, however, the net effect of import substitution was negligible, a relative displacement of imports by domestic production in developed market-economy countries of non-ferrous metals being offset by a reverse movement for tropical timber.

281. The displacement of natural by synthetic materials has, however, continued on a substantial scale, even after the oil price increases of 1973 and 1974 which raised production costs significantly for the entire range of synthetics. Production of the three main categories of synthetic materials — synthetic fibres, synthetic rubber and plastic materials — increased at rapid rates in the 1960s, but much more slowly in the 1970s, mainly as a result of the economic recession (see table 23).

282. In the fibres group, the newer non-cellulosic synthetics made large inroads into many of the traditional uses of cotton and rayon in the earlier period (cotton consumption in developed market-economy countries declined by over 10 per cent between 1963-1965 and 1971-1973), and this process continued, albeit at a reduced rate, in the subsequent period up to 1978-1980. Raw cotton had accounted for some three-fifths of the combined value of these countries' total consumption of cotton and synthetic fibres in 1963-1965, but this proportion was reduced to one-third by 1971-1973 and to only one-quarter by 1978-1980.

283. Synthetic rubber had already captured the major share of the elastomers market in developed market-economy countries by the early 1960s. By 1963-1965, the share of natural rubber had fallen to under 40 per cent, and there was a further substantial decline, to under 30 per cent, by 1971-1973. The rise in oil prices, and the consequent increase in the relative cost of producing synthetic rubber, combined with significant productivity improvements in natural rubber, allowed the latter to maintain its share at 25-30 per cent of the total market by the end of the 1970s. Plastic materials of various kinds represent the largest segment of output of the synthetic materials industries, plastics having displaced virtually the entire range of natural materials — both agricultural and mineral — in certain products over the past two decades.

284. The substitution of these various synthetic materials for their natural counterparts was evidently a major influence on the developed market-economy countries' demand for imported industrial materials. As table 22 indicates, this factor offset one-half of the effect of the growth in total consumption of industrial materials over the period up to 1971-1973, while in the subsequent period the substitution of synthetics for the natural product had a negative effect, which more than offset the positive effect, on imports of materials from developing countries of the (recession-constrained) growth in total materials consumption.[107]

C. Conclusion

285. For primary commodities as a whole, it is clear from the above analysis that the virtual stagnation in the volume of developed market-economy countries' imports from developing countries since the early 1970s was mainly the effect of recession, though continued substitution of synthetics for natural materials and of domestic production of temperate-zone agricultural products for lower-cost competing products were important additional aggravating factors. Changes in consumption patterns tended to reduce demand for imports from developing countries in the food group, but to increase such demand for industrial materials. Finally, it should be noted that the analysis in the

[107] It is only in recent years that it has become generally recognized that the production of synthetic materials may involve heavy social costs in terms of pollution of the environment.

present chapter has been essentially in terms of volume changes, but these have been accompanied by changes in relative prices which have had a major impact on the real earnings of developing countries from their commodity exports. In particular, the continuing recession in the developed market-economy countries has resulted in a sharp deterioration in the terms of trade of commodity-exporting developing countries. These further effects are considered in more detail in part II, chapter 2, above.

Chapter 4

STRUCTURAL CHANGE IN MANUFACTURING INDUSTRIES

A. Developed market-economy countries

1. THE PATTERN OF OUTPUT AND PRODUCTIVITY CHANGE

286. Over the decade of the 1970s, the industrial structures of developed market-economy countries showed a general tendency to shift towards the higher productivity industries (defining the latter as those with higher-than-average value added per head), this tendency being observable in the United States, Western Europe and Japan. (For a regression analysis of the elasticity of volume growth with respect to value added per person employed in manufacturing industry in developed market-economy countries in 1970-1978 (see annex table B.1.) In each case, however, there were a number of industries which did not conform to this general trend for various reasons, exhibiting relatively high growth rates even though their value added per head was relatively low, or combining low growth rates with high value added per head.

287. The general tendency of industrial structures in developed countries to shift towards higher productivity activities reflects both the differential rates of growth in demand for different products and the corresponding differential rates of growth in output, and also the fact that productivity generally tends to rise faster in those industrial branches in which output is increasing faster than average. As already indicated, this general tendency does not apply to all industries in practice, one reason being that in some cases government support is forthcoming for the expansion of low value-added sectors.

288. A better understanding of the pattern of industrial growth can be obtained by subdividing value added per head into two elements, one (wages and salaries per head) being an indicator of the skill-intensity of labour, the other (value added *minus* wages and salaries, per head) being an indicator of the physical capital intensity of production.[108] For Western Europe, the relevant analysis indicates that over the period 1970-1978 the structure of industry shifted towards branches with both relatively high skill intensity and relatively high capital intensity. For Japan and the United States, the shift appears to have been essentially towards high-skill intensity industries, though in the latter country it was also in part towards more capital-intensive branches. (For a regression analysis of volume growth with respect to factor-intensity indicators in manufacturing industry in developed market-economy countries in 1970-1978 see annex table B.2.)

289. An alternative approach to analyzing the nature of the shift in the structure of manufacturing output can be devised on the basis of a classification of individual industries into categories of relative skill intensity and relative physical capital intensity. Table 24 shows how 17 manufacturing industries can be classified according to the criteria proposed by Lary.[109] There is inevitably considerable variation in both skill intensity and physical capital intensity among industries in each of the four categories distinguished, and the same would no doubt be the case among individual plants in the same industry. None the less, this broad classification does allow the general trends to be established.

290. Over the period 1970-1978 the pattern of change in the United States and Western Europe was broadly similar: a shift towards industries with relatively high-skill intensity, whether or not they were capital-intensive, and a shift — more pronounced in Western Europe — away from industries with relatively low skill intensity and relatively low capital intensity (see table 25). In Japan, over this period, the shift towards high skill-intensive/low capital-intensive industries (which include electronics and electrical equipment) was exceptionally sharp, as was the relative shift away from industries with low skill intensity/low capital intensity (which include textiles and clothing). In all these areas there was a shift in the pattern of employment also, though the movements were small in relation to the relative shifts in output and productivity.

291. In both the United States and Western Europe the fastest growth in output was in the industry group (high skill/high capital intensity) in which relative productivity, as indicated by value added per head, was highest. In both cases, too, the high skill/low capital-intensive group of industries expanded faster than average, while the low skill/high capital-intensive group rose by less than average, though their productivity was relatively high. None the less, there was a generally positive relationship between output growth and relative productivity, as was also the case for Japan, which is generally consistent with the results of the regression analysis noted above.

[108] These indicators were first used by Hal B. Lary (*Imports of manufactures from less developed countries*, National Bureau of Economic Research, New York, 1968). A recent analysis by Ho Dac Tuong and Alexander Yeats ("On factor proportions as a guide to the future composition of developing country exports", *Journal of Development Economics*, vol. 7, No. 4, December 1980) demonstrated that Lary's indicators remain valid for more recent years.

[109] *Op. cit.*

TABLE 24

Classification of manufacturing industries by factor intensity

Capital intensity	*Labour intensity*	
	Low skill (LS)	*High skill (HS)*
Low (LC) . .	Textiles	Rubber[a]
	Clothing	Printing
	Leather and products	Electrical machinery
	Wood and products	Non-electrical machinery
	Metal products[a]	Transport equipment
	Miscellaneous manufactures[a]	
High (HC) . .	Food processing[a]	Chemicals
	Non-metallic mineral products[a]	Petroleum refining and coal products
		Basic metals
		Paper

Source H B Lary, *op cit*

[a] Marginal cases

TABLE 25

Growth of output, employment and productivity in manufacturing industries in Western Europe, United States and Japan according to relative factor intensity from 1970 to 1978
(*Percentage per annum*)

Region/country	*Branch of industry*[a]				*Total*
	HC/HS	*HC/LS*	*LC/HS*	*LC/LS*	
Western Europe					
Output[b]	3.1	2.2	3.0	1.3	2.5
Employment	−0.8	−0.9	−0.4	−1.7	−1.0
Productivity[c]	3.9	3.3	3.4	3.0	3.5
(Relative productivity)[d]	(134)	(112)	(101)	(74)	(100)
United States					
Output[b]	4.7	3.9	4.6	3.7	4.3
Employment	0.1	−0.2	1.3	0.5	0.6
Productivity[c]	4.6	4.1	3.3	3.2	3.7
(Relative productivity)[d]	(133)	(119)	(100)	(74)	(100)
Japan					
Output[b]	4.0	2.0	6.2	2.1	4.3
Employment	−1.3	0.2	−0.7	−1.4	−0.9
Productivity[c]	5.3	1.8	7.0	3.5	5.2
(Relative productivity)[d]	(158)	(88)	(107)	(68)	(100)

Source As for table 24

[a] HC and LC refer to relatively high and relatively low capital-intensive industries, respectively, HS and LS refer to relatively high and relatively low skill-intensive industries (see text, para 289)

[b] Value added at 1970 prices

[c] Output per person employed

[d] Value added per person employed in 1970 (total manufacturing = 100)

2. THE DEGREE OF STRUCTURAL CHANGE

292. For purposes of quantitative assessment of the effects of the slowdown in economic growth on the process of structural change it is convenient to utilize an index of the magnitude of such change. Various alternative measurements are possible, but for simplicity of presentation, and to minimize the computations involved, the index developed by ECE has been adopted.[110] This index has been computed by ECE for 9 or 10 countries of Western Europe for the period 1958-1960 to 1968-1970, and for 1970-1978, based on value added, measured in constant prices, for 18 branches of manufacturing industry.[111] Comparable indices have been computed

[110] The ECE index of structural change in manufacturing industry (I) is defined as:

$$I = \text{Sum of } (a(i2) - a(i1)) \text{ for all } a(i2) > a(i1)$$

where a(i) refers to the percentage accounted for by industry i in the total output of manufacturing industry; and subscripts 1 and 2 refer to the periods being compared. The greater the magnitude of this index, the greater the degree of structural change. It should be noted that the magnitude of the index depends on the degree of disaggregation by industrial branches, as well as on the amount of structural change proper. See *Economic Survey of Europe in 1980* (United Nations publication, Sales No. E.81.II.E.1), p. 189.

[111] *Ibid.*, table 4.2.4.

by the UNCTAD secretariat for the United States and Japan, and these are shown together with the ECE figures in annex table A.34.

293. There appears to be a fairly close association among the countries of Western Europe between the growth rate of manufacturing production and the degree of structural change, as measured by the ECE indices. This holds true for each of the two periods, as well as for the change between them (see chart IX). In both periods, the degree of structural change in Italy was significantly lower than would have been expected on the basis of that country's growth rate in manufacturing. Part, at least, of the explanation would seem to be that Italian industry specializes in labour-intensive activity, an increasing proportion of which incorporates skilled labour (such as design and marketing); the expansion of industry in that country has thus not stimulated a shift into capital-intensive products on the scale found in other European countries.

294. If Italy is excluded, a much closer fit can be obtained by a cross-country regression for the period 1958-1978 (see annex table A.34), and slightly better results are also obtained for 1970-1978 and for the change between the two periods. Excluding Italy, a 1 per cent change in the growth rate of manufacturing production was associated with a change of 0.17 per cent in the index of structural change (this result being statistically significant at the 1 per cent level).

295. When the United States and Japan are included in the regressions for the 1960s, however, the degree of fit is improved, but for the 1970s it is considerably reduced. While the structural change index for Japan (0.95) in the latter period is very close to what would be expected on the basis of the Western European regression (1.08), the index for the United States (0.56) is significantly below that level.

296. It is of interest in this connection to compare the degree of structural change in manufacturing industry in the developed market-economy countries with the corresponding changes in the socialist countries of Eastern Europe and in the developing countries. Annex table A.33 shows indices of structural change based on data for 10 industrial branches[112] for each country group, together with the corresponding growth rates of manufacturing production. Two conclusions emerge. First, the positive association between structural change and growth rate that was found among developed market-economy countries also holds across the three country groups: developed market-economy countries, developing countries and socialist countries of Eastern Europe. Second, the retardation in the pace of structural change has been very much sharper in the developing countries than in either of the two groups of developed countries (see chart X). It is, however, too early to say whether, and to what extent, this sharp retardation in structural change in the developing countries is a reflection of the economic recession affecting a number of these countries after 1979. In any event, it would appear that the process of industrialization in developing countries has suffered a major setback in recent years.

[112] Indices of structural change based on only 10 industries will be smaller than those based on a greater number of industries (since much structural change takes place within, as well as between, industries). For this reason, the figures in annex tables A.33 and A.34 are not comparable.

B. Developing countries

297. Since the end of the second World War developing countries have made great efforts to industrialize their economies and to expand their manufacturing sector. Beginning from a relatively very small base, their rates of growth in manufacturing production have generally been significantly higher than the corresponding growth rates of developed countries. Since 1973, with the recession of 1974-1975 and that beginning in 1980 in the developed market-economy countries, the developing countries have continued to achieve somewhat faster manufacturing growth than have the developed countries. Whereas in 1963 the developing countries' output of manufactures (in terms of value added) represented some 11 per cent of that of the developed market-economy countries, this proportion had risen to 13 per cent by 1973 and to 15 per cent by 1980 (see table 26).

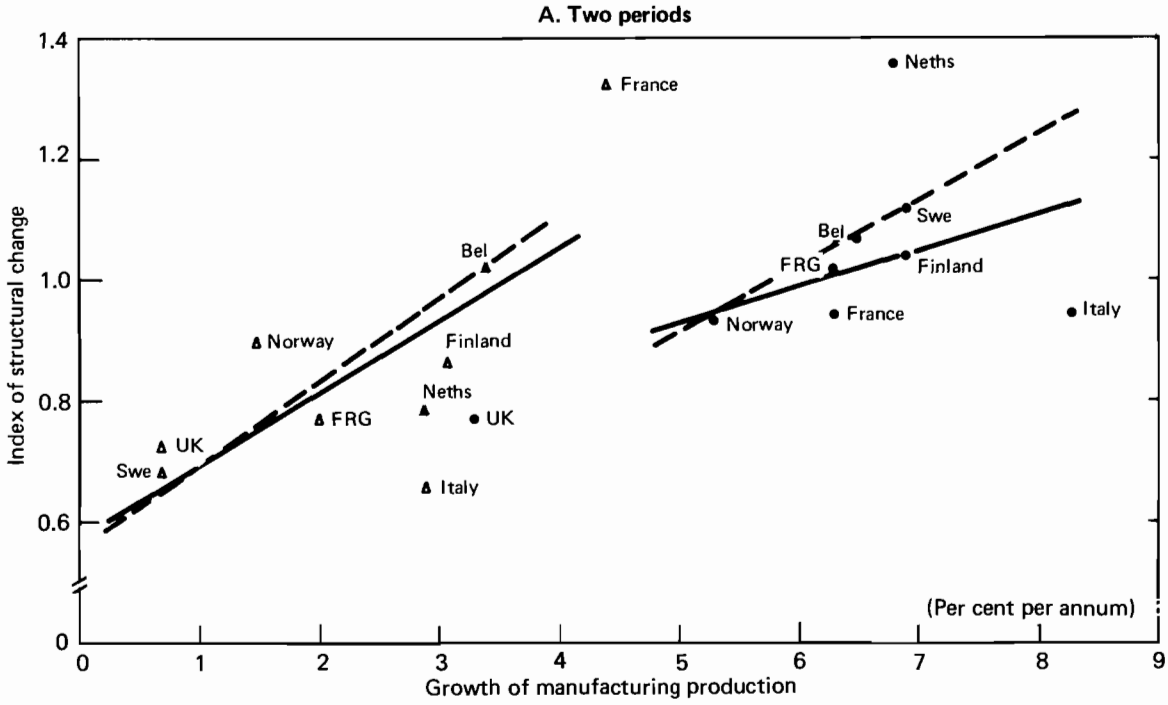
298. However, since developing countries are still at a very much lower level of industrialization, the absolute increment in manufacturing production per head of the population is only a small fraction of that in the developed market-economy countries. Over the most recent period, from 1973 to 1980, for example, while the annual increment per head had fallen in the latter countries to $10 (at 1975 prices), from $55 over the preceding decade, the corresponding increment in developing countries fell to only about $1 per head during the 1973-1980 period, from $3.5 in the decade up to 1973.

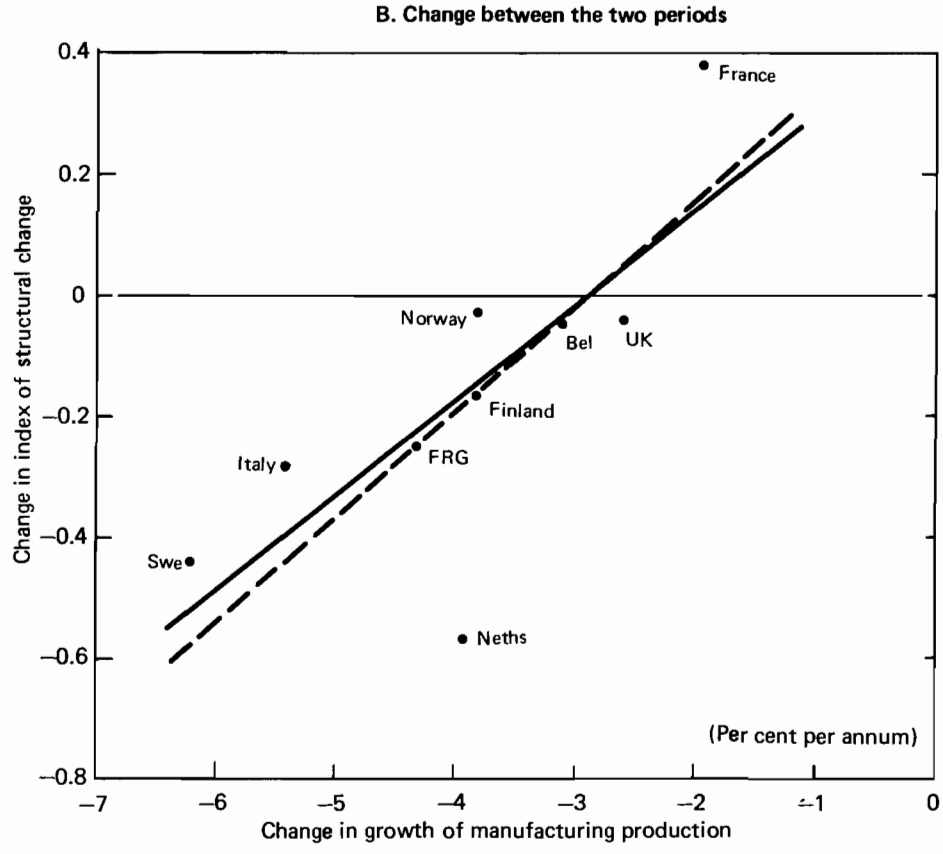
299. The slowdown in the growth rate of manufacturing production since the early 1970s has been fairly general in developing countries. Taking the four largest countries, in terms of the size of their manufacturing sector, that is, Argentina, Brazil, India and Mexico, their (unweighted) mean growth rate of manufacturing output had been 7.5 per cent a year over the decade up to 1973, whereas over the period 1973-1980 the corresponding growth rate fell to 4.1 per cent (see annex table A.35). Of the other developing countries and territories listed in that table, only Nigeria and Indonesia showed a marked acceleration in manufacturing output between the two periods (in both cases reflecting sharp expansion in the external earnings from petroleum exports), but there were marked declines in manufacturing growth rates for many others, including Hong Kong, Pakistan, Philippines, Singapore and Colombia. The manufacturing growth rate in the Republic of Korea remained relatively high over the period 1973-1980, even though 1980 was a year of sharp recession in that country.

300. The vicissitudes of the manufacturing sector were not reflected in the movement of total real product in many countries, particularly those where

CHART IX

Developed market-economy countries: indices of structural change in relation to growth rates of manufacturing production in the 1960s and 1970s





Key : • 1958-1960 to 1968-1970
▲ 1970-1978

Regression lines : ——— Including Italy
— — — Excluding Italy

Source: See annex table A.34 for the data and annex table B.7 for the regression lines

TABLE 26

Growth of manufacturing production in developed market-economy and developing countries, 1963-1980

Period	Value added [a] ($ billion) Developed (1)	Value added [a] ($ billion) Developing (2)	Value added [a] (Percentage) (2)/(1)	Value added per head [b] ($) Developed (1)	Value added per head [b] ($) Developing (2)	Value added per head [b] (Percentage) (2)/(1)
1963	650	70	11	950	50	5
1973	1 150	150	13	1 510	85	6
1980	1 290	190	15	1 580	80	6
			($ per annum)			
Absolute change:						
1963-1973	+50	+8	16	+55	+3.5	6
1973-1980	+20	+6	30	+10	+1.0	7
			(Percentage per annum)			
Percentage change:						
1973-1973	5.8	8.1	..	4.8	5.4	..
1973-1980	1.6	3.6	..	0.6	1.0	..

Sources United Nations *Monthly Bulletin of Statistics*, February 1982, United Nations *Handbook of World Development Statistics*, 1979 (PPS/QIR/5), UNCTAD secretariat estimates

[a] At 1975 prices and exchange rates

[b] Per head of total population

agriculture is the dominant activity and where agricultural production continued to expand over the more recent period. In small countries or territories heavily dependent on the manufacturing sector — Singapore and Hong Kong being clear examples — the slowdown in manufacturing was reflected in a reduced growth rate of total real product.

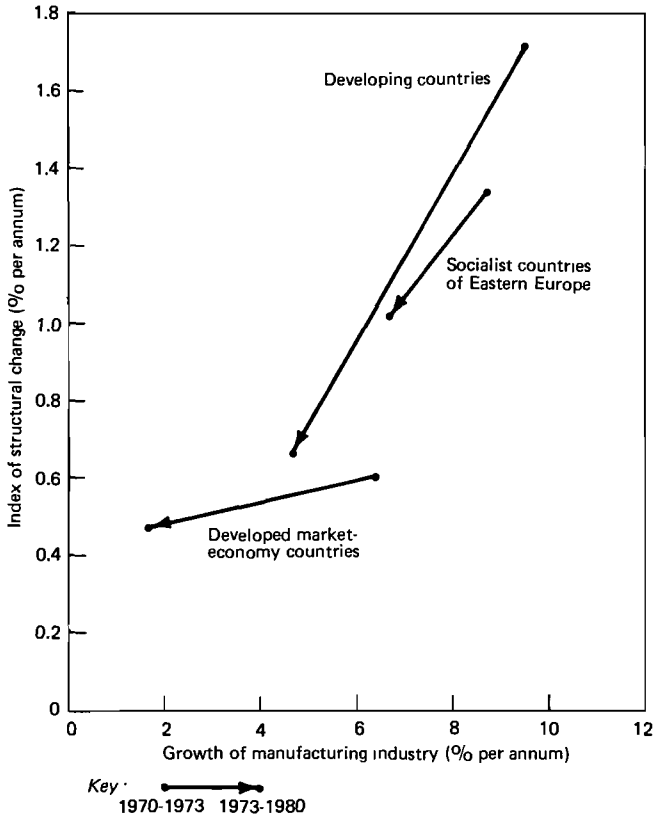
1. THE EXTERNAL CONSTRAINT

301. The continued growth of manufacturing output in developing countries generally requires a corresponding expansion in foreign exchange availabilities to support it. This is because in virtually all developing countries the manufacturing sector has a relatively high import content, depending on external sources not only for much of its capital plant and equipment, but also for various raw materials, intermediate products and components. In addition, where manufacturing is carried out by subsidiaries of transnational corporations, or under licence from them, there are likely to be royalty or other charges to be met. Where developing countries can expand their manufacturing industry on the basis of exports of manufactured goods, this is a self-financing process, its rate depending very largely on the growth rate of real earnings from manufactured exports. This kind of export-led expansion has been successfully practiced by a number of developing countries and territories of which Hong Kong, the Republic of Korea and Singapore have been noteworthy examples.

302. Where developing countries depend mainly on primary commodities for their export earnings, however, an import-substituting industrialization strategy based on a rapid expansion of export earnings of primary commodities is much more difficult. This is mainly because the demand for most primary commodities in developed countries is inelastic with respect to both income and price. Thus, the demand for primary commodities increases at a lower rate than real income in these countries, and import demand is further constrained by the effects of sub-

CHART X

Structural change in relation to the growth of manufacturing production by country grouping, 1970-1973 and 1973-1980



Source Annex table A 33

stitution of synthetic for natural products,[113] while if developing countries succeed in expanding the volume of their exports, this tends to worsen their terms of trade.

303. Additional constraints arise if food production in industrializing developing countries does not keep pace with the expansion in the non-agricultural labour force, since such countries will rapidly enter a food-deficit phase and, if previously food-exporting, may become food-importing countries. Balance-of-payments constraints for many primary-exporting developing countries have thus tended to become chronic, resulting in continuing shortages of capital replacements and of essential raw materials and component parts.

304. Since 1973, the terms of trade have deteriorated substantially for the majority of developing countries, including the more industrially advanced. Out of 16 of the latter countries for which data are readily available, the terms of trade worsened from 1973 to 1980 for 11 countries, and of the five others, three (Mexico, Nigeria and Indonesia) benefited from the rise in the price of their petroleum exports. Excluding such exports, the terms of trade deterioration was a very pervasive one.[114]

305. Most of these industrializing countries managed to continue to expand the volume of their exports though the rate of growth was much reduced for many countries owing to the recession in their major markets. In spite of the general volume increases, the widespread deterioration in the terms of trade of the 15 non-oil-exporting countries listed in table 27 resulted in absolute declines in the purchasing power of exports for seven countries, while for a further two countries the growth rate in the purchasing power of exports, though positive, was significantly lower than during the decade 1963-1973. There were, however, four countries which succeeded in increasing their growth rates in the purchasing power of exports between the two periods.

306. That the export sector has generally become much less effective as a stimulus to growth in the domestic economies of the industrializing (as well as other) developing countries is borne out by a comparison of the contribution made by the growth in the purchasing power of exports to the total growth in GDP (at constant prices). As table 27 indicates, the incremental contribution of exports to GDP growth in the decade up to 1973 was positive in all the countries listed, the relative contribution varying widely, from only 2 per cent for Mexico to over 100 per cent for Singapore.[115] For the subsequent period up to 1980, however, seven out of the 13 non-oil-exporting countries showed negative contributions, varying from marginal proportions for Egypt and Brazil to a very substantial amount for Kenya. For two other countries (the Republic of Korea and Chile), the contribution of export growth to the increment of GDP was considerably reduced between the two periods, though the reverse was the case for four other countries and territories (Hong Kong, Malaysia, Singapore and Colombia).

2. The structure of manufacturing industry

307. While the rates of growth of manufacturing production have varied widely from one developing country to another, as they have done also from one period to another, depending on changes in the external economic environment as well as on the efficacy of domestic mobilization of resources for industrialization, the structure of manufacturing industry itself generally reflects in the main the stage of economic development reached.

308. It is a well-known phenomenon of industrialization that at early stages of development the production of consumer goods (processed food, textiles, clothing, etc.) predominates, while at intermediate stages chemicals and basic metals — depending on the availability of raw materials — play an increasing role together with, in some countries, the beginnings of assembly of machinery and transport equipment. At more advanced stages the production of capital equipment assumes greater relative importance.[116] Developing countries, even the more industrialized, are however still very far from possessing an integrated industrial structure, particularly in the sense that capital goods represent only a minor part of their industrial output. Consequently, they remain heavily dependent on the industrialized developed countries for the greater part of their supplies of capital equipment.

309. An analysis of the structure of manufacturing production for a recent year (1978) can be made for 15 developing countries at different stages of industrial development (see annex table A.32). The six more industrialized of these countries and territories produced some $400 in manufacturing value added per head of the population, or less than one-quarter of the corresponding average of $1,740 in the industrialized developed market-economy countries in that year. The output of the capital goods sector in these six developing countries represented some 13 per cent of total manufacturing output, while in the developed countries the corresponding proportion, 27 per cent, was twice as high. The comparison is even more stark for the nine less industrialized developing countries: their manufacturing output per head (an unweighted average of $50) was only 3 per cent of the developed country average, while their capital goods share, at 10 per cent of total output, was under two-fifths of the developed country average.[117]

[113] For a detailed review of the various constraints on the imports of primary commodities by developed market-economy countries, see part III, chap. 3.

[114] There was a further deterioration in developing countries' terms of trade in 1981, continuing into 1982 (see part I, chap. 2, sect. A).

[115] Since exports are measured on a gross basis — i.e., including the value of inputs — while GDP is valued on a net basis, the ratio of the two overstates the true contribution of export activity to GDP.

[116] See R. A. Batchelor, *op. cit.*, pp. 126 *et seq.*

[117] The share of capital goods falls to very small proportions in the least developed countries. Apart from Bangladesh (shown in annex table A.32), the share of capital goods was, for example, 6 or 7 per cent for Haiti and under 1 per cent for Ethiopia.

TABLE 27

Contribution of the export sector to GDP growth in selected developing countries, 1963-1980
(Percentage)

Country*	Terms of trade		Purchasing power of exports (PPE)		PPE/GDP[a]	
	1963-1973	1973-1980	1963-1973	1973-1980	1963-1973	1973-1980
			Annual average			
Larger countries						
Argentina	2.0	−8.6	4.3	−1.6	8.0	−7.9
Brazil	2.0	−7.1	10.7	−1.9	13.4	−2.1
India	0.0	−7.5	1.4	−5.9	3.2	−8.7
Mexico	0.9	7.1	3.1	17.7	2.2	19.7
Smaller countries and territories						
Chile	4.7	−12.4	3.5	1.7	25.4	10.0
Colombia	1.3	3.9	5.3	6.0	11.9	15.6
Egypt	−0.2	−1.5	3.4	−0.7	11.1	−1.1
Kenya	−0.3	−3.3	4.9	−6.4	27.8	−41.8
Nigeria	5.4	19.7	15.5	18.6	30.7	57.9
Hong Kong	0.9	−0.3	9.8	10.3	93.8	111.2
Indonesia	2.1	12.7	11.4	16.2	23.5	50.9
Malaysia	−1.9	1.4	5.7	7.6	42.0	52.0
Pakistan	−0.7	−4.6	4.9	−1.8	10.3	−3.9
Philippines	0.6	−7.7	4.6	−1.3	20.3	−3.5
Rep. of Korea	1.8	−5.7	37.4	7.9	43.7	28.1
Singapore	0.6	−0.7	10.3	11.8	111.3	183.2

Sources UNCTAD, *Handbook of International Trade and Development Statistics* (various issues), United Nations, *Handbook of World Development Statistics, 1979* (PPS/QIR/5), national sources

* Grouped according to absolute size of manufacturing sector

[a] Change in purchasing power of exports as a proportion of change in gross domestic product, both measured in US dollars at 1975 prices and exchange rates

310. Conversely, the share of consumer goods in total manufacturing output is highest in the less industrialized group of developing countries (about 70 per cent) and lowest in the industrialized developed market-economy countries (47 per cent), with the more industrialized developing countries in an intermediate position (60 per cent).

311. Some caution is necessary in interpreting the figures for individual countries, however, since in some cases the percentage share shown for "intermediate products" is inflated by the output of petroleum refineries (Nigeria, Singapore and Venezuela especially), while in others the share shown for "capital goods" is inflated by the inclusion of automobile production (part of which is more properly considered as durable consumer goods). Exceptionally, a substantial proportion of the output of capital goods recorded for Singapore consists of repair work done on ships, together with the construction of oil rigs.

312. The relatively small size of the capital goods sector in industrializing developing countries reflects a number of interrelated factors: their relatively low degree of industrialization, their scientific and technological dependence on developed countries, their relative lack of adequate financial capital and human skills required to support a large capital-intensive sector and the comparative smallness of their domestic economies. Consequently, much of the 'multiplier' effects of economic growth tends to leak abroad in terms of expanded imports of capital equipment.

313. At the same time, imports of capital equipment from developed countries play a special role in the process of industrialization in so far as they embody modern technology and thus constitute a major source of productivity growth in the user industries. A recent analysis of industrial growth in Hong Kong[118] has revealed a high rate of technical progress in those industries — cotton textiles, apparel and electronics — which are growing relatively rapidly, and in which many of the dominant firms are subsidiaries of transnational corporations or joint ventures with them, and receive a sizeable and continual flow of foreign technology along with foreign investment. A second group of industries — metals, plastic and footwear — have low rates of technical progress, due in part to the small average size of firms and the insignificant role of foreign investments.

314. In virtually all industrializing developing countries the expansion of manufacturing output and exports is dependent to a greater or lesser extent not only on foreign capital, but also on imports from developed countries of various intermediate products, components and parts. Over the period 1973-1980, for example, manufacturing production in the non-oil-exporting developing countries rose

[118] Ronald Hsia, "Technological change, trade promotion and export-led industrialization", Asian Employment Programme Working Paper (WP-II-2), ILO, Feb. 1979.

by almost 40 per cent, while their imports of industrial raw materials increased by some 25-30 per cent in volume (see table 28). In some cases (e.g., India and Mexico) the percentage increase in raw materials imports exceeded that in manufacturing output, though generally the import content of output appears to have declined somewhat.

TABLE 28

Non-oil-exporting developing countries: exports and production of manufactures in relation to imports of industrial materials, 1973-1980

(Average annual rate of change)

	Exports of manufactures [a]	*Production of manufactures*	*Imports of industrial materials* [b]
	(Percentage change per annum)		
Total, non-oil-exporting developing countries and territories [c]	9.0	4.7	3.6
of which:			
Argentina [d]	4.9	0.0	−4.0
Brazil	19.8	6.8	3.3
Hong Kong . . .	10.0	. . .	16.1
India	1.7	4.0	4.9
Mexico	−2.3	3.7	8.8
Rep. of Korea . .	18.1	18.7	10.8
Singapore	17.3	9.0	8.8

Source: National trade statistics; United Nations, *Monthly Bulletin of Statistics*, February 1982.

[a] SITC 5-8 less 68. Approximate change in volume (dollar values deflated by unit value of exports from "fastgrowing exporters of manufactures").

[b] Agricultural raw materials, and ores and metals. Approximate change in volume (dollar values deflated by UNCTAD indices of export unit values for these commodity groups).

[c] Developing countries, excluding members of OPEC.

[d] 1970-1979.

315. The industrializing developing countries fall into two broad groups, those which have pursued an export-led development strategy (undertaken most successfully by certain countries and territories in South-East Asia, such as the Republic of Korea, Hong Kong and Singapore), and those where industrial development has been essentially for serving the domestic market by substituting for imported products. Over the past decade or so many developing countries have adopted "outward-looking" strategies, either by measures aimed at offsetting the cost disadvantages of export industries arising from high protection for domestic manufacturing industries (as in India or Mexico) or by export promotion policies which provide incentives for export activities (as in Brazil, the Republic of Korea, Malaysia and Pakistan). As a result, Brazil increased the volume of its manufactured exports at a much higher rate than its domestic production, as also did Singapore, while the fast growth in manufactured exports from the Republic of Korea was matched by an equally fast growth in manufacturing production. By contrast, both India and Mexico met difficulties in export markets, reflecting in part an erosion of their competitive position.

316. Since 1978, moreover, export markets have become generally more restrictive as regards access for the manufactured exports of developed countries.[119] The various new forms of protection (such as "voluntary export restraints" and "orderly marketing arrangements", together with the restrictions on market access imposed by the GATT Multifibre Arrangement), have the effect of discriminating against some of the more promising export products of developing countries as well as the traditional textiles, clothing and footwear. These market restrictions, the effects of which are considered further in the following chapter, provide an incentive for developing countries to seek more intensive trade links among themselves, as well as to expand their exchanges with socialist countries.[120]

3. THE GROWING IMPORTANCE OF TRANSNATIONAL CORPORATIONS

317. Market access problems may also provide an incentive to developing countries to attract additional investment by transnational corporations in manufacturing facilities, since these corporations can provide assured outlets within their own organizations or affiliates for exports of manufactures or components made in developing countries. Policies devised with this end in view will, in fact, accentuate a trend which has become increasingly apparent over the past decade. While the role of transnational corporations in the economies of different developing countries varies greatly, these corporations have come to play a major — sometimes decisive — part in determining the pace and pattern of economic and social development in a large number of developing countries.

318. In the area of primary commodities, transnational corporations — including purely trading enterprises — predominate in the international marketing and distribution of virtually all the major commodity exports of developing countries. It has been estimated that in 1976 the share of developing countries' exports marketed by transnationals exceeded 70 per cent for a wide range of commodities, including tropical beverages (tea, coffee and cocoa), bananas, tobacco, rubber, cotton, jute, timber and the principal metallic mineral ores.[121] By acting as oligopsonistic buyers in developing country markets for many of these commodities, as well as oligopolistic sellers in developed country markets, the transnational corporations are able to reap a disproportionate share of the gains from this trade, resulting in real export earnings of developing countries at a lower level than they would be if there were a more even balance of bargaining power in these commodity markets.

[119] For further details, see the report by the UNCTAD secretariat, "Protectionism and structural adjustment in the world economy" (TD/B/888), to be issued as a United Nations publication (TD/B/888/Rev.1), Sales No. E.82.II.D.14.

[120] For a discussion of changes in the trading system, see part II, chap. 1.

[121] *Marketing and distribution of tobacco: Study prepared by the UNCTAD secretariat* (TD/B/C.1/205), United Nations publication, Sales No. E.78.II.D.14, table 1.

319. As regards manufactures, the relative importance of transnationals varies from the case of a small country such as Singapore, where industrial development is heavily dependent on foreign investment, and where transnationals accounted for nearly 70 per cent of manufactured exports in the mid-1970s, to large countries like India and Pakistan with a relatively substantial number of domestically-owned enterprises, where the share of transnationals in manufactured exports is under 10 per cent (see table 29). Of other industrializing developing countries and territories, the transnational share of manufactured exports in the mid-1970s was relatively small in Hong Kong (some 10 per cent), but considerably higher in the Republic of Korea, Argentina, Colombia and Mexico (all about 30 per cent) and in Brazil (over 40 per cent). The degree of control by transnationals over the manufacturing production of many developing countries is also substantial, as can be seen from table 29.

TABLE 29

Shares of transnational corporations in the production and export of manufactures: selected developing countries, early or mid-1970s

Country or territory	Production		Exports	
	Value added in 1975 ($ billion)	*Share of TNCs (Percentage)*	*Value in 1975[a] ($ billion)*	*Share of TNCs (Percentage)*
Hong Kong	2.0	..	6.48	10
India	12.6	13	1.84	under 10
Pakistan	1.9	..	0.65	under 10
Rep. of Korea	5.5	11	3.90	28
Singapore	1.3	30	2.84	nearly 70
Argentina	18.4	31	0.70	30
Brazil	33.7	49	2.10	over 40
Colombia	2.9	..	0.30	30
Mexico	18.0	28	0.88	30

Sources Centre on Transnational Corporations, *Transnational corporations in world development a re-examination* (United Nations publication, Sales No E 78 II A 5 and corrigendum), D Nayyar, "TNCs and manufactured exports from poor countries", *Economic Journal*, March 1978 UNCTAD, *Handbook of International Trade and Development Statistics, Supplement 1980* (United Nations publication, Sales No E/F 80 II D 10 and corrigendum), United Nations, *Handbook of World Development Statistics, 1979* (PPS/QIR/5)

[a] SITC 5-8 (*less* 67 and 68)

320. The general shift in policy in many developing countries towards an "outward-looking" strategy has involved greater incentives for new foreign investment in production for export. This has, in turn, resulted in increasing competition among developing countries in attracting foreign equity capital, including offers of financial and other concessions which have, in many cases, significantly limited the net benefit accruing to host countries.

321. One indication of this trend in policy has been the growth in the number of developing countries establishing export-processing free zones.[122] While such zones were already in operation in 1980 in some 30 developing countries, others were being planned or were under development in that year in a further 14 countries. An analysis of the current operations of foreign enterprises in these zones reveals that employment is predominantly for low-skilled labour performing simple manual tasks, production has a high import content, and the zones have failed to develop significant backward linkages with the rest of the host economy.

322. On the other hand, many host governments have taken steps to improve their bargaining position vis-à-vis existing investments owned or controlled by transnational corporations, particularly in the minerals sector, so as to increase their share of the benefits in terms of taxes, royalties and other revenues. Moreover, an increasing number of developing countries are pursuing measures to enhance their domestic scientific and technological capability as an essential ingredient of a more self-reliant style of development. Such measures, particularly if supported by policy co-ordination among the host countries concerned, can go some way to ensure that the increasing participation of transnational corporations in the economies of these countries supports, rather than hinders, their general development objectives.

C. The socialist countries of Eastern Europe

323. Growth in terms of net material product (NMP) in the socialist countries of Eastern Europe in the post-war period has been rapid, although the rates varied widely from country to country and also from period to period for a given country (see annex table A.44). As a result of the implementation of successive five-year plans based on the development strategy of priority investment in industry, the countries in the region underwent profound structural transformations marked by a rising importance of industry and shifts in the composition of industrial output. Concomitant with these changes was a substantial increase in the level of *per capita* income.

324. Rapid growth in NMP, particularly in the period up to the late 1960s, when labour and raw materials were in abundant supply, gave rise to sectoral imbalances which became increasingly serious in the 1970s, due in part to declining rates of population growth and rising investment costs in fuel and raw materials projects and in part to changing external conditions which resulted in declining terms of trade for all the countries in the region, except the Soviet Union.

325. As part of the adjustment process, various measures were adopted to promote management efficiency and to economize the use of material inputs. At the same time, to improve the relationship between capital assets and output, greater emphasis was placed on the need to modernize the stock of fixed assets by writing off obsolescent plant and equipment. Although no systematic data are available on write-off rates, evidence presented by ECE, however, suggests that write-off rates rose somewhat during 1970-1975 but declined in 1976-1980 in most countries.[123] In 1978, development priorities were re-

[122] Foreign investors in export-processing free zones are usually given duty-free status, income-tax exemption, freedom to repatriate profits and access to abundant labour supply at low wages.

[123] Increases in gross fixed capital formation were compared with changes in the level of fixed assets to yield a rough indicator of write-off rates. See ECE, *Economic Survey of Europe in 1981, op. cit.*, pp. 254-258.

defined, resulting in a markedly slower growth of the investment volume in 1978 and 1979. Growth target rates for these years were accordingly revised downwards, but were still unfulfilled due in part to poor weather, which affected crop production.

326. Industry, due to its high investment priority, has been the leading growth sector of the economy in all the countries. Up to the early 1970s, growth in gross industrial output was closely associated with increases in both labour and capital inputs, with labour productivity increasing at a higher rate than capital intensity.[124] Since then, with the exhaustion of agricultural labour reserves and slower growth of industrial employment, the growth of industrial output has tended to decline: by and large, industry has become more capital intensive and the productivity of both labour and capital has increased more slowly.

327. The growth of agricultural output, on the other hand, has been considerably slower than that of industry. In spite of substantial achievements in terms of mechanization and intensive application of chemical fertilizers, along with land improvements, production has been subject to large yearly fluctuations, not only in relative but also in absolute terms in times of poor harvest conditions. Between 1970 and 1980, there was a general relative decline in the growth of labour productivity, in spite of an absolute decline in agricultural employment.

328. As a consequence of the rapid growth of NMP, accompanied by the divergent rates of growth in industry and agriculture, the economies of the socialist countries of Eastern Europe have undergone structural transformations which are similar to those of developed market-economy countries.

329. Annex table A.45 shows a decline in the share of agriculture and forestry in NMP in each of the countries of the region. In most of the countries, however, the share of agriculture in total employment remains at a level which is substantially higher than that of developed market-economy countries. In 1980, it ranged from 10.0 per cent in the German Democratic Republic to 29.8 per cent in Romania, as compared to 8.3 per cent in 1978 for developed market-economy countries.[125]

330. The trend in the share of industry and construction in NMP varied widely from country to country. Nevertheless, the sector was responsible for the bulk of NMP in all countries during 1970-1980. Over the same period, with the notable exception of the German Democratic Republic, the share of the tertiary sector (transport, communications, trade and other economic activities) in NMP increased in varying degrees, to reach a level which in 1980 surpassed that of agriculture.[126]

331. Concomitant with the expansion of industrial production were substantial shifts in the relative importance of the various branches of industry[127] (see annex table A.46). Although the relative importance of a particular branch and changes in it over time varied from country to country, reflecting the different needs of each country in its development process, some common features are discernible.

332. The branches with rapidly increasing output shares (engineering and chemicals) were those which experienced corresponding shifts in shares in both industrial employment and fixed assets. For branches with gains in the share of fixed assets, but with little or no increase in the share of industrial employment (metallurgy and energy), the increases in output share were modest or even negative. The branches with rapidly declining output shares (food processing and light industry) were also those with declining shares in both employment and fixed assets.

333. During 1976-1980, the share of engineering in industrial investment continued to increase, whereas that of chemicals declined. The predominance of the engineering branch is attributable not only to its role as a supplier of equipment and machinery to modernize production but also to its key position in foreign trade. Discernible also in all the countries during 1976-1980 was a shift in investment allocations in favour of fuel and, to a lesser extent, the energy-producing sectors, in an effort to raise the level of self-sufficiency in fuel and energy within the region as a whole.

334. Under centralized planning external trade plays a key role in the solution of major economic problems of paramount importance for each of the socialist countries of Eastern Europe members of the Council for Mutual Economic Assistance.[128] The Council is responsible, among other things, for the co-ordination of national economic plans and special long-term programmes of co-operation among its member countries, and thus provides a framework within which the advantages of an interna-

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[124] By implication, the capital-output ratio declined — a trend which was reversed in subsequent periods. For a detailed discussion, see ECE, *Structure and Change in European Industry* (United Nations publication, Sales No. E.77.II.E.3), part II, chap. 1.

[125] The percentage share of agriculture in the total labour force (economically active population) for the other countries in the region in 1980 are as follows: 23.8 for Bulgaria, 12.6 for Czechoslovakia, 20.6 for Hungary, 26.1 for Poland and 20.4 for the Soviet Union. (See ECE, *Economic Survey of Europe in 1981...* table 3.2.2). For developed market-economy countries, see table 19 of this report.

[126] For Poland, the increase in the share of the tertiary sector reflected a fall in the share of industrial production, from 59.6 per cent in 1975 to 54.7 per cent in 1980. In the German Democratic Republic, on the other hand, the decline in the share of the tertiary sector reflected a sharp increase in the share of industry: between 1975 and 1980, while the share of construction in NMP fell from 7.4 to 6.8 per cent, that of industry increased from 59.1 to 68.3 per cent. One likely explanation is that prices in the tertiary sector, which, as a rule, are set at relatively low levels in all the countries of the region, are particularly low in the German Democratic Republic. (For further details, see ECE, *Economic Survey of Europe in 1981.....*, pp. 126-127.)

[127] As in the case of developed market-economy countries and developing countries, a positive association between the degree of structural change and the rate of growth in industrial output during 1970-1980 was found for the socialist countries of Eastern Europe. (See annex table A.33 of this report).

[128] The Council was established in 1949 and presently consists of Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania and the Soviet Union, together with (outside Europe) Cuba, Mongolia and Viet Nam.

TABLE 30

Pattern and growth of the trade of the socialist countries of Eastern Europe, 1960-1980

	Percentage distribution				*Annual average percentage rate of growth*		
	1960	*1970*	*1975*	*1980*	*1960-1970*	*1970-1975*	*1975-1980*
Exports (f.o.b.) *($ million)* . . .	*13 187*	*30 895*	*75 730*	*155 615*			
Exports (f.o.b.)	100.0	100.0	100.0	100.0	8.9	19.6	15.5
of which to:							
Developed market-economy countries . .	19.8	21.9	25.6	28.8	10.0	23.4	18.3
Developing countries . .	8.6	15.4	16.4	19.3	15.4	21.1	19.4
Socialist countries of Eastern Europe	61.1	59.4	55.6	49.1	8.6	18.0	12.7
Imports (f.o.b.) *($ million)* . . .	*13 390*	*30 177*	*86 632*	*150 805*			
Imports (f.o.b.)	100.0	100.0	100.0	100.0	8.5	23.5	11.7
of which from:							
Developed market-economy countries . .	21.5	25.9	35.3	33.0	10.5	31.4	10.2
Developing countries . .	9.5	11.6	13.1	15.9	10.6	26.6	16.0
Socialist countries of Eastern Europe	58.8	61.0	49.0	51.1	8.9	18.2	12.7

Sources: UNCTAD secretariat estimates, based on national statistics of the socialist countries of Eastern Europe. (See also TD/B/912/Add. 1, table 1).

tional division of labour can be utilized by the member countries.

335. Accompanying the rapid expansion of NMP in the socialist countries of Eastern Europe, therefore, was a rapid growth of their external trade, especially in the 1966-1980 period. Estimates by the ECE secretariat show that, with rare exceptions, the growth in both export and import volumes outpaced that of NMP in each of the three five-year plan periods from 1966 to 1980 for all countries in the region.[129]

336. In nominal terms, exports and imports of the region during 1970-1980 grew at an annual average rate more than double that of the preceding decade (see table 30). As may be expected, intra-regional flows, which constitute an important component of national plans, accounted for the bulk of the total trade of the socialist countries of Eastern Europe. Nevertheless, the relative significance of these flows has declined, falling to around 50 per cent in 1980 (from some 60 per cent in 1960) as a result of the more rapid growth in trade with both developed market-economy countries and developing countries. In 1980 the former accounted for 28.8 per cent of the socialist countries' total exports and 33.0 per cent of their imports, whereas the corresponding figures for developing countries were respectively 19.3 and 15.9 per cent.

337. Even with allowance for the substantial difference in the pace and timing of price changes in the world market, on the one hand, and in intra-CMEA trade, on the other, notably in the latter half of the 1970s, this change in the geographical pattern of trade (i.e., in volume terms) is still evident.[130] The shift in the direction of trade reflected a number of factors including the consistent policy of the socialist countries of Eastern Europe to expand their relations with the developing countries and the needs of the countries in the region to diversify their external trade in keeping with structural changes which had taken place in their economies.

338. The commodity structure of the intra-regional trade of the socialist countries of Eastern Europe is characterized by the relatively large share of machinery and other engineering products (which account for more than one-third of the total trade turnover) and fuels (more than 10 per cent). Roughly one-half of exports to developing countries consist of manufactured goods, including complete plants and installations, while 80 per cent of the imports from these countries consist of primary products. Fuel and primary products constitute the bulk of the region's exports to the developed market-economy countries, while manufactured products of various kinds, particularly machinery and equipment, play an important role in its imports.

339. With growth in export volume restricted in part by the recession in developed market-economy countries and declining world trade, the need to restore external balances led to reductions in the growth of import volumes from the developed market-economy countries in some socialist countries of Eastern Europe in 1979 and 1980. During this time a number of obstacles to the development of East-West trade were introduced by the governments of some market-economy countries for political reasons. These obstacles affected both exports and imports and also caused slackening of the growth of mutual trade.

[129] *Economic Survey of Europe in 1981...*, table 3.6.1.

[130] During 1976-1980, the volume rates of growth in the Soviet Union's trade with all other socialist countries and the rest of the world were respectively 3.7 and 5.2 per cent per annum for exports and 3.7 and 4.9 per cent per annum for imports. For the other socialist countries as a whole, the respective figures were 3.7 per cent per annum (for imports from the socialist countries and also from the rest of the world), and 4 and 6 per cent per annum (for exports). *Ibid.*, table 3.6.3.

Chapter 5

STRUCTURAL CHANGE AND TRADE IN MANUFACTURES

340. According to traditional international trade theory,[131] a country will tend to specialize in exports of goods which embody its relatively abundant factors of production. In the case of industrialized developed countries, where physical capital is relatively abundant, this theory implies that such countries will specialize in capital-intensive exports to less industrialized countries, while importing from them labour-intensive and resource-intensive products.

341. More recent theory, based on the concept of a product cycle, envisages specialization in industrialized countries being based on products embodying new technologies and their associated specialized labour skills. When such new technologies become stable and standardized, they become suitable for transfer to less industrialized countries, where they can be profitably exploited on the basis of their lower wage costs. Competition from new producers in less industrialized countries thus becomes an added incentive for the development of still newer technologies in the industrialized countries.

342. An alternative version of the product cycle theory envisages specialization in developed countries being focused on industrial branches with a high rate of product development (the "unstandardized" industries), while less developed countries will tend to specialize in industrial branches with a low rate of product development (the "standardized" industries).[132]

343. The traditional approach would seem to have been relevant to most of the trade between developed and developing countries before the Second World War, when that trade reflected essentially a "vertical" exchange of relatively capital-intensive manufactures for relatively labour-intensive primary commodities. Since that time, industrial development in a number of newly-independent developing countries — some of which has resulted from investments made by transnational corporations, using their patented technologies — has tended to shift their trading patterns more in accordance with product cycle theory.

344. An analysis of the trade in manufactures between developed market-economy countries and developing countries, classified by factor intensity, shows that a much higher proportion of the exports of developing countries than of developed countries consists of labour-intensive manufactures, while the reverse is true for capital-intensive manufactures[133] (see table 31).

345. Over the period since 1960, there have been some significant trends in the relative proportions of labour-intensive and resource- and capital-intensive manufactures exported from developing countries. Perhaps the outstanding change has been a marked upward trend in the proportion of high-skill, labour-intensive goods (which includes electrical apparatus), from about 5 per cent of the total in 1963 to over 20 per cent in 1980. This increase was offset by a reduction in the proportion for resource-intensive manufactures. Of the reverse flow, from developed to developing countries, the main trend has been a continuing decline in the relative importance of low-skill, labour-intensive goods, combined with small relative increases for high-skill and highly capital-intensive products.

346. A recent analysis by UNIDO of manufactured exports from non-oil exporting developing countries is relevant in this connection. By classifying exports of non-resource based goods into those from either mature or new industries (according to the degree of labour skill involved) and, alternatively, those from either standardized or unstandardized industries (according to the rate of product development) the UNIDO analysis provides some test of the alternative approaches to an explanation of international trade flows.[134] A comparison of the contribution of the different categories of manufactures to the total increase in exports between the later 1960s and the mid-1970s clearly indicates that the relative importance of resource-based products falls off as the level of industrialization rises, the least advanced of the three country groups[135] relying on resource-based products (mainly processed foods) for over half the increase in exports, compared with little more than one-quarter for the two other country groups (see table 32).

[131] There is a large literature on both traditional (Heckscher-Ohlin) trade theory and the product cycle theory: see, for example, S. Hirsch, "Hypotheses regarding trade between developing and industrial countries" (in H. Giersch (ed.) *The International division of labour: problems and perspectives*, (Tübingen: J. C.B. Mohr, 1974).

[132] See J.M. Finger, "A new view of the product cycle theory" (*Weltwirtschaftliches Archiv*, Bd.111, No. 1, March 1975); also the discussion in UNIDO, *World Industry in 1980* (ID/269) (United Nations publication, Sales No. E.81.II.B.3).

[133] Approximately 10 per cent of manufactured exports from developing countries in 1973 and 1980 consisted of resource-based goods (e.g. wood manufacture).

[134] *Op. cit.*, chap. II.

[135] The unweighted mean GNP *per capita* in 1978 was $1,920 for the industrializing developing countries, compared with $570 for the sample of other developing countries, and $2,920 for the sample of Mediterranean countries.

TABLE 31

Trade in manufactures[a] of developed market-economy countries with developing countries classified by factor intensity[b] 1963, 1973 and 1980

(*Percentage*)

Factor intensity	Year			Change[c]	
	1963	1973	1980	1963 to 1973	1973 to 1980
Exports to developing countries					
Labour-intensive:					
Low skill	15.0	10.6	9.4	−4.4	−1.2
High skill	33.9	39.6	37.0	+5.7	−2.6
Capital-intensive and resource-intensive[d]	51.1	49.8	53.6	−1.3	+3.8
TOTAL	100.0	100.0	100.0	.	.
Imports from developing countries					
Labour-intensive:					
Low-skill	37.3	44.1	42.4	+6.8	−1.7
High skill	5.6	16.9	21.3	+11.3	+4.4
Capital-intensive and resource-intensive[e]	57.1	39.0	36.3	−18.1	−2.7
TOTAL	100.0	100.0	100.0	.	.

Source United Nations commodity trade statistics tapes

[a] SITC 5-8 (excluding 68)

[b] Based on the UNIDO classification given in *World Industry in 1980* (ID/269), United Nations publication, Sales No E.81.II.B.3, chap. II, appendix

[c] Percentage points

[d] Mainly capital-intensive products

[e] Mainly resource-intensive products

TABLE 32

Contribution of different factor-intensity categories to growth of exports of manufactures by group of countries: 1966-1967 to 1975-1976

(*Percentage of total export growth*)

	Industrializing developing countries or territories[a]	*Other developing (sample)*[b]	*Mediterranean countries (sample)*[c]
Resource based	28.6	55.7	26.5
Mature industries[d]			
Labour-intensive	38.5	25.4	24.4
Capital-intensive	6.5	6.6	13.3
Total	47.8	33.7	43.1
New industries[d]			
Labour-intensive	18.9	5.9	21.6
Capital-intensive	1.9	2.1	2.5
Total	23.1	9.8	29.1
Standardized industries[e]			
Labour-intensive	52.4	28.3	41.8
Capital-intensive	3.4	4.8	6.0
Total	57.4	34.1	50.3
Unstandardized industries[e]			
Labour-intensive	5.0	3.1	4.2
Capital-intensive	5.1	3.9	9.8
Total	13.1	9.1	20.1

Source UNIDO, *op. cit.* (see table 45), table II.7. The classification is that of the source

[a] Argentina, Brazil, Hong Kong, Mexico, Republic of Korea, Singapore, Turkey

[b] Colombia, Egypt, India, Ivory Coast, Nicaragua, Philippines, Sri Lanka, Thailand, Tunisia, United Republic of Cameroon

[c] Greece, Israel, Portugal, Spain, Yugoslavia

[d] "Mature" industries are those requiring a large number of unskilled workers, while "new" industries require fairly large numbers of skilled workers

[e] "Standardized" industries are those with a low rate of product development, while "unstandardized" industries have a high rate of product development

347. As regards non-resource based products, both the two more advanced country groups owed much of their progress to the export of mature products requiring little in the way of skills, but both also achieved substantial increases in exports of products with relatively high skill intensities. According to the alternative classification by rate of product development, the main contribution to the export expansion came from industries producing standardized goods with low rates of product development (which were mainly labour-intensive). None the less, the contribution made by unstandardized products was not insignificant, and may indicate the direction in which the pattern of exports from developing countries is likely to move in the period ahead.

348. However, developing countries still remain a long way behind the industrialized countries in terms of skill levels and physical capital stock per worker. An approximate indication of the order of magnitude of the gaps involved can, in principle, be derived indirectly by weighting the relevant factor-intensity indicators used previously by the patterns of exports of these two groups of countries. The calculations performed on this basis are summarized in annex table A.11, which also gives the corresponding results for Japan and for the socialist countries of Eastern Europe.

349. The gaps revealed by the indices in annex table A.11 almost certainly understate the true position, because the calculation assumes that the level of skill, and the capital stock per worker, in developing countries is the same as in the United States in 1970 for each of the individual industries involved. However, this is not likely to be the case in a number of industries (chemicals being particularly

important in this respect) in which the product mix is very different in the two groups of countries. The indices in annex table A.11 should, however, be reasonably valid as indicators of trends over time in the relative factor intensity of trade in manufactures of the different countries or country groups.

350. Over the period covered (1963-1980) the mean level of skill intensity embodied in developing countries' exports of manufactures rose slightly in relation to the corresponding means for exports from developed market-economy countries. For Japan, however, there was a dramatic rise in the relative position in terms of mean labour skill embodied in manufactured exports, from 90 per cent of the corresponding mean for developed market-economy countries in 1963 to just over 100 per cent in 1980. For socialist countries of Eastern Europe, in contrast, there was a slight decline in the relative position of the mean skill intensity of their exports.

351. In terms of the mean capital intensity of trade, there was little significant change in the relative position of developing countries as a whole, though there was a notable increase in the relative position of the Republic of Korea, offset by decreases for Singapore and some other developing countries. The mean capital intensity of Japanese manufactures rose significantly between the 1960s and the 1970s, compared with the corresponding levels for developed market-economy countries as a whole, while for socialist countries of Eastern Europe there was little significant change in their relative position.

352. Over the past two decades, then, the relative position of developing countries has improved only marginally in terms of the average labour skill and capital intensity of their export products. However, the average factor intensity of exports conceals wide variations both among different countries and among different products. In particular, a number of developing countries have demonstrated their ability to produce a range of high-skill and/or high capital-intensive goods at competitive prices (indeed, there are many well-known examples of this, including steel, electrical goods and ships), thus indicating a significant shift in comparative advantage in these technically more sophisticated products in favour of these developing countries.

353. Past trends in exports of different categories of manufactured goods from all developing countries are thus not a reliable guide to current or potential shifts in comparative advantage as between developed and developing countries. With this caveat in mind, it is of some interest, none the less, to consider recent shifts in the factor intensity of trade flows between these two groups of countries. Developed market-economy countries had a trade surplus in low-skill, labour-intensive products in 1963, which turned into an increasing deficit between 1973 and 1980, mainly as a result of increasing imports of clothing. It seems probable that, had there been no increase in non-tariff barriers (resulting from the Long-Term Agreement on Cotton Textiles, followed by the Multifibre Arrangement), there would also have been an increasing deficit on trade in textiles. By contrast, their surpluses in high skill and capital-intensive products increased substantially over the entire period (see table 33).

TABLE 33

Balance of trade of developed market-economy countries with developing countries in manufactures, classified by factor-intensity, 1963-1980
($ billion)[a]

Factor intensity	Year				
	1963	*1968*	*1973*	*1978*	*1980*
Labour-intensive					
low skill	+1.3	+0.8	−3.0	−8.8	−10.8
Textiles	+0.8	+1.0	+1.1	+2.1	+3.3
Clothing	0.0	−0.4	−3.2	−9.3	−12.3
Other	+0.6	+0.3	−0.9	−1.6	−1.8
Labour-intensive high skill	+5.6	+9.1	+20.2	+59.9	+72.5
Capital-intensive and resource-intensive .	+6.9	+9.3	+21.6	+70.4	+100.6
TOTAL	+13.8	+19.2	+38.8	+121.5	+162.2

Source: United Nations commodity trade statistics tapes. Classification based on that used by UNIDO (*World Industry in 1980, op. cit.*).

[a] Positive figures indicate a trade surplus of developed market-economy countries and negative figures a deficit (exports f.o.b., imports c.i.f.).

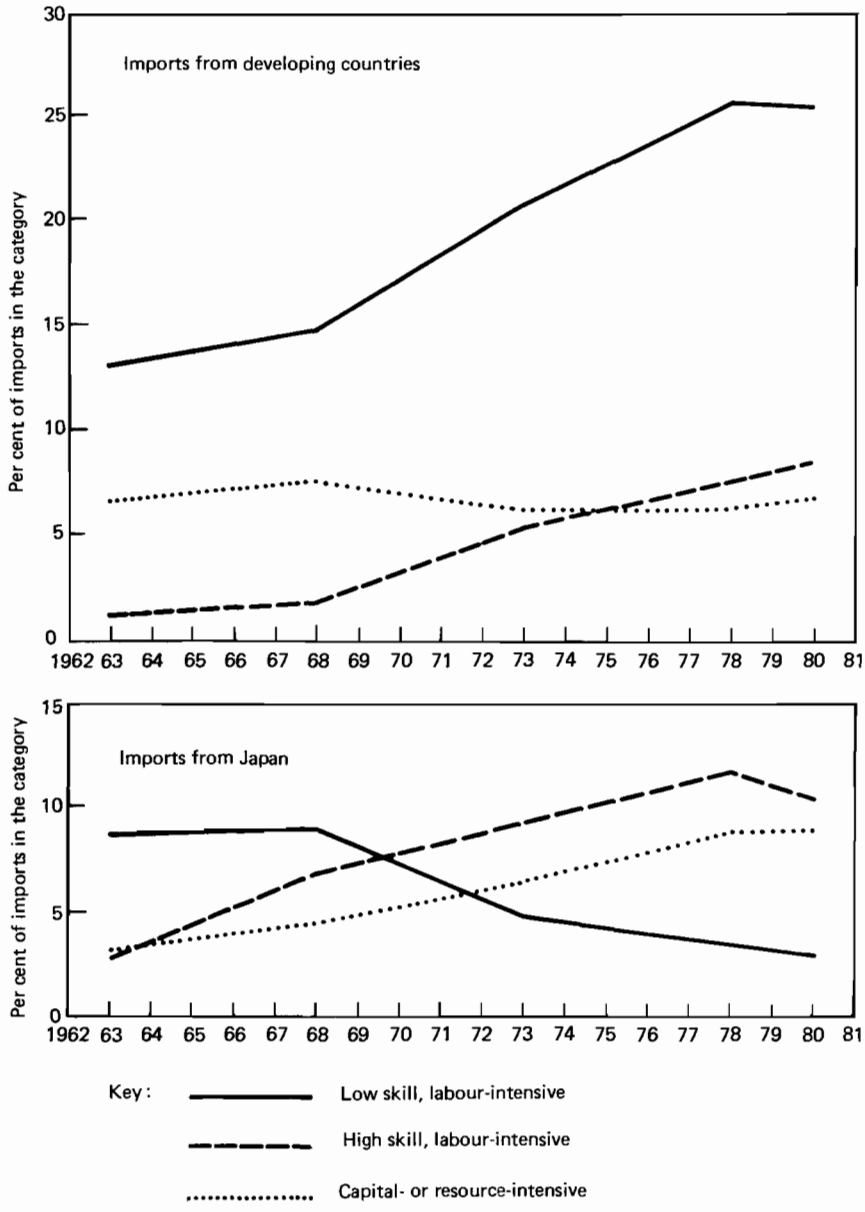
354. The comparative advantage of developing countries taken as a group is also shown by trends in their share of total imports into developed market-economy countries in the different factor-intensity categories, as shown in annex table A.12, which also includes comparable statistics for imports from Japan. The share of developing countries in imports of low-skill, labour-intensive products doubled from 13 per cent in 1963 to 26 per cent in 1978, but there was a marginal decline in the share between 1978 and 1980. As can be seen from chart XI, this represented a sharp change in the previous trend, a change which can reasonably be assumed to have resulted from the extension of various new forms of protection, which appear to have had particularly adverse effects on exports of textiles and clothing from developing countries.[136] Had the developing countries' share risen between 1978 and 1980 at the same rate as between 1968 and 1978, the 1980 share of this category would have been about 28 per cent (instead of 25.5 per cent), representing an additional $3.3 billion of manufactured imports from these countries (compared with actual imports of this category of $33.5 billion from developing countries in 1980).[137] This hypothetical loss in the export trade of developing countries must be taken purely as a possible order of magnitude, rather than as a precise estimate. Moreover, it relates only to the export loss sustained since 1978 as a consequence of the extension of protectionist barriers. The comparable loss for earlier years may well be far greater than this.

[136] See the report by the UNCTAD secretariat, *Protectionism and structural adjustment in the world economy* (TD/B/888), to be issued as a United Nations publication (TD/B/888/Rev.1), Sales No. E.82.II.D.14, for a detailed discussion of this issue.

[137] Total imports of manufactures into developed market-economy countries from developing countries amounted to $79 billion in 1980.

CHART XI

Imports from developing countries and from Japan, by factor intensity, as a proportion of total imports into developed market-economy countries in each category, 1963-1980



355. A comparable export loss for Japan can be seen in the high-skill, labour-intensive category, for which Japan's share of imports into developed market-economy countries had risen continuously, from 3 per cent in 1963 to 11.5 per cent in 1978, only to fall back to 10-10.5 per cent in 1980. This category includes many products in which Japanese industry has become very competitive in world markets (e.g. office machines, domestic electrical apparatus and ships), and in which export restraint measures have been negotiated in recent years to limit the growth in Japanese exports to the United States and/or the European Economic Community. The hypothetical loss in this case, resulting from these additional trade restraints since 1978, can be estimated as being in the region of $4-5 billion in 1980 (compared with actual imports of this category from Japan of $20.5 billion in 1980).

356. Over the decade up to 1978, the structural shift in imports of manufactures from developing countries into developed market-economy countries towards low-skill, labour-intensive goods complemented the structural shift in manufacturing production in the latter countries towards relatively high-skill industries. As was shown in chapter 4, industries classified as "high skill" (whether labour-intensive or capital-intensive) expanded at a much faster rate than the "low skill" group (see table 33), thus allowing imports from developing and other low-cost sources to take up an increasing share of the domestic market. The trend towards increased protection of labour-intensive industries by many developed market-economy countries which has been evident since 1978 must give rise to some concern, however, not simply because it injects new constraints on the growth of world trade — and more particularly on the exports of developing countries — but also because it tends to undermine the longer-term complementarities in the patterns of structural change as between developing and developed countries.

Chapter 6

LEVELS OF ACTIVITY, TRADE AND STRUCTURAL CHANGE: SELECTED ISSUES

A. Introduction

357. The earlier chapters of Part III contain an examination of several aspects of the evolving structure of production and trade in developed and developing countries. The main focus of this examination is the long-term process of change together with some of the principal factors underlying it. Less emphasis is given to such factors as the sharp fluctuations in economic activity during the 1970s that have characterized the recent pervasive loss of the dynamism in most developed market-economy countries. The weaker economic performance of developed market-economy countries is especially evident in the widespread incidence of higher rates of unemployment of labour and productive capacity which in many countries have tended to persist since the recession of 1974-1975. It is widely agreed that such persistence is associated with various long-term trends affecting the developed market-economy countries, some of them the result of competitive shifts associated with the process of change described in the earlier chapters of this Part.[138]

358. The present chapter discusses various features of the recent experience of recession and stagnation, mainly in connection with the impact of demand in developing countries on levels of output in developed market-economy countries. It begins with a review of trends in the rates of capacity utilization and unemployment at both aggregate and sectoral levels in developed market-economy countries. Attention is then drawn to the contribution of developing countries' import demand to the stabilization of economic activity during the recession of 1974-1975 and to the growing share during the 1970s of such countries in the exports of developed market-economy countries. Both these circumstances seem especially worth recalling in the midst of the intensification of another global recession. There is also a brief discussion of corresponding trends in export shares at a sectoral level and of the likely impact of prolonged recession on rates of capacity utilization and profitability in certain industries in which developing countries are well established or in the process of increasing their shares of world production. The importance of markets in developing countries to the developed world goes beyond a stabilizing role during downturns of the business cycle. They are also potentially capable of assisting the process of structural change in developed market-economy countries by giving a fillip to the shift of resources from sectors in secular decline to others with better prospects of long-term viability. In the final section of the chapter this point is illustrated for the engineering industry. It is shown how exploitation of the opportunities furnished by the markets in developing countries for engineering goods is capable of assisting the longer-term process of industrial restructuring in developed market-economy countries.

B. Unemployment and rates of capacity utilization in the developed market-economy countries

359. The levels and movements of rates of unemployment were far from uniform among the developed market-economy countries during the 1970s. Moreover, the rates of unemployment in these countries arose from the different relative contributions made by changes in the size of the labour force and the supply of jobs.[139] Nevertheless, with very few exceptions the recession of 1975 gave rise to substantial increases in unemployment in developed market-economy countries, and during the next three years it was only in the United States (among the larger economies in this group) that the rate fell to pre-1975 levels. Recently there has been a further deterioration, so that, for example, in 1981 most of the countries of the European Economic Community (EEC) had average rates of unemployment which were more than three times as high as for 1962-1973,[140] while in the United States, the rate was about one and a half times as high.

360. Part of the rise in unemployment in the developed market-economy countries was due to shifts in competitiveness which had strongly adverse effects at a sectoral level. Since employment in certain branches of activity is frequently concentrated

[138] On various other aspects of long-run trends in production and consumption in the developed market-economy countries since 1945 see UNCTAD, *Trade and Development Report 1981* (TD/B/863/Rev.1), United Nations publication, Sales No. E.81.II.D.9, part II, chap. 2.

[139] On variations among the developed market-economy countries in the interactions between these two factors see, for example, *Economic Survey of Europe in 1981*, *op. cit.*, chap. 1, sect. (iii).

[140] This was true of Belgium, the Federal Republic of Germany, France, the Netherlands, and the United Kingdom. For Italy the corresponding rise was about 2.5 times. The average rates of unemployment for 1962-1973 on which the statement in the text is based were taken from OECD sources and the rates for 1981 were taken from Commission of the European Communities, Directorate-General for Economic and Financial Affairs, *European Economy*, No.3, March 1982, Supplement A.

in particular regions, the rises in aggregate unemployment have been associated with an uneven pattern of local rates. For example, according to figures published by the Commission of the European Communities, the highest regional rate of unemployment in Belgium in 1979 was 8.3 per cent (Region Wallonne), and the lowest 6.1 per cent (Vlaams gewest). The corresponding rates for the Federal Republic of Germany were 4.9 per cent (Saarland), and 1.5 per cent (Baden-Wurtemburg); those for France were 7.8 per cent (Mediterranée) and 4 per cent (Est); those for Italy 11 per cent (Campania) and 3 per cent (Lombardia); those for the Netherlands 4.4 per cent (Zuid) and 2.8 per cent (West); and those for the United Kingdom 7 per cent (Northern Ireland) and 2.2 per cent (South-East).[141]

361. A number of estimates are also available showing rates of utilization for all factors of production combined or for capital equipment. For various reasons such estimates require more careful interpretation than data for the unemployment of labour since only rarely do figures for rates of capacity utilization correspond at all closely to a well-defined technical relation between actual and potential output.[142]

362. However, although available figures for rates of capacity utilization or the deviations between actual and potential output should not be taken too literally, it is noteworthy that there is considerable similarity in the general character of the trend of estimates made for manufacturing industry in developed market-economy countries during recent years. For example, a survey of such estimates for nine countries which was carried out for the IMF indicates a marked tendency for rates of capacity utilization in manufacturing to be substantially lower during the years 1970-1978 than during the previous decade.[143] If these figures are combined with estimates for more recent years of the ECE secretariat, the resulting trends indicate that in some developed market-economy countries there was an improvement in the rate of capacity utilization towards the end of the decade but that in the larger economies of this group the rate tended to fall again in 1980-1981.[144]

363. There are also available for recent years various estimates of rates of capacity utilization for particular industries, which indicate the impact of the 1974-1975 recession and its sequel at a micro-economic level.[145] For example, in both the six original countries of the European Economic Community and in Japan the rate of capacity utilization in the steel industry fell from the levels of 85 — 90 per cent prevailing in 1973-1974 to less than 70 per cent in 1975; and there was also a substantial fall in the United States.[146] OECD estimates show a recovery in the rate of capacity utilization for the United States in subsequent years of the decade but the persistence of rates far below those achieved in the 1960s and the early part of the 1970s for Japan and the main steel-producing countries of the European Economic Community.[147] Another sector for which internationally comparable figures for rates of capacity utilization in the 1970s are available is the petrochemical industry. In the case of four basic products of this industry (ethylene, benzene, propylene, and butadienne) movements during the middle of the 1970s in rates of capacity utilization in the United States, Japan, and the European Economic Community were similar to those for steel.[148] Despite some recovery later in the decade available figures indicate that, as in the steel industry, the position at the beginning of the 1980s is still far less favourable than that prevailing before 1975.[149]

C. The stabilizing influence of the import demand of developing countries during the 1970s

364. The average rate of growth of real GDP of developing countries as a group was sustained at

[141] Commission of the European Communities, Directorate-General for Economic and Financial Affairs, *European Economy*, No. 10, November 1981, chap. 7, table 7.10.

[142] Figures for rates of capacity utilization can be classified into two broad categories, one consisting of estimates made by means of statistical or econometric methods and the other of the results of surveys of business enterprises. Neither of these measures can be taken as unambiguous. In the former case several different procedures are followed, and all of them are open to criticism. Likewise, the design of surveys on this question is far from uniform, and the answers received are often difficult to interpret. For a brief discussion of these and other problems associated with the measurement of the rate of capacity utilization see "Resource transfers, excess capacity, and industrial regeneration in developed-market economies: a review of some available evidence", study by the UNCTAD secretariat, (TD/B/C.3/161/Supp.1 and Supp.1/Corr.1), chap. IV, A. There is a more comprehensive review of different kinds of estimates of rates of capacity utilization in L.J. Christiano, "A survey of measures of capacity utilization", *IMF Staff Papers*, Vol. 28, No. 1, March 1981.

[143] Christiano, *op. cit.*, pp. 177-193. The countries included in the survey are the United States, France, Sweden, the United Kingdom, Italy, Japan, the Netherlands, Canada and the Federal Republic of Germany.

[144] *Economic Survey of Europe in 1981...*, chap. 1, sect. (i) and sect. (vii) and chart 1.1.8.

[145] Such estimates are based on methods similar to those used for manufacturing as a whole. However, estimates based on statistical techniques at this level are sometimes difficult to reconcile with first-hand knowledge of the effects of problems arising out of indivisibilities of capital equipment or its specificity to certain products, etc.

[146] Federal Trade Commission, *The United States steel industry and its international rivals: trends and factors determining international competitiveness. Staff report of the Bureau of Economics to the Federal Trade Commission*, by Richard Duke *et. al.* (Washington D.C., United States Government Printing Office, 1977), table 4.21, p. 238.

[147] OECD, *The iron and steel industry* (Paris, various years), and *The steel market in 1980 and the outlook for 1981* (Paris, 1981), tables 8-10.

[148] OECD, *The petrochemical industry. Trends in production and investment to 1985* (Paris, 1979), tables 1a-3a and 1b-3b.

[149] On the rates of capacity utilization for the petrochemical products mentioned in the text in 1976, see the source cited. For output figures in the rest of the 1970s see OECD, *The chemical industry* (Paris, various years), and for estimates of capacity in Japan, Western Europe, and North America in 1979 see *Second world-wide study on the petrochemical industry: process of restructuring*, prepared by the secretariat of UNIDO (ID/WG.336/3), table I.27. Figures for capacity and output in the case of ethylene for Western Europe in the period 1974-1979 are given in Agence Internationale d'Information pour la Presse, *Europe*, 17 November 1980.

higher levels than that of the developed market-economy countries during the mid-1970s, declining as it did from a figure of more than 6 per cent per annum during the period 1970-1974 to 4.6 per cent in 1974-1975. Thereafter the rate rose to 6 per cent in 1975-1977 and in the following two years rates of growth were 4.5 to 5 per cent.[150] The recession in the developed market-economy countries in 1974-1975 was associated with stagnation in the growth of their imports, while the fall in the rate of growth of the imports of developing countries was much less sharp.[151]

365. There are various possible ways of giving some indication of the importance of the stabilizing influence of developing countries' import demand which is implied by such figures. For example, estimated global multipliers can be applied to the increased deficit in the balance of trade of non-oil-exporting developing countries with the developed market-economy countries. Another approach is to examine the changes in the share of the exports of developed market-economy countries which were purchased by developing countries. The latter would demonstrate the stabilizing influence of oil-exporting as well as other developing countries during the 1974-1975 recession and would also draw attention to the increased importance of the markets of such countries over the decade as a whole.

1. The multiplier effect of non-oil-exporting developing countries' trade deficit with developed market-economy countries

366. The overall deficit in the balance of trade of non-oil-exporting developing countries rose from $10,341 million in 1973 to $32,012 million in 1974 and $40,648 million in 1975.[152] This was accompanied by a similar movement in their balance with developed market-economy countries, their trade deficits rising by $6,230 million between 1973 and 1974 and by $11,360 million between 1974 and 1975.[153]

367. Recent years have witnessed the development of a number of econometric models which make it possible to investigate the quantitative impact of exogenous changes in expenditure in a global framework. For example, the system of econometric models brought together in project LINK has on various occasions been used for simulations designed to estimate the impact on developed market-economy countries of such changes, including those which would result from increased financial flows to developing countries. The results depend on the assumptions made about the way in which the exogenous change in expenditure is financed. In the context of the analysis of the effects of changes in the trade deficit of non-oil-exporting developing with developed market-economy countries, perhaps the greatest interest attaches to estimates of the multiplier effect of a rise in financial flows to the former made on the assumption that this rise was not associated with a corresponding increase in direct taxation or reduction in government expenditure in OECD economies. In the LINK system the multiplier effect of an exogenous change in the exports of OECD countries on their rate of growth of GDP is well above 2 after two years, whereas in the OECD's international linkage model the multiplier is 2.04 after one year and nearly 3 after 2 years.[154] Strictly speaking, such multipliers cannot simply be applied to the increases in the trade deficit of the non-oil-exporting with the developed market-economy countries in 1974-1975 in order to calculate their effect on the rate of growth of the latter. The multipliers are estimated on the basis of a particular distribution of the exogenous change in expenditure among OECD economies, which probably differs from that of the increases in the trade deficit in question. Nevertheless, the multipliers do make it possible to obtain a rough idea of the extent to which demand levels in OECD economies were sustained by the expansion of their trade surpluses with non-oil-exporting developing countries. If, for this purpose, the global multiplier after a year is taken to be 2, then the one-year effect on the GDP of the OECD economies would have amounted to about $12 billion in 1974 and about $23 billion in 1975.[155]

2. The recent evolution of developing countries' share of the exports of developed market-economy countries

368. The figures resulting from the application of global multipliers to the increases in the trade deficit of non-oil-exporting with developed market-

[150] UNCTAD, *Handbook of International Trade and Development Statistics, 1979* (United Nations publication, Sales No. E/F.79.II.D.2) and *Supplement 1980* (United Nations publication, Sales No. E/F.80.II.D.10 and corrigendum), table 6.2. It should be noted that the average figures for the group conceal large variations among individual developing countries, several of them experiencing negative growth rates of real GDP of as much as 10 per cent or more in 1973-1974 and 1974-1975, whilst others registered large positive growth rates, in some cases exceeding 15 per cent per annum.

[151] After rising from $429,900 million in 1973 to $611,800 million in 1974 the value of imports of developed market-economy countries rose to only $614,200 million in 1975. The imports of developing countries rose from $98,900 million in 1973 to $163,500 million in 1974 and $189,700 million in 1975. (UNCTAD, *Handbook of International Trade and Development Statistics, Supplement 1980*, tables 1.1 and 1.2.)

[152] *Ibid.*, table 1.12.

[153] UNCTAD, *Handbook of International Trade and Development Statistics, 1979* (*op. cit.*), table A.1.

[154] "The OECD international linkage model", *OECD Economic Outlook: Occasional Studies*, January 1979, pp. 19-24.

[155] If the exogenous increase in expenditure in the OECD economies were associated with rises in taxation or reductions of government outlay, the multipliers and the additions to levels of economic activity in these countries would be lower. On this question see, for example, H. Georgiadis, L. R. Klein, and V. Su, "International co-ordination of economic policies", *Greek Economic Review*, Vol. 1, No. 1, August 1979, pp. 39-42, and "Financial transfers from industrial to developing nations: a reexamination" (Washington, D.C.: United States Department of State, INR report No. 1081). It is not clear how relevant these considerations are for the analysis here, since it would be very difficult to establish a connection between the rise in the trade deficit of non-oil-exporting with developed market-economy countries and a change in taxation or government expenditure in the latter.

economy countries in 1974 and 1975 indicate a stabilizing influence of modest size in comparison with the GDP of the latter. An attempt to estimate the impact of the increased trade deficits during periods longer than one year would make little difference. However, the changes in developing countries' import demand assume a greater importance if they are compared with the exports, rather than the total output, of developed market-economy countries.

369. Annex table A.9 shows the changes during the 1970s in the shares of different major regions in the total exports of developed market-economy countries. As might be expected, the share of both all developing countries and of the group excluding the major oil exporters rises in 1974 and reaches a peak in 1975. Annex table A.29 shows the position for the United States, Japan, and the European Economic Community. Export shares follow movements similar to those for developed market-economy countries as a whole, peaks also being recorded for developing countries' share of the exports of each country or group of countries in 1975. It is interesting to note the particularly high share of developing countries in Japan's exports, a share which actually exceeded that of other developed market-economy countries in 1975.

D. Some micro-economic aspects of interdependence

1. Changing shares of different destinations in major categories of developed market-economy countries' exports and their patterns of excess capacity

370. Increases similar to those relating to developing countries' share of the total exports of developed market-economy countries during the 1970s also occurred at the level of certain major SITC groups. Examples for various one- and two-digit groups are given in annex table A.10. A number of features of this table are noteworthy. In all the six SITC classes specified in the table the share of non-oil-exporting developing countries in developed market-economy countries' exports rose to peaks in 1974 or 1975 (or in both years). The same is true for all developing countries except in the cases of manufactured goods excluding iron and steel and non-ferrous metals (SITC 6+8-(67+68)) and of machinery and transport equipment (SITC 7). However, during the 1970s as a whole there was a very marked expansion of the share of all developing countries for SITC 7. Indeed, in the case of each of the SITC classes in annex table A.10, except chemical products (SITC 5), developing countries' share of the exports of developed market-economy countries had risen by the end of the decade to a level higher than that prevailing in the early 1970s. The developing countries' share of exports of SITC 7 from the United States, Japan, and the European Economic Community is shown in annex table A.29. Although there is considerable variation in the size of the share in the three cases, the movements are similar to those for the share of the exports of developed market-economy countries as a group.

371. In a consideration of the benefits to developed market-economy countries of increasing the import demand of developing countries, account must be taken not only of macro-economic effects such as reductions in overall rates of unemployment but also of the help which might thus accrue to branches characterized by excess capacity and more generally to the process of restructuring the manufacturing industry. However, in spite of the growing dependence of developed market-economy countries' exports on markets in developing countries at the level of major SITC groups (see annex table A.10), there must be uncertainty concerning the extent to which the adoption of such programmes would solve the problems of certain major sectors in developed market-economy countries. The respective contributions of cyclical downturns in demand and other long-term factors to low levels of capacity utilization at a micro-economic level in recent years are not easy to establish and are still the subject of controversy. Nevertheless, there can be little doubt that excess capacity in major industries such as steel and shipbuilding is due not only to cyclical factors but also to the secular shifts in comparative advantage and in the distribution of world industry discussed in earlier chapters of Part III and to changes in relative prices (especially of energy).[156]

372. The pattern of excess capacity in major manufacturing sectors is likely to be a continuing problem for some time to come. Since the mid-1970s there have been widespread attempts to reduce and rationalize capacity in developed market-economy countries. However, according to present indications capacity in certain industries of these countries still appears to be in excess of probable long-term requirements.[157] At the same time, the manufacturing capability of developing countries in sectors such as steel, shipbuilding, and petrochemicals continues to increase.[158] These factors not only add to the diffi-

[156] For a survey of some of the salient features of the changing distribution of world production in the steel and shipbuilding industries see the study by the UNCTAD secretariat, "Resource transfers, excess capacity, and industrial regeneration in developed market economies: a review of some available evidence" (TD/B/C.3/161/Supp.1 and Corr.1), chap. IV, C and D. There is a more detailed analysis of the respective roles of cyclical and longer-term factors in the recession of the steel industry in International Iron and Steel Institute, *Causes of the mid-1970s recession in steel demand* (Brussels, 1980), which attributes special importance amongst the latter to the large changes in relative prices which characterized the 1970s.

[157] For example, there was a reduction in employment in the steel industry in countries of the European Economic Community of 180,000 between 1973 and early 1981, and a tendency for a rise in the value added of their exports relative to that of their imports, indicating a greater concentration on more sophisticated products. However, there was also a rise in production capacity for crude steel of 13 per cent in these countries between 1974 and 1980, which was associated with a drop in the rate of capacity utilization of about 25 per cent during the same period. (*European Economy*, No. 10, November 1981, chap. 8, and OECD, *The iron and steel industry in 1974* (Paris, 1976), tables 4 and 44, and *The steel market in 1980 and the outlook for 1981* (Paris, May 1981), table 8.)

[158] On the growth of petrochemical capacity in developing countries and the rise in their production as a proportion of their demand for various products of this industry see *Second worldwide study on the petrochemical industry...*, (ID/WG.336/3), sect. I.

culty of predicting how different industries and countries will be affected by measures designed to promote international economic recovery but also have important implications in the context of the probable impact of the intensification of the current recession.

2. Some implications of intensified global recession for economic relations at an industry level between developed and developing countries

373. Intensified global recession is likely to have various adverse repercussions on the evolving pattern of economic relations between developed and developing countries described in earlier sections of this chapter, and for rates of capacity utilization in manufacturing in both groups of countries. An important part of the contribution of developing countries to global stabilization during the mid-1970s was due to the growth of the imports of members of certain groups of these countries such as the major oil exporters and the fast-growing exporters of manufactures. The prospects for the growth of real GDP of various countries in these groups have recently deteriorated, and in the face of the less promising outlook for borrowing from the international capital markets the rate of growth of their imports may be reduced to a point where a repetition of their earlier stabilizing role is not possible.

374. Moreover, an intensification of the recession will be reflected in a worsening of problems at the sectoral level. Certain labour-intensive industries such as those producing textiles, shoes, and clothing are frequently at the centre of discussion in this context. During a recession there is a tendency for the demand for goods in these categories to grow more slowly, with all that such conditions may imply for the intensification of struggles over market shares. Moreover, protectionist pressures affecting these industries may also be aggravated owing to worsening employment prospects in other parts of the economy.[159] However, the changing distribution of world industry is no longer limited to branches such as textiles and clothing. Increasingly, it also involves others such as steel, shipbuilding, and petrochemicals. A further worsening of the positions of industries in the latter group is unlikely to be confined to developed market-economy countries. The possible consequences, which may well involve the widespread incidence of unprofitable operations, can be illustrated in the cases of the shipbuilding and petrochemical industries.

375. Since the onset of the depression in shipbuilding during the mid-1970s, which was closely related to the earlier over-expansion of oil-tanker production, many shipyards have attempted to diversify into products characterized by higher levels of demand and profitability, an outstanding example being vessels required for offshore oil exploration. The scale of the boom which has recently characterized this part of the industry can be gauged from the estimated expansion of the orderbook for mobile offshore drilling rigs from 33 in January 1978 to 224 in July 1981 (the latter figure amounting to between 40 and 50 per cent of the existing world fleet of such rigs).[160] However, since mid-1981 there has been a slight reduction of the orderbook and a tendency for charter rates for rigs to weaken.[161] If the recession were to become prolonged, it might well be associated with a significant falling-off of exploration activity in the energy sector, with the result that oil rigs would cease to be a profitable area of diversification for shipyards. In such circumstances it would be reasonable to anticipate intensified competition in the markets for most kinds of ships and increased pressure for protection and subsidies on the part of shipbuilders as many yards became more willing to take on unprofitable orders in the interests of long-run survival.[162] While the 1970s witnessed the emergence of a number of developing countries into the ranks of the world's major producers of merchant ships[163] and there are indications that in many cases the resulting capacity is competitive, it is unlikely that shipbuilders in developing countries would not be seriously affected by depressed conditions of the kind outlined above.

376. In the case of the petrochemical industry its products are used as inputs in a very wide variety of goods, with the result that rates of capacity utilization are highly sensitive to movements of aggregate economic activity. Mention was made earlier of both the effects on important branches of this industry of the recession of the 1970s and of the expansion of capacity in developing countries. An important part of this expansion is associated with the attempts of various developing-country producers of oil and natural gas to diversify the structure of their output. Some of this capacity is already in operation, and much of the rest is expected to come on stream at various times during the 1980s.[164] Although costs

[159] Concerning protection in recent years in the footwear, textiles, and clothing industries see, for example, S. J. Anjaria, Z. Iqbal, L. L. Perez, and W. S. Tseng, *Trade policy developments in industrial countries*, IMF Occasional Paper No. 5 (Washington D.C., July 1981), sect. III. On the effects of protectionist measures on developing countries' exports of labour-intensive products, see also part III, chap. 5, above.

[160] *Shipping Statistics Yearbook 1981* (Bremen: Institute of Shipping Economics, 1981), pp. 50 and 270.

[161] A. Fisher, "Business is booming", *Financial Times*, 30 April 1982.

[162] There is a description of the extraordinary favourable terms available to ship buyers during the previous depression in late 1978 in "The struggle to stay afloat", *Financial Times*, 6 July 1979. It should be noted that depressed conditions in the industry would probably be associated with increased pressure for greater orders for military vessels in some cases.

[163] The rise of shipbuilding in developing countries is described in A. J. Cornford and R. B. Glasgow, "The process of structural change in the world economy: some aspects of the rise of the shipbuilding industry in developing countries", *Trade and Development. An UNCTAD Review*, No. 3, Winter 1981 (United Nations publication, Sales No. E.82.II.D.3).

[164] There seems to be doubt about the dates at which many of the plants planned in developing countries will begin to produce. This question is discussed, for example, in OECD, *The petrochemical industry: Trends in production...*, pp. 14-17, and a list of the years in which a number of export-oriented plants in developing countries are expected to start operating is given in UNIDO, *Second world-wide study on the petrochemical industry....* (ID/WG.336/3), p. 72.

vary among different producing areas, it is only at high rates of capacity utilization that plants break even, and a significant part of the output of some developing countries is expected to be exported. Thus, if recession is prolonged, the pattern of low rates of capacity utilization may no longer be confined to the traditional producing countries but spread also to new regions.[165]

E. Industrial regeneration in developed market-economy countries, the "North-South" dimension of international economic relations, and the engineering industry

1. Preliminary remarks on industrial restructuring in developed market-economy countries

377. Reference was made earlier to arguments that industrial restructuring in developed market-economy countries can be assisted by measures to promote international economic recovery which would involve increasing developing countries' import demand. There are various ways in which this demand is capable of facilitating the shift of resources from industries subject to secular decline to others with good prospects for long-term expansion. Certain aspects of such a process are illustrated below for the case of the engineering industry. However, first it should be recalled that the achievement of economic and social goals in both developing and developed market-economy countries has many aspects in which the "North-South" dimension of international economic relations is relatively unimportant. For example, a successful outcome of the development process in developing countries will depend also on internal economic policies, the evolving pattern of relations among countries belonging to this group, and so on. Likewise, industrial regeneration in the developed market-economy countries is a major part of their overall process of structural change (various aspects of which were discussed earlier in this Part), and cannot be considered in isolation from macro-economic management and other policies such as those directed at regional problems, the promotion of research and development, aiding small firms, etc. Moreover programmes in the developed market-economy countries involving job creation, subsidies to defray the costs associated with labour mobility, and various other means of reducing the insecurity, loss of identity, and sense of personal failure accompanying unemployment should help to facilitate the process leading to the contraction of industries in secular decline and to reduce pressures for protectionism.[166]

It should also be noted that many of the phenomena which are part and parcel of industrial regeneration, such as the development of various new products and the exploitation of the opportunities to which they give rise, will in the main, at least initially, affect the internal structure of developed market-economy countries and their mutual economic relations.

2. The potential role of the engineering industry in future structural change

378. Although many policies required for the process of industrial regeneration in developed market-economy countries must necessarily be of a primarily internal nature, nevertheless the preceding analysis, especially that treating the tendency during the last decade for developing countries' share of the exports of developed market-economy countries to rise, points to the significance of the "North-South" dimension in this context. It is widely believed that a key part in successful restructuring in developed market-economy countries will be played by the expansion of industries producing engineering and capital goods. These are, of course, not the only industries in such countries which may show special dynamism in the years to come. Nor should it be overlooked that developing countries have already begun to establish a capability of their own in this field. Engineering provides an interesting illustration of the potential benefits of sustained expansion along lines which associate industrial growth in developed countries more closely with the development of developing countries. Demonstration of the existence of such benefits in this case involves a series of interrelated arguments concerning the comparative advantage of developed market-economy countries in this sector and the increase in the dependence of their engineering industries on exports, on the one hand, and the needs of developing countries for capital goods, on the other.

379. The sector producing engineering and capital goods is far from being a well-defined one, and its output is highly heterogeneous. For many purposes it is desirable to single out some of its constituent parts, such as shipbuilding and vehicle production, for special treatment, and ideally both these branches should be excluded from this study,[167] though it is doubtful if failure to do so has much effect on the broad conclusions which are reached in this section.[168] Whether or not shipbuilding and the

[165] It should be noted that a possible response to prolonged recession would be a tendency to slow down production of new capacity.

[166] For a survey of measures affecting the process of industrial change in the countries of the European Economic Community, see Commission of the European Communities, Directorate-General for Economic and Financial Affairs, "Report of the Study Group on industrial policies in the Community: state intervention and structural adjustment" (II/419/80-EN), (Brussels, 1981). For a more general account of the situation facing those unemployed as a result of structural change and of measures to alleviate it, including alternatives to conventional retraining for older workers such as the provision of special educational services designed to provide people with broader general interests, see B. Sherman, "Employment policies: proposals for industrial restructuring", in A. R. Riddell, (ed.) *Adjustment or protectionism: challenge to Britain of Third World industrialization* (London: Catholic Institute of International Relations, 1981).

[167] The attempt to exclude them would have caused major difficulties in the use of existing statistical sources.

[168] SITC 7, which is used in the discussion below, does not include goods belonging to the categories of professional, scientific, and controlling instruments; photographic and optical goods, watches and clocks (SITC 86). However, figures in Statistical Office of the European Communities, *Employment and*

(*Continued on next page*)

production of vehicles are included, the engineering industry accounts for a substantial proportion of total employment in manufacturing in developed market-economy countries.[169] As might be expected, there is considerable variation among such countries in their competitive strength in different branches of engineering.[170] Nevertheless, if the developed market-economy countries are considered as a group, they retain a comparative advantage in relation to other regions in the production of a wide range of engineering goods. This is mainly due to various considerations of a qualitative character.[171] For example, these countries have at their disposal a reservoir of skills in this sector which, despite rapid progress in certain fields, other regions are unlikely to be able to match in the near future. Another important consideration here concerns the relationship between the engineering industry and technical progress in electronics. It is expected that developments in electronics will have a great impact on technology in the production of capital goods, and that the developed market-economy countries in which such progress mostly originates will have an initial advantage in exploiting it.[172]

380. The last two decades have witnessed a very rapid rise in trade in engineering products, and the share of this sector's output devoted to exports in the major developed market-economy countries has increased very significantly reaching by the second half of the 1970s levels twice as high as those prevailing in the early 1960s. For example, according to figures of the International Iron and Steel Institute the exported share of production of machinery and equipment rose between 1963 and 1976 from 41 per cent to 60 per cent for the Federal Republic of Germany, from 19 per cent to 51 per cent for France, from 26 per cent to 59 per cent for Italy, from 44 per cent to 68 per cent for the United Kingdom, and from 18 per cent to 33 per cent for the United States.[173] The growing dependence on markets abroad which is indicated by such figures was without doubt partly the result of a rise of intra-industry trade associated with an increase in specialization within the engineering industry among developed market-economy countries themselves.[174] However, it was also accompanied by the rise in developing countries' share of developed market-economy countries' exports of machinery and equipment (mentioned in section D above).

381. The sectoral distribution of changes in the import demand of developing countries is hard to predict. Nevertheless, closer examination of various data bearing on these countries' propensity to import engineering goods suggests that this sector in developed countries would be substantially affected by changes in the import demand of developing countries. For example, annex table A.17 shows for selected years of the 1970s the percentages of imports of various kinds of machinery and equipment for certain categories of developing countries with a wide range of levels of GDP *per capita*, and it indicates that, for all but a few of them, machinery and transport equipment (SITC 7) tended to account for substantial shares of total imports. Indeed, for only eight of these countries was the share in total imports of goods belonging to SITC 7 less than 15 per cent in two or three of the years shown. For nine countries this share was at least 40 per cent, for 35 countries between 25 per cent and 40 per cent and for 21 countries between 15 per cent and 25 per cent. Moreover, it should be emphasized that the figures in annex table A.17 are average import propensities and that, particularly in the case of countries undergoing the process of industrialization, the corresponding marginal propensities, are likely to be higher.

382. There are indications that many of the branches of the engineering industry in developed market-economy countries managed to avoid the worst effects of the last major recession.[175] However, the analysis above suggests that the industry would be vulnerable to an intensification of the current recession in view of the severity of its probable

(*Footnote 168 continued.*)

Unemployment 1972-1978 (Luxembourg, 1980), table III/4, show that employment in instrument engineering in the Federal Republic of Germany and the United Kingdom amounted to only about one-tenth of that in mechanical and electrical engineering.

[169] According to OECD, Interfutures, *Facing the future. Mastering the probable and managing the unpredictable* (Paris, 1979), table 57, the share of employment in manufacturing in 1972-1973 which was accounted for by engineering in the Federal Republic of Germany, France, Italy, Japan, the United Kingdom, and the United States varied between 22 and 30 per cent.

[170] See, for example, the analysis of the changing export shares of various OECD countries in different branches of engineering in C. T. Saunders, *Engineering in Britain, West Germany, and France. Some statistical comparisons of structure and competitiveness* (Brighton: Sussex European Research Centre, 1978), chap. 4.

[171] Various statistical indicators can be used to reinforce such qualitative arguments. For example, *European Economy*, November 1981, table 8.3, shows that there were relatively high export/import ratios for equipment products in the trade of Belgium, the Federal Republic of Germany, France, Italy, the Netherlands, and the United Kingdom with countries not belonging to the European Economic Community in various years during the 1970s.

[172] OECD, Interfutures, *op. cit.*, pp. 336-346.

[173] International Iron and Steel Institute, *op. cit.*, annex 5. It is not clear whether by machinery and equipment here are meant goods belonging to SITC 7 or those belonging to ISIC 382-385.

[174] On the growth of intra-industry trade in engineering products in three major developed market-economy countries see Saunders, *op. cit.*, Chap. 3, sect. (iii).

[175] For example, a comparison of figures in the EEC publication mentioned in footnote 168 above, tables III/4 and IV/1, for employment and the number of unemployed in various major branches of the engineering industry in the Federal Republic of Germany, France, and the United Kingdom suggests that in general the industry was characterized by sectoral unemployment rates which were less than the national average. The sectoral classification in the two tables cited are not strictly comparable, but if the figures in them are none the less combined to calculate rates of unemployed for mechanical engineering, the manufacture of transport equipment, electrical engineering, and instrument engineering, only in electrical engineering was there a marked tendency for rates to exceed the national average in all three countries during the period from 1973-1974 until 1978. The rates of unemployment in mechanical engineering mostly seem to have been lower than the national averages during this period.

impact on investment and international trade, especially if the rate of growth of GDP of developing countries were not sustained to the same extent as in the mid-1970s.[176] The discussion here illustrates certain features of a different possible future scenario for the world economy in which there is a higher rate of expansion in developed market-economy countries along lines that combine improved long-run viability with meeting needs in developing countries.

[176] In this context it is worth referring once again to the rise during the 1970s of developing countries' share of developed market-economy countries' exports of machinery and transport equipment (SITC 7) which is shown in annex table A.10.

Chapter 7

RECENT DEVELOPMENTS IN THE ENERGY SECTOR AND THEIR IMPLICATIONS FOR STRUCTURAL ADJUSTMENT

A. Introduction

383. The developments which took place in the world energy scene during the past decade have been among the main forces contributing to structural transformation. Simultaneously, the world energy sector has itself undergone considerable restructuring. Hence the need to devote particular attention to energy in an analysis of causes, size and impact of structural change of the world economy.

384. In the *Trade and Development Report, 1981*,[177] it was argued that industrialized countries, and particularly the developed market-economy countries, will have to undertake an in-depth restructuring of their energy sector because of their overall large energy consumption and of their high dependence on oil, while developing countries will have to spend increased resources on the building of their energy base.

385. The present report comes in the midst of continuous changes on the energy front. The unexpectedly strong and persistent way in which demand for oil, as well as for energy as a whole, has responded to the 1979-1980 oil price increases and the further reductions in energy use associated with the world economic recession have reversed the short-term outlook for the world oil market. As regards the long-term outlook, however, there are diverging views. The decline in energy use, in the face of slow but nevertheless positive economic growth in many developed market-economy countries, has led some analysts to argue that the link between energy demand and economic growth has been broken. However, while there is evidence that some adjustment in the form of conservation or fuel substitution has taken place since 1973-1974, it would be wrong to perceive recent developments in energy demand as necessarily irreversible changes in the relationship between energy and economic activity.

386. The recent fall in demand resulting from the higher oil prices and the world economic recession appears to have reduced the sense of urgency surrounding the need for adjustment. At the same time, the lower earnings in the energy sector, uncertainties regarding future price levels, and high interest rates have reduced the attractiveness of certain investments: the past few months have seen a faltering of investment efforts, particularly in the development of alternative energy sources.[178] For similar reasons, industries which might have been planning investments for energy conservation and improvement of technical efficiency may now be abandoning them. Up to now permanent conservation (insulation, new machinery) as well as fuel substitution have been achieved through an adjustment process that has involved both small- and/or large-scale investment. Further progress in restructuring the energy sector will depend to an even greater extent on increased investment and technological improvements.

B. The evolution of world energy supplies

387. One of the striking aspects in the evolution of energy supplies in the past few years has been the increased role of important producers of petroleum outside OPEC. Total non-OPEC supplies have grown steadily even under depressed demand conditions, so that the reduction in OPEC production between 1979 and 1981 was 26 per cent as compared to a reduction in world oil output of 11 per cent (see table 34).

388. In recent years higher world market prices for oil and changes in pricing and taxation policies in some countries stimulated investment in exploration and production and enhanced recovery well above levels that would otherwise have occurred. The bulk of these investments has been in non-OPEC countries, often entailing exploration in difficult areas and with more advanced technology, involving higher unit costs of production. According to a Chase Manhattan Bank analysis,[179] the capital investments in oil/gas development of a group of petroleum companies operating world-wide increased almost five-fold between 1973 and 1980,[180] reaching in 1980 $36 billion. Of these investments 62 per cent were made in the United States. Such developments have changed the relative share in output of the various producers. They have not, however,

[177] TD/B/863/Rev 1 (United Nations publication, Sales No E 81 II D 9)

[178] *Financial Times*, 23 March 1982 "Declining oil prices blow to projects Energy groups drop investment programmes as oil prices fall", *Financial Times*, 9 April 1982 "Cuts advised in energy research", *International Herald Tribune*, 6 May 1982 "Costs squeezing search for oil in the British North Sea, U S Synfuel plans becoming idea whose time has passed"

[179] "1980 — Financial Analysis of a Group of Petroleum Companies", *The Petroleum Situation*, vol 6, No 1, January 1982 (The analysis covers 18 petroleum companies, including the major ones)

[180] *Ibid*

TABLE 34

Crude oil production
(Billions of tons)

	1970	1973	1979	1980	1981	Change 1979-1981 (Percentage)
World	2.36	2.87	3.20	3.07	2.86	−10.6
Developing countries of which:	1.38	1.77	1.84	1.69	1.46	−20.8
OPEC	1.14	1.52	1.52	1.32	1.12	−26.0
Other major petroleum exporters	0.07	0.08	0.14	0.17	0.18	+24.8
Developed market-economy countries	0.58	0.60	0.65	0.65	0.67	+3.9
Socialist countries of Eastern Europe and Asia	0.40	0.50	0.71	0.73	0.73	+2.6

Sources: United Nations, *Yearbook of World Energy Statistics; BP Statistical Review of the World Oil Industry 1980; Petroleum Economist*, January 1982.

altered dramatically the world oil long-term prospects. In effect, if increased exploration has clarified — and in some cases modified — the oil perspectives of individual countries, it has not changed drastically, as explained below, the assessment of world oil resources.

389. According to widely accepted views,[181] the world's potential additional resources of conventional oil are estimated at 3,700 billion barrels. Assuming a recovery rate for these potential additional resources of 40 per cent by the year 2000, the world's ultimately recoverable reserves (i.e. additional and presently "proved" reserves (excluding cumulative production up to the end of 1981) can be estimated at 2,000 billion barrels. On the basis of this estimate, production will probably peak around 1990 at 82-104 million barrels a day.[182] The increased exploration and development activity following the 1973-1974 oil price increase as well as the price increase itself has improved the level of proved reserves, i.e., reserves recoverable under existing economic and operating conditions, but there has been no significant improvement in finding new oil. According to various analysts, the world has been adequately explored, so that the probability of discovering new giant oil fields is small. However, increased exploration and development even after 1973-1974 has concentrated in areas where oil has already been found[183] i.e., in areas of more limited risk.

390. Thus even with increased efforts in exploration and in investment in production and enhanced recovery, oil continues to be a resource in limited supply. Given that oil, at its present price, is still cheaper than most other energy sources, its pricing and production rates will continue to have a decisive impact on the functioning of the energy system.

391. The recent weakening of oil prices has already led to revisions of investment plans in the oil sector itself,[184] thus reducing future rates of growth of capacity. This weakening may have more far-reaching effects on the development of alternative sources of energy.

392. In recent years the development and utilization of other sources of energy, e.g. coal and nuclear energy, have contributed to reducing the dependence on oil, particularly in some of the developed countries. In OECD countries, these energy sources have been used mainly for electricity generation, both in meeting additional demand for energy in that form and in replacing oil in existing generating facilities. Thus, while coal utilization in these countries increased by 18 per cent over the period 1973-1980, its use for electricity production has increased by 41 per cent (see annex table A.48). Nuclear-powered generating capacity has increased three-fold in the same period. On the other hand, oil used in electricity generation has decreased by 21 per cent, half of the decrease taking place in a single year, i.e., 1980. The changes in the electricity sector are among the most concrete manifestations of structural changes taking place in the energy field and they reflect investment decisions taken in some cases before, but

[181] *Survey of Energy Resources 1980* (prepared by the Federal Institute for Geosciences and Natural Resources, Hanover, Federal Republic of Germany), World Energy Conference, London, 1980.

[182] World production in 1979 and 1980 was respectively 65.8 and 62.6 mb/d. ("World View of Year 2000", *Petroleum Economist*, vol. 49, No. 3, March 1982, pp. 82 and 83.)

[183] According to Financing a wider search for oil, *The Petroleum Economist*, vol. 49, No. 2, February 1982, p. 66, the first oil price increase had relatively little impact on activity in developing countries and there is no evidence as yet to show any boost resulting from the 1979-1980 increases. According to one estimate, during the 1970s only some $3.6 billion annually was being spent on oil search in developing countries as compared to world-wide outlays in exploration/production of $44.5 billion in 1979.

[184] The decision to shelve the North Sea fields (cancellation of three fields of peak production 100,000 b/d by Philips Petroleum, British Petroleum and Shell-Esso joint venture) comes at a time when.... no new development plans have been filed with the British Government ... Moreover, it would have taken five years to bring the fields into production and that is when wells that now produce about 1.9 mb/d will begin to run down ("Costs Squeezing Search for Oil in British North Sea", *International Herald Tribune* (Paris), 6 May 1982).

in many cases after, the 1973 oil price increase. The large reduction in oil use for electricity generation in 1980 reinforces the argument that the energy policies adopted after 1974 had started to produce significant results only by the time of the second oil price rise, and points to the long time necessary for bringing about changes in the structure of supply in this sector.

393. The further expansion of electricity generation in developed market-economy countries will depend mainly on the use of coal and nuclear energy, but both of these sources face, in addition to high capital costs, opposition for environmental reasons. For developing countries, which lack the necessary infrastructure, expansion of generating capacity would be much more expensive and would take longer.[185]

394. During the 1970s a certain impetus was given to the research and development of other energy sources or technologies such as unconventional synthetic oil fuels and new and renewable sources of energy. Many such projects have now either been cancelled or are being reconsidered. While the recent drop in energy demand and weakening of the oil price may have provided some breathing space for the re-evaluation of investment decisions, slackening in the efforts for the development of energy alternatives would mean both extending the period of dependence on oil and high rates of depletion before commercial application of energy alternatives is achieved. Furthermore, in view of the long lead times involved in most energy projects, including oil, investment decisions can only be postponed for a short time without compromising supply in the medium and long term. Planning in the energy sector is by its nature long term and decisions must be taken in the face of uncertainty regarding future levels of demand and the risk involved in the projects themselves.

C. The evolution of energy demand

395. Adjustment of demand to higher energy costs can take the form of changes in the habits of energy use (e.g., lowering the heating and cooling of buildings, energy management in industry, lower speed limits for motor vehicles) that require little or no investment, or of improved performance of the energy system (better insulation of buildings, combined generation of heat and power, improvements in technological efficiencies). In its latter form, adjustment may require investments that can be very high.[186] However, it is this type of adjustment that leads to permanent savings and for which there still is significant scope. It is now generally accepted that it is often more efficient in terms of capital expenditure to save a unit of energy than to expand supply by an equivalent amount.[187] For this reason it is important to understand the causes of the recent decline in energy demand.

396. Although available data for 1980 and 1981 do not permit a detailed analysis of the present situation, the demand trends during the period following 1973 can provide an insight into the adjustment process that has been taking place (see charts XII, XIII and XIV below).

397. Being, as a group, the world's largest energy consumers, the developed market-economy countries, which account for about 56 per cent of the world's commercial energy consumption, have been the main determinants of recent developments in energy demand[188] and they will continue to be so in the next few years. For this reason the present analysis examines the behaviour of these countries, and in particular of the OECD countries, for which there is a large body of comparable recent data on both economic and energy variables.

398. In OECD countries the overall efficiency of energy use, as measured by the ratio of total energy requirements to GDP, improved by 6.9 per cent over the period 1973-1979. More than half of this change (4 per cent) was achieved between 1973 and 1975, immediately following the first oil price increase. In 1980, the energy/GDP ratio showed another 4 per cent improvement (see annex table A.49).

399. Two distinct processes underline this improvement in efficiency: (i) progress in reducing the energy requirements of output in individual industries and (ii) shifts in the structure of output, with relatively energy-intensive sectors losing weight in comparison with less energy-intensive sectors. Future improvements in energy efficiency will depend upon the extent to which further conservation in individual economic activities is technically and economically feasible and will be achieved. It also depends, however, on whether changes in the composition of output are linked primarily to the cyclical phase of the OECD economy, so that the share of energy-intensive sectors will return to its previous level in case of economic recovery, or whether these changes are mainly of a more long-term and structural nature.

400. Available statistical data are either too incomplete or not recent enough to allow a thorough examination of these questions. Furthermore, it

[185] For a more detailed exposition of this point, see *Trade and Development Report 1981*, *op. cit.*, part IV, chap. 4, sect. C.2.

[186] According to a study carried out by a team at Lawrence Laboratory on energy-efficient buildings, cutting in half the energy used by buildings in the United States in the next two decades (today's United States consumption in buildings is the equivalent of roughly 14 mb/d) using today's technologies could require an investment of $400 billion which, although staggering, would be lower than investment required to produce the additional energy. ("Energy Conservation", *The Economist*, 6 February 1982.)

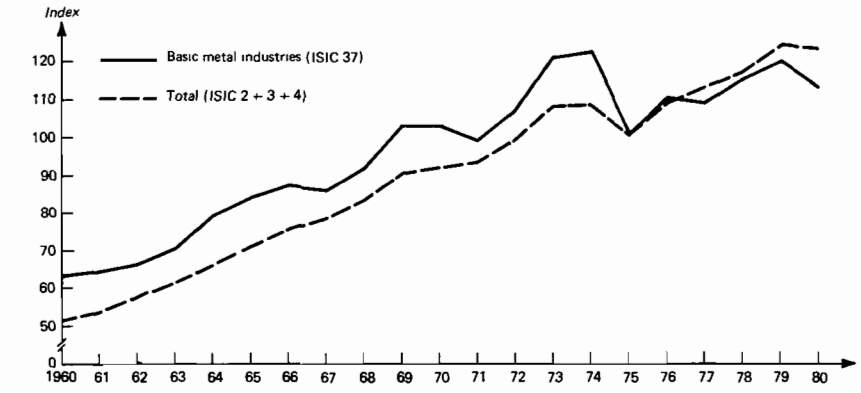
[187] *Ibid.*, and Economic Commission for Europe, "Energy investment prospects to 1990 in the EEC region" (EC.AD(XVII)/R.5), September 1980.

[188] In 1980 total world energy consumption fell by 1 per cent and consumption of oil by 4.2 per cent. In the developed market-economy countries the decline in total energy and oil demand was respectively 3.1 per cent and 7.6 per cent. For the rest of the world, with the exception of China, energy growth slowed down but did not become negative.

CHART XII

Industrial production in OECD countries, 1960-1980

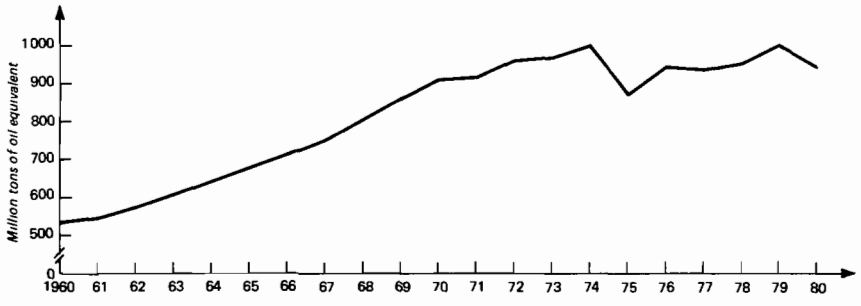
Index numbers (1975 = 100)



Source OECD, *Main economic indicators* (various issues)

CHART XIII

Energy consumption in industry in OECD countries, 1960-1980

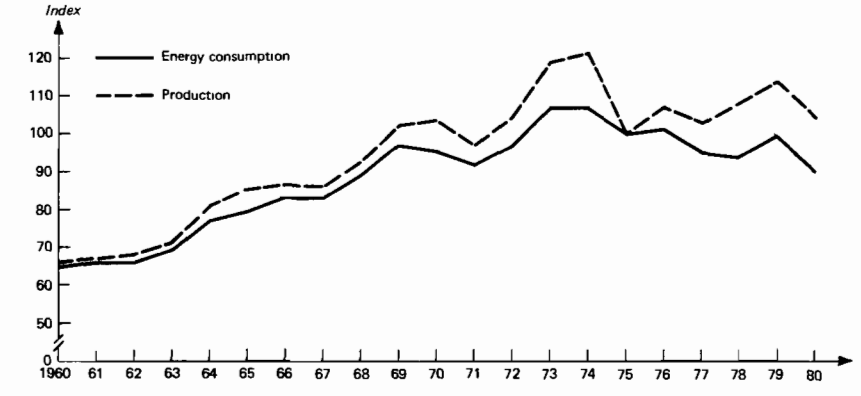


Source IEA, *Energy balances of OECD countries* (various issues)

CHART XIV

Production and energy consumption in the iron and steel industry of OECD countries, 1960-1980

Index numbers (1975 = 100)



Source IEA, *Energy balances of OECD countries* (various issues)

should be clear that the respective weights of conservation and sectoral shifts differ greatly from country to country.

401. Available data provide some evidence of improvement in the efficiency of energy use in some industrial sectors (although not very large in the case of steel — see chart XIV). For reporting industries in the United States under the Industrial Energy Efficiency Programme, energy efficiency improved by 17.6 per cent (primary metals 9 per cent).[189] These figures may appear high, but they have to be viewed in the context of the relatively low efficiency of the United States industry in comparison with those of other developed market-economy countries (often in the ratio of 1 : 2).[190] In the case of Sweden, the major factor in the decrease of the energy use/GDP ratio appears to be changes in the relative weights of the various sectors of the economy.[191] Changes in relative weights also appear to have played an important role in the OECD economies considered as a whole. Available data suggest a sizeable decrease in the share of energy-intensive sectors in industrial production, in particular iron, steel and cement.

402. The energy-intensive character of the iron and steel industry is illustrated by the fact that this sector in 1975 accounted for less than 7 per cent of total industrial production of OECD countries but for 20 per cent of industrial energy consumption. As indicated above, the ratio of total energy requirements to GDP improved by 4 per cent between 1973 and 1975. During the same period, while GDP grew slightly in real terms and industrial production declined by 6.8 per cent, iron and steel production declined by 16 per cent. Furthermore, in 1980, a year during which the energy/GDP ratio showed another 4 per cent improvement, industrial production declined by 1 per cent, while iron and steel production fell by 8.5 per cent. In fact, over the whole 1975-1980 period, the ratio of iron and steel output to total industrial production decreased by about 15 per cent. Furthermore, over the same period, energy consumption in industry appears to have been more closely associated with production of basic metals than with overall industrial production (charts XII and XIII). On these grounds it seems that there are reasons to believe that the decrease in the energy/GDP ratio in industry has been to a large extent the result of the decrease in the share in industrial production of the basic metals sector.

403. Similar evidence can be presented for cement production which, in 1978, for OECD countries as a whole was still 4.3 per cent lower than in 1973. In the case of the United States cement production declined by 20.3 per cent between 1973 and 1975, and by 16.7 per cent between 1978 and 1980.

404. It is difficult to evaluate the extent to which the share of energy-intensive industries in total industrial production might rise towards previous levels with the next upturn of the economic cycle. However, it seems difficult to imagine any substantial and pervasive economic recovery in developed market-economy countries without a revival of a demand for automobiles, household appliances, etc., and thus without pressure on the basic metals sector. On the other hand, there is some evidence that the basic metals industries are being "relocated" worldwide, with developing countries providing an increasing share of output. If this were to occur, the changes in relative weights of basic metals would be more permanent. This would improve energy efficiency in developed market-economy countries, but would not necessarily reduce world energy demand. Indeed, it might even increase it if improved technologies are not transmitted to developing countries.

405. In the *residential and commercial* sectors there are signs of demand adjustments which reflect mainly changes in habits of energy use and small-scale improvements in efficiency. This is so because the response to the price increases has been immediate and therefore could not reflect the impact on demand of large-scale investment for technological improvements. As may be seen in chart XV, energy demand in this sector responded equally strongly in the short term to both oil price increases, with a reduction of 7.6 per cent in 1974, 6.7 per cent in 1975 and 7.1 per cent in 1980. In the 1975-1980 period, however, demand advanced somewhat but was stabilized at around its 1973 level. It is this trend that reflects the adjustment that has been taking place. Further improvements in energy use in this sector are associated with better construction methods and improved energy efficiency of heating and cooling devices and of most household equipment. These improvements are again constrained by the current levels of overall investment in the developed market-economy countries.

406. Energy demand in the *transportation* sector, 90 per cent of which is in the form of oil, has shown the weakest response to developments in the oil market throughout the whole period between 1973 and 1980 (chart XV). Demand in this sector grew at an annual rate of 5.7 per cent during the period 1970-1973 and 5 per cent, following the first oil price increase, during the period 1975-1978. This might be explained by the fact that prices to final users, because of the taxes imposed on transport fuels, have risen proportionally less than crude oil and less than for fuels in other sectors. In some cases, after the first oil price increase, governments allowed the price to consumers to rise at a lower rate than the price of petroleum by reducing the share of taxes in final consumer prices. With the second price

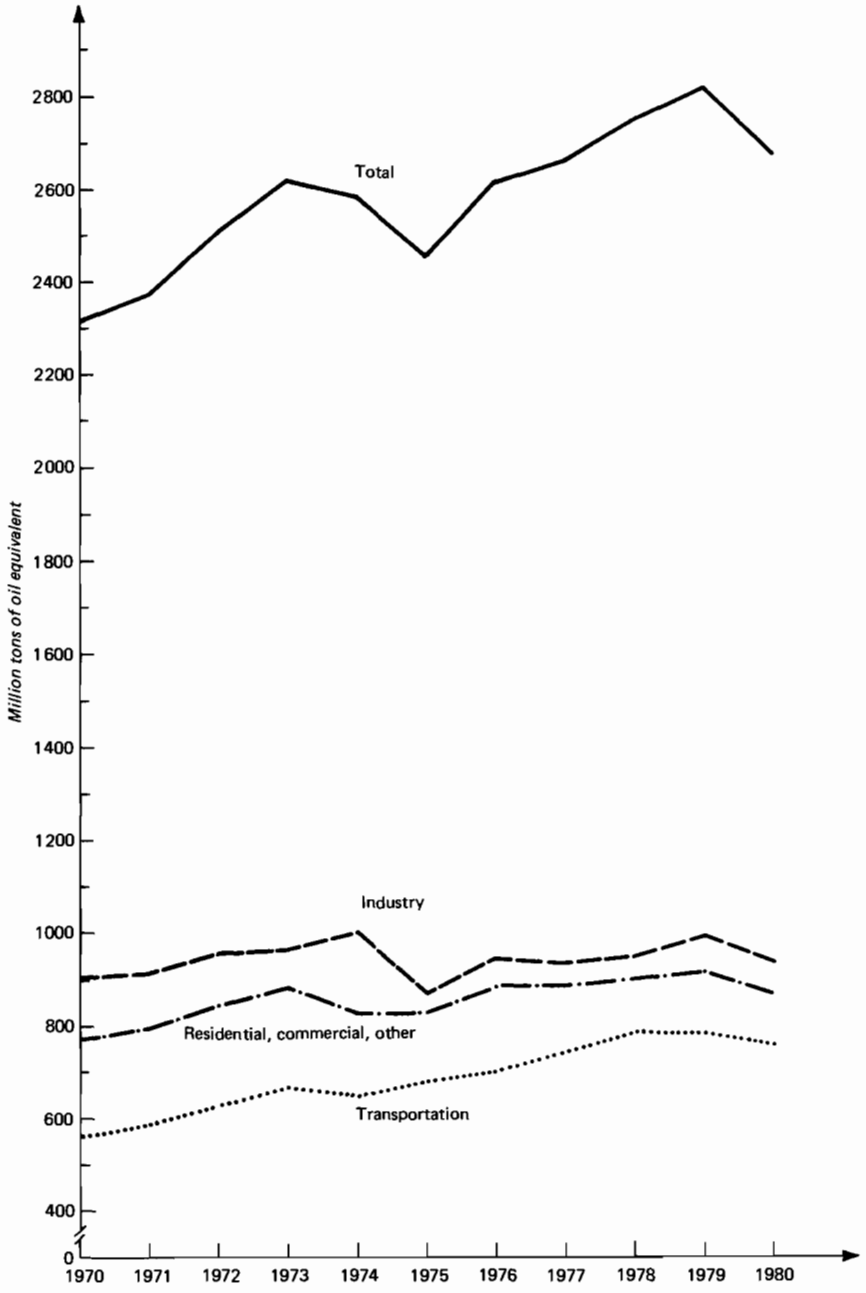
[189] See Department of Energy, *The Industrial Efficiency Improvement Program. Annual Report to the Congress and the President, 1980* (Washington D.C., December 1981). The reporting industries are chemicals, primary metals, petroleum and coal, stone, clay and glass, paper, food, fabricated metals, transportation equipment, machinery (except electrical), textiles.

[190] In such a context, energy improvements are easier to achieve and do not entail high costs. As already pointed out, further improvements in industrial energy uses are increasingly costly. Furthermore, advanced improvements are not likely to be economic, especially in view of the declining energy prices in 1981-1982, unless they are related to overall plant modernization or capital equipment replacement.

[191] G. Östblom, "Energy use and structural changes", *Energy Economics*, vol. 4, No. 1, January 1982. The author, working with 24 subsectors of the production system, shows that if the "production shares of subsectors had remained as in 1973 over the whole period, the resulting use of energy relative to total output would have been the same in 1978 and 1975 as in 1973".

CHART XV

Sectoral composition of final energy demand in OECD member countries, 1970-1980



003 *Source:* IEA, *Energy balances of OECD countries* (various issues).

increase, demand in this sector stagnated in 1979 and dropped by 3.3 per cent in 1980. The recent decline has not only been larger than in 1974, but has also been more unevenly distributed among the various countries. Thus, while in 1974 the demand drop in the United States was similar to that of other OECD countries, in 1980 United States consumption dropped by 6 per cent — almost twice as fast as the average for OECD countries — reflecting the deregulation of gasoline prices in the United States.

407. Conservation *stricto sensu* in this sector depends mainly on efficiency improvements in transport equipment and particularly automobiles, which in some of the OECD countries has been among the sectors hardest hit during the present recession. It should be noted, however, that energy consumption in the transportation sector will also depend to a large extent on social choices regarding transportation systems and in particular between individual versus mass transportation.

408. The above review suggests that, while there is scope for demand adjustment, further improvements in the overall energy intensity of the economy will be harder to realize. On the one hand, growth in the energy-intensive industries is bound to resume with economic recovery and, on the other hand, the level of investment directed towards energy conservation and efficiency improvement will depend on expectations regarding future prices and the extent to which policies provide additional incentives.

D. Supply-demand balance and interaction with the overall economy

409. Despite the present surplus in the energy markets, the prospects for future supply/demand balance and uninterrupted economic growth in the developed market-economy countries[192] remain limited if things are left entirely to the market.

410. As has been seen above, the present market conditions, which are not characteristic of long-term trends, are discouraging the expansion of energy supply. If investment in new supplies falls off, there is, in addition to the usual risk surrounding planning under uncertainty, increased risk of inadequate supplies in the future on account of the long gestation period for investment in this sector.

411. On the demand side it has been seen that further adjustment requires increased energy-saving investment in almost all sectors of the economy. This would be possible under a healthy world economy and therefore adjustment is closely linked to economic recovery.

412. If, however, economic recovery were to take place under constant or falling real energy prices and without any further incentives for conservation and improvements in energy technology and efficiency, increased growth of energy consumption would probably resume until a new deficit emerged or appeared imminent. Demand would then be arrested through increased prices and their effect on the economy. In turn, conditions would be created for augmenting supply which, together with the depressed demand, would lead again to a period of energy surplus and stagnating prices. The length of this cycle is related to the average lead time of energy projects. This being long, the result would be that demand would be allowed to grow while prices stagnated over a lengthy period before an actual or perceived imbalance would disrupt the energy system.

413. In order to protect the world economy from periodic disruptions of the energy market, various stabilization policies have been envisaged. Some are aimed at maintaining prices on a reasonable and sustainable long-term path so that erratic short-term price movements do not provide erroneous signals to investors. Others are more directly oriented towards the implementation of energy-saving technologies and the development of both conventional and non-conventional energy resources independently of price developments. All countries would benefit from such stabilization policies.

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[192] Developments in the energy market over the longer term will be affected by developments also in developing countries, as energy use in these countries will continue to grow much faster because of both higher GDP growth rates and a high energy intensity of their economies (see *Trade and Development Report 1981*, *op. cit.*).

Part IV

ISSUES IN SELECTED SECTORS

Chapter 1

SERVICES AND THE WORLD ECONOMY

414. There is a growing awareness of the importance of service industries for both the domestic and the international economy. Until recently, the interest in the service sector has been mainly due to the tendency for the share of services to rise in total output and employment and the implications for the growth of output, employment and productivity. But the current trends in the structure of international trade are now posing questions about the significance of services for the world economy. This chapter will examine both issues, with emphasis on the role of services in international trade.

A. Services in the domestic economy

1. The development of services

415. Classical economists described services as unproductive because they thought that, for technological as well as institutional reasons, the production and consumption of services slowed down accumulation, exchange and economic growth and development. Technologically, services "did not add to the value of anything", were not durable, and so were incapable of physical accumulation: institutionally, they were objects of extravagance — of "unproductive consumption" — especially by landlords, rich merchants and the State, the unholy trinity of "the mercantile system". However, both aspects of the argument referred to final services — luxury services (such as domestic service) and public entertainment, as well as State services — and they excluded intermediate or complementary services such as transport or trade.[193]

416. An entirely different line of approach was the stage theory of economic development according to which the economy would go through the agricultural, the agricultural-and-industrial, and the agricultural-industrial-and-commercial stages of development.[194] This was followed by a more rigorous theory whereby, in the early stages, primary activities would dominate the economy in terms of their share of output and labour force, secondary industries would replace them in that role, at higher stages, and finally, tertiary activities would become the dominant sector of the economy.[195]

417. The argument for the continued growth of services had been almost exclusively based on their high income-elasticity of demand. Engel's Law (1858) had shown that, at higher *per capita* incomes, economic growth would result in a proportionately lower increase in the demand for food and a higher increase for manufactured goods. This historical background led to the belief that at still higher *per capita* incomes the income-elasticity of demand for services would be high.[196] Apart from the income-elasticity issue, the share of services in the output and labour force of many developing countries was already high, and this was inconsistent with the view that the tertiary sector would become large only at later stages of development.

418. However, since the service sector was too heterogeneous in terms of the production and consumption characteristics of its component parts, it would be necessary to discuss its properties at a lower level of aggregation. Accordingly, services could be classified as final (or consumer) services and intermediate (or producer) services. Final services are made up of old services, such as domestic service, and new services, e.g. domestic and international tourism. Both the demand for the old services and the demand for the new services are likely to be sensitive to the level as well as growth of *per capita*

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[193] See further, M. A. H. Katouzian, "Services in International Trade: A Theoretical Interpretation", in H. Giersch (ed), *International Economic Development and Resource Transfer*, Institut für Weltwirtschaft an der Universität Kiel (Tübingen: J. C. B. Mohr, 1979); "Adam Smith, Mandeville and Effective Demand", *History of Economic Thought*, 1977, No. 18; and (with K. A. Tucker), *The Nature and the Size of the Service Sector*, Discussion Paper, University of Kent at Canterbury, 1972.

[194] See, for example, B. F. Hozelitz, "Stages of Growth" in B. F. Hozelitz (ed.) *Theories of Economic Growth* (Glencoe, Illinois: Free Press, 1960).

[195] A.G.B. Fisher, "Capital and the Growth of Knowledge", *Economic Journal*, 1933, pp. 374-389; Colin Clark, *Conditions of Economic Progress* (London: Macmillan 1957); see further, Simon Kuznets, "Quantitative Aspects of the Economic Growth of Nations II: International Distribution of National Product and Labour Force", *Economic Development and Cultural Change*, vol. 5, No. 1, July 1957, and *Six Lectures on Economic Growth* (Glencoe, Illinois: Free Press, 1959).

[196] See Simon Kuznets, *Six Lectures*... Hoffman's study seemed to support this hypothesis, but later studies by Kuznets appeared to contradict it.

income and leisure. The demand for the old services would tend to decline, while the demand for the new services would rise, in part as substitute for the old services, but mainly in response to new wants brought about by technological development (e.g. the cinema, television, etc.). Intermediate services, on the other hand, are mainly demanded by producers of goods and other services, and they are thus of a complementary nature — from the supply side — to the entire production and growth process. Transport and communications, banking, insurance, trade and the like are services of this type. It follows that an income-elasticity concept based on the old, the new and the complementary services taken altogether is unlikely to yield meaningful results.[197]

419. Likewise, the relatively large size of the service sector in developing countries could be explained partly by the significance of the old services, partly by the wants generated by the new services, and partly by the need for an infrastructure, and the interdependence of complementary services and modern industrial development.[198]

420. In his extensive study of the service industries, Sabolo has found (*a*) that the service sector is large, and growing, even in developing countries; and (*b*) that the demand for the new services is growing fast, the demand for complementary services grows more slowly, while the demand for the old services tends to diminish.[199]

2. Employment, output and productivity

421. Table 35 seems to support the hypothesis of a historical rise in the share of services in the total labour force of both developed and developing countries. Between the 1900s and the 1960s the share of services in the developed countries' labour force increased by 18 percentage points. Likewise, between the 1880s and the 1960s their share of employment in the developing countries grew by over 11 percentage points. It is worth noting, however, (*a*) that the average share of services in the developed countries is 50 per cent, while in the developing countries it is less than 33 per cent, (*b*) that its long-term growth in developed countries has been significantly faster than in developing countries, (*c*) that in the case of some developed countries such as Canada, the United States and France the rise in the share of services has been exceptionally high, and (*d*) that the historical as well as cross-section variations in the experience of the individual countries in the sample are greater for developing than for developed countries.

TABLE 35

Long-term structural shifts in employment
(Percentage of total employment)

Sector	*Agriculture*	*Industry*	*Service*
Developed countries[a]			
Initial period	33.8	34.2	32.0
Terminal period	9.8	40.2	50.0
Change[c]	−24.0	+6.0	+18.0
Developing countries[b]			
Initial period	62.6	16.0	21.4
Terminal period	48.6	18.6	32.8
Change[c]	−14.0	+2.6	+11.4

Source: Based on Y. Sabolo, *The Service Industries* (Geneva, ILO, 1975), tables 2 and 3.

[a] Average for Australia (1911-1966), Belgium (1910-1970), Canada (1911-1971), Denmark (1911-1970), France (1911-1970), Germany (1907-1970), Italy (1911-1970), New Zealand (1911-1966), Sweden (1910-1965), United Kingdom (1911-1966), United States (1910-1970).

[b] Average for Argentina (1895-1960), Brazil (1920-1970), Chile (1907-1960), Egypt (1907-1960), India (1881-1961), Mexico (1910-1960), Sri Lanka (1881-1963), Turkey (1927-1965).

[c] Percentage points.

422. The share of services in total output shows a similar historical pattern, which has been continuing in recent decades. Between 1960 and 1977 the share of services in output increased for all the main country groups, but at different rates (see annex table A.28).

423. Looking at the data for selected countries, it can be seen that, in 1977, the share of services in the output of all the developed countries except the Federal Republic of Germany was significantly higher than 50 per cent, and its increase since 1960 varied between 5 and 14 percentage points. Furthermore, the countries with a relatively lower share of services in their 1960 output (e.g. Austria and Japan) experienced the fastest relative growth of their service sector (see annex table A.28). In the developing countries, too, the share of services is high, but is generally less than in developed countries; moreover, it has increased in some cases (e.g. Ethiopia and Chile) and declined in others, such as the Philippines and Sri Lanka (see annex table A.28). In general, it is likely that the more advanced a developing country, the larger the rise of its service sector. In 1977, services claimed about 59 per cent of the output in the industrialized countries, 46 per cent in middle-income developing countries, and 36 per cent in the lower-income developing countries (see table 36). The decline in the share of services in capital-surplus oil-exporting countries is a consequence of the exceptionally fast growth of the oil sector, and oil prices; otherwise, the share of services in the non-oil output of these (and many of the other) oil-exporting countries is high and increasing, as many of them have few alternatives for the expansion of their non-oil output and employment other than through services (and construction). In addition, because of their considerable financial and foreign exchange resources, the oil-exporting countries tend to import substantial amounts of the new, and complementary services.[200]

[197] See further, M. A. H. Katouzian, "The Development of the Service Sector: A New Approach", *Oxford Economic Papers*, vol. 22, No. 3, November 1970, pp. 362-382; and "Services in International Trade: A Theoretical Interpretation", *op. cit.* Many of the complementary services (e.g. banking and insurance) are also final consumer services, and the extent to which their total output may be distributed between the two categories would be different in different contexts.

[198] See further Katouzian, *op. cit.*.

[199] Yves Sabolo, *The Service Industries* (Geneva: ILO, 1975), especially chaps. 1 and 2.

[200] See A. H. Katouzian, *The Political Economy of Modern Iran: Despotism and Pseudo-Modernism* (London: Macmillan, and New York: University Press, 1981), chaps. 12-14; and (by the same author) "The political economy of oil-exporting countries", *Peuples mediterranéens*, No. 8, July-September 1979.

TABLE 36

Percentage share of services in GDP[a] by groups of countries

Country group	*1960*	*1965*	*1970*	*1977*
All developing countries	41.8	43.0	45.1	44.4
Low-income developing countries	32.6	33.5	34.4	35.6
Middle-income developing countries	44.3	45.3	47.4	46.2
Capital-surplus oil-exporting countries	..	30.2	29.1	20.7
Industrialized countries	52.5	54.2	56.1	58.8
Centrally planned countries	16.8	16.0	17.2	19.8

Source: Based on *World Tables, The Second Edition (1980)* (Baltimore and London, Johns Hopkins University Press, for the World Bank, 1980), table 4.

Note: The classification in this table is that of the source.

[a] At current factor cost.

424. The dominant position of services in the output and employment of many developed countries is mainly due to: (*a*) further growth of *per capita* income and leisure, raising the demand for the new, and complementary services; (*b*) technical progress increasing the productivity of the new, and complementary services; and (*c*) greater specialization by these countries in trade in services, both for the above reasons and because of longer historical experience in the field. The process is sometimes described as "de-industrialization", but this refers to the term industry in its narrow sense and it would make better analytical and historical sense to describe these economies as "post-manufacturing" rather than "post-industrial".

425. However, the measurement of the contribution of services to output and employment poses many more difficulties than is the case for other industries: services are not only diverse and heterogeneous in respect of their production (technological) and consumption (behavioural) characteristics; they are also difficult to conceptualize and locate with any degree of accuracy. The difficulties associated with the evaluation of unpaid family services and non-traded public services are well known, but there are other important problems.

426. First, modern technological developments are making it increasingly difficult to distinguish between the producers of goods and services within the firm (because of the substitution of automated devices for mechanical equipment). Secondly, the increase in the size of the firm has led to integration into the firm of some services which have been traditionally supplied by independent activities — for example, research and development, catering, legal and other services. There are similar problems in the identification and measurement of the contribution of services to international trade: many goods exported by developed to developing countries are serviced in the country of origin, and many imported by the former from the latter are serviced in the importing country.[201] There is also the question of estimating the size of the so-called informal sector or "black economy", which is no longer an exclusive feature of developing countries. These measurement problems are not insurmountable, but they call for new analytical and accounting approaches which would take time to develop. In any case, they pale into insignificance in relation to problems of productivity, factor intensity and other technological measurements.

427. It is often thought that labour productivity as well as its growth rate are low in services. In fact, earlier studies do not indicate significant differences in productivity behaviour between industry and services.[202] Simon Kuznets' more recent study has suggested a tendency for long-term decline in the relative productivity of services,[203] but Sabolo's later study has shown (*a*) that the level of labour productivity is not necessarily lower, and could even be higher, than in industry and (*b*) that its rate of growth is fast, though there are significant variations from one country to another.[204] However, a still later study of the growth of output per man reaches the conclusion that "productivity performance in the service sector has been a good deal slower, and productivity in agriculture has grown faster than in industry in most countries".[205]

428. Some of these conflicts are due to different samples, time-periods, data sources, concepts of services and/or labour productivity, theoretical assumptions and statistical techniques used. For example, the simple ratio of output per man probably says more about income per worker than about labour productivity. But the basic problems arise from the heterogeneity of services themselves. Labour productivity grows in response to technical progress and economies of scale, and these in turn mainly depend on capital accumulation. All these factors affect various service activities differently. Some old services are relatively unskilled and labour-intensive, while some new, and many complementary, services are capital-intensive and knowledge-intensive. Optimum size and hence the extent of potential economies of scale also vary greatly among different service activities, although these economies are not necessarily due to large-scale production alone.[206] As a simple

[201] See Katouzian, "Services in International Trade: A Theoretical Interpretation", *op. cit.*

[202] See Katouzian (1970), *op. cit.*, tables III and IV; Kuznets (1957) *op. cit.*, appendix table 5; P. J. Dhrymes, "A Comparison of Productivity Behaviour in Manufacturing and Service Industries", *Review of Economic Studies*, February 1963, and V. R. Fuchs, *Productivity Trends in the Goods and Service Sectors, 1929-1961: A Preliminary Survey* (New York: National Bureau of Economic Research, Occasional Paper No. 89, 1964). Fuchs has somewhat modified his view in a later study, *Production and Productivity in the Service Industries*, edited by V. R. Fuchs (New York: NBER, 1969). (Conference on research in income and wealth. *Studies in Income and Wealth*, vol. 34.)

[203] Simon Kuznets, *Economic Growth of Nations: Total Output and Production Structure* (Cambridge, Mass.: Harvard University Press, 1971).

[204] See Sabolo (1975), *op. cit.*, p.102, table 33. It also turned out that the Verdoorn coefficient - relating productivity to output, and possibly "explaining" economies of scale — was high for services, though it was somewhat lower than for industry. It was particularly high — in some cases even higher than industry — for "complementary" services. (*Ibid.*, pp. 104-108, and table 34).

[205] See Angus Maddison, "Long-term dynamics of productivity growth", *Banca Nazionale del Lavoro Quarterly Review*, No. 128, March 1979, pp. 3-43, especially pp. 30-34, and tables 11-13.

[206] See further, M. A. H. Katouzian and K. A. Tucker (1972), *op. cit.*

illustrative example, examine the figures in annex table A.36 for two different groups of complementary services: (*a*) labour productivity has been growing fast both in transport and communications and in commerce and banking; (*b*) its growth has been generally higher in transport and communications; (*c*) labour productivity levels in transport and communications relative to industry are generally high; in many cases they are much higher than in industry; (*d*) in relation to commerce and banking they are a good deal lower; and (*e*) in terms of both productivity growth and relative productivity levels, there are significant variations among (as well as within) different countries.

429. The whole of the above discussion refers to labour productivity, whereas the more interesting and meaningful concept for comparisons of productivity behaviour is that of total productivity. Different factor intensities of production imply different labour productivity levels, and differences in rates of capital accumulation may result in differential productivity growth rates. If measured properly, output per unit of total factor input would overcome these problems. For example, Sabolo's figure for the annual rate of growth of labour productivity in the United States (1953-1967) is very high (6.7 per cent), while Maddison's (for 1950-1976) is very low (1.4 per cent).[207] However, chart XVI shows that, between 1967 and 1979, the total factor productivity of the United States' service sector grew twice as fast as that of the goods sector. This is not so very surprising: the service sector as a whole may have been less capital intensive than industry; but some new and complementary services — for example, tourism, transport, communications, banking and insurance, etc. — are becoming increasingly capital intensive as well as knowledge intensive. Therefore, (*a*) assuming lower previous levels of accumulation and skills, the rise in productivity due to an increase in capital intensity and knowledge intensity would be higher in services than in industry, and (*b*) technical progress would take place both in consequence of the absorption of more efficient (increasingly, electronic and micro-electronic) equipment, and as a result of the employment of higher skills and know-how, which the use of advanced technology necessitates.

B. Services and trade

430. An important aspect of the greater heterogeneity of the service sector is the wide differences in the extent to which various services are tradeable and/or traded. For example, household services performed by members of the household are not traded through the market or (normally) paid for, but they can be substituted by marketed services such as laundering, cleaning, domestic service and catering.[208] This is particularly true of the role of various services in international trade, as some services (e.g. public administration, internal transport, etc.) are by definition excluded from it, while others, e.g. shipping and international travel and tourism involve, also by definition, international transactions. A number of services, such as banking, insurance and real estate, fall between these two extremes.

431. The relative significance of services in a country's exports is principally determined by four factors: (*a*) the size of the service sector in the domestic economy; (*b*) the composition of the service sector, (*c*) the country's natural advantage in some services, e.g., tourism, canal and port services, etc., and (*d*) the static comparative costs in exporting internationally traded services.[209] A large service sector dominated by non-traded and/or internationally non-tradeable services (e.g. family, domestic and public services, repair work, retail trade, etc.) is unlikely to have a considerable share in the country's foreign trade. On the other hand, if a few items of new and complementary services (e.g., tourism, banking, insurance, etc.) have a substantial share in its composition, then it would be likely to make a significant contribution to the country's exports. Given a large service sector with a significant component of tradeable services, the extent to which one country would export relatively more than another would depend (apart from natural advantages) (*a*) on comparative costs, and (*b*) on the quality of the service product which, like other products, is not homogeneous — e.g., for the same price, one country's service may be regarded as better than another's. In the case of some international services, especially shipping, restrictive practices by the established firms and institutions also play an important role in determining the market shares of various countries and country groups. This leads to an examination of the role of services in international trade.

1. Services and international trade

432. The balance of service transactions is recorded in the invisibles account of the balance-of-payments. Table 37 shows that the developed market-economy countries as a group have a surplus in their invisibles (and a deficit in their merchandise trade), developing oil-exporting countries have a deficit in their services account and a surplus in their trade account, while non-oil-exporting developing countries have a deficit in both the visible and the invisible account. Among the developed market-economy countries themselves, the United States has by far the largest surplus in services trade, followed by Italy, the United Kingdom and France, while the Federal Republic of Germany, Japan and Canada have considerable deficits in invisibles (see annex table A.19).

433. But the invisibles account consists of international receipts and payments both for service pro-

[207] Cf. Sabolo (1975), *op. cit.*, table 33, and Maddison (1979), *op. cit.*, table 11.

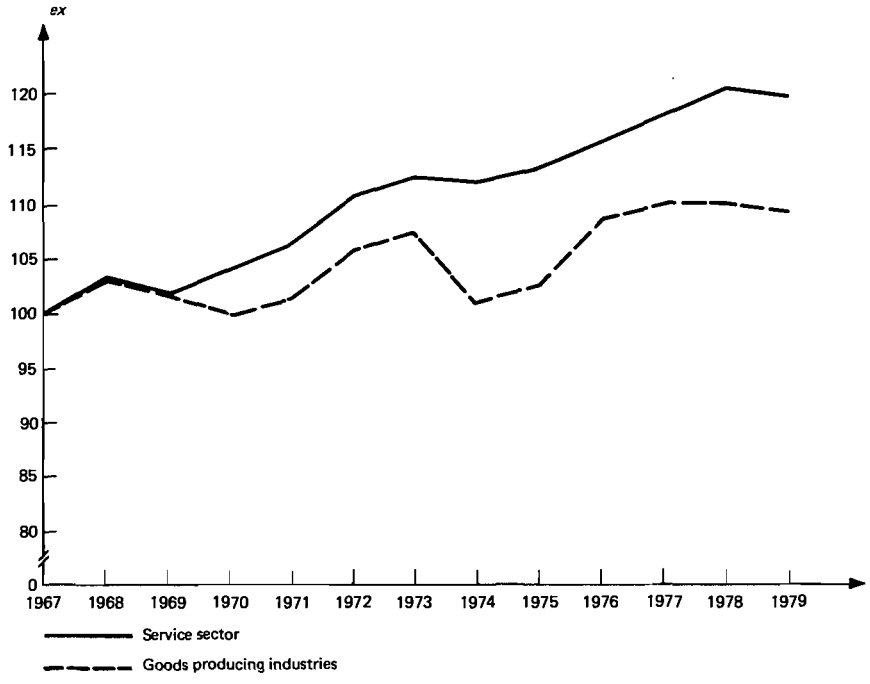
[208] The increase in women's participation in the formal economy tends to encourage this substitution process, particularly in developed countries. It also adds to the difficulty of measuring service output and employment through time, because the substitution of commercial for family services would tend to overstate the real growth of these activities in the economy.

[209] Note that this refers to the static comparative cost position of various countries, which need not remain the same through time. See further, section C below.

CHART XVI

Service and goods producing industries in the United States: total factor productivity, 1967-1979

Index numbers (1967 = 100)



Source. U.S. Dept. of Labour Statistics.

TABLE 37

Balance of payments on current account: global summary by groups of countries, 1979

(Billions of dollars)

Group	Balance on		
	Trade	*Services and private transfers*	*Current account excluding official transfers*
Developed market-economy countries	−36.1	26.3	9.8
Oil-exporting countries[a]	110.4	−42.0	68.4
Non-oil developing countries[a]	−42.6	−10.3	−52.9

Source: International Monetary Fund. *Annual Report, 1980* (Washington, D.C., 1980) table 7.

[a] As defined by IMF.

ducts and for factor services. The return on factor services is made up of investment income — i.e. interest, profits and dividend — as well as workers' remittances. Trade in factor services does not easily fit into the traditional framework of international trade because here — unlike the case of international trade in goods and in service products — one cannot speak of static comparative costs of production, only of differential rates of return (associated with a complex risk structure and socio-economic costs) on capital and labour, and a host of legal and political factors which influence the volume, direction and distribution of factor exports as well as factor earnings in the world economy.

434. Less than one-third of total invisible trade is made up of investment income,[210] most of which is earned by developed countries and (to a limited extent) the capital surplus oil-exporting countries. It should be noted that the opportunity cost of surplus capital is the rate of return on investment in the international market. The absorptive capacity of some oil-exporting countries' domestic economy is less than their financial capabilities, and this may be described as a case of capital abundance. In an analytical sense the position is not all that different for the non-oil capital exporters, because in their case too the international rate of return on investment must be greater than the domestic opportunity cost of capital.

435. Most developed market-economy countries both import and export capital, and some of them — especially the United States, but also Switzerland, the Federal Republic of Germany and others — earn considerable amounts of net investment income from abroad. Other such countries, such as Canada, Norway, etc., and many developing countries, led by Brazil and Mexico, have a net outflow of investment income (see annex table A.24). As a group, however, developed market-economy countries have a surplus, and developing countries have a deficit, on this account. It must be emphasized that investment income describes both direct and portfolio investment, and that direct foreign investment is made in the production of goods as well as services. Virtually

[210] See *World Invisible Trade*, Committee on Invisible Exports, London, 1980.

all world direct investment income is earned by the developed market-economy countries, and more than 70 per cent by the United States alone.

436. Developing countries, on the other hand, tend to export labour, and benefit from workers' and emigrants' remittances from abroad. The labour-importing countries are mainly the developed countries of Western Europe and of North America, in addition to many developing oil-exporting countries. Some developed countries (e.g. Greece, Portugal and Spain) are also large recipients of labour income from abroad. Developing countries received $9.7 billion in such payments in 1978.[211] In some cases, the proportion of workers' remittances to the country's export earnings is quite considerable. It seems that Yemen (which exports labour to Saudi Arabia) virtually depends on workers' remittances for its foreign exchange earnings, but their significance is probably better indicated by the case of countries like Egypt, Pakistan and Upper Volta, whose remittance inflows range from 60 to 90 per cent of their earnings from merchandise exports (see annex table A.25).

437. Trade in factor services involves many commercial, technological, economic and non-economic issues, and they have been extensively studied. Although no less important, trade in service products or non-factor services has received less attention. The rest of this chapter is devoted to this subject.

C. International trade in non-factor services

1. The analytical aspects

438. A number of factors which were briefly discussed in section A led to the gradual growth of the share of services in output and employment in the domestic economy. This was reinforced by the opportunity to specialize in the export of some services such as shipping, banking and insurance. Post-war developments have accelerated these tendencies, especially in the case of some developed market-economy countries. First, the growth and redistribution of income and leisure in the 1950s and 1960s led to a more than proportionate rise in demand for the new services; secondly, economic expansion involved the growth of complementary or intermediate services; thirdly, the rise and rapid development of new technology (or the electronics revolution) has tended to reduce the costs of production in many services of both types and has itself contributed to a rapid expansion of certain service flows (e.g., patents etc.,); fourthly, the growth and liberalization of trade in merchandise has increased trade in traditional complementary services, such as transport and insurance; fifthly, the import substitution strategy of development, the export-oriented industrialization in a number of developing countries, and the growing activities of transnational corporations have all led to a considerable expansion of international trade in engineering and construction services, other consultancy services, communications, the sale of patent rights, etc.; finally, the manifold increase in demand for various services from the oil-exporting countries in recent years has significantly reinforced the above tendencies.

439. Another question related to long-term tendencies towards specialization in services trade is that of the determinants of trade in non-factor services, and its growth. Clearly, the complementary or intermediate services like transport, insurance, banking etc. are trade-related. That means that (*a*) the growth or decline of world output and (*b*) greater liberalization or intervention in world trade could influence the volume of trade in such services either favourably or adversely. Experience shows that the two factors, i.e. the growth of the world economy and the attitude towards an increase or decrease of trade, are closely linked: good times encourage liberalism and bad times promote protectionism in trade.

440. On the other hand, the new services and, above all, international tourism are income- (and leisure-) related.[212] Expansion in world tourism in the past two decades has also been due to considerable reductions in passenger transport costs, which in turn have resulted from technical progress in the means of transport, economies of scale, and innovation of methods (e.g. the chartered passenger flight) for a fuller utilization of capacity. Thus, apart from the income effect, there has also been a substitution effect. A high price elasticity of demand for international services means, among other things, that the exchange rate of main exporting countries will have an influence on increasing their respective shares of the market. Empirical studies have confirmed the price elasticity and exchange rate sensitivity of international services flows, including travel, passenger transport, shipping and private services.[213]

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[211] G. Swamy, *International Migrant Workers' Remittances: Issues and Prospects*, World Bank Staff Working Paper, No. 481, August 1981, table 2.

[212] In his extensive econometric analysis, Jacques Artus showed that most international travel flows were "highly income-elastic". Using different assumptions, his estimated average income elasticities for Western European countries ranged from 2.30 to 1.16. Marian Bond's comprehensive econometric study of invisible trade also led to the conclusion of high income elasticities — an average of 1.45 for the 14 industrial countries in the sample — for international travel and passenger services. (See J. R. Artus, "An econometric analysis of international travel", *IMF Staff Papers*, vol. 19, No. 3, November 1972, especially table 2 and pp. 593-599 and 604, and M. E. Bond, "The world trade model: invisibles", *IMF Staff Papers*, vol. 26, No. 2, June 1979). In Sabolo's comprehensive study income elasticities of demand for the new services turn out to be generally high, but there are (sometimes significant) variations among different countries (see his *The Service Industries*, *op. cit.*, chap. 2).

[213] See H. P. Gray, "On measuring the price sensitivity of invisible international trade", *Bulletin of the Oxford Institute of Economics and Statistics*, vol. 33, No. 3, August 1971; A. S. Gerakis, "Effects of exchange-rate devaluations and revaluations on receipts from tourism", *IMF Staff Papers*, vol. 12, No. 3, November 1965; J. R. Artus, *op. cit.* On the question of the relationship between relative resource endowments and specialization in services trade, see A. Sapir and E. Lutz, *Trade in Services: Economic Determinants and Development-related Issues*, World Bank Staff Working Paper No. 480, August 1981, and Dick and Dicke and H. Katouzian in *International Economic Development and Resource Transfer*, *op. cit.*

2. The structural and empirical aspects

441. Table 38 shows the total world exports of non-factor services during the 1970s (excluding exports from the socialist countries). Shipping consists of freight and (merchandise) insurance.[214] Passenger services are made up of (mainly air) passenger transport fares and similar items. Other transportation comprises the remaining transport and transport-related services such as port facilities. Travel refers to expenditures in foreign countries for both tourist and business purposes; it excludes costs of passenger transport. Other official services are the general government as well as central bank transactions and aid services; they include expenditures by governments in other countries, for example, in maintaining diplomatic and other official legations. Other private services include many items, such as construction, engineering and other consultancy services involved in the transfer of technology, advertising, international communications (non-merchandise) insurance and reinsurance, films and media rentals, etc.

442. The classification and the basic data are from the International Monetary Fund's balance-of-payments statistics. Unfortunately, the data leave much to be desired. In section A above it was suggested that both the size and the distribution of international trade in (non-factor) services are likely to be distorted because of the accidental inclusion of some service expenditures (e.g. internal costs of transport) in the value of merchandise imports. There are, however, deliberate practices of this kind in the case of international trade in services, of which the following is an example:

> In the United States' balance-of-payments data some of the international receipts and payments of the service industries are subsumed in items included in the invisible account; some services — closely associated with trade in goods — are reported in such a way as to be included in the merchandise account.[215]

443. There are still other ways in which the use of balance-of-payments data may be misleading. A well-known example is the use of flags of convenience in shipping, whereby a country's carrier flies another country's flag and the resulting revenues are not recorded in its balance-of-payments accounts. Confusion may also arise from the operations of the affiliates and subsidiaries of one country's firms in another country. However, this does not necessarily make the studies based on the existing data of little practical value so long as the data limitations are kept firmly in mind and the statistical results are regarded as broader ordinal tendencies rather than precise cardinal facts.

444. The available data suggest that the share of non-factor services in world trade has hovered around one-fifth in the past two decades.[216] This apparent constancy is unlikely to be true, although it cannot be disproved in the present state of of knowledge. But given the remarks about the accounting procedures above, it is virtually certain that the existing data significantly understate the size of non-factor services and hence their share in international trade, and possibly the growth thereof. For reasons that will be explained later, these understatements are likely to be most significant in the case of shipping and other private services in particular. This in turn affects the apparent distribution of non-factor services trade between developed and developing countries.

445. Subject to the above qualifications, the data show that other private services, travel and shipping, respectively, have the highest shares in the distribution of total trade in services (excluding that of the socialist countries) and that (at current prices) other private services alone have significantly improved their share in the 1970s (see annex table A.20). In fact, the growth rates of all these three categories of traded services were significantly higher in 1970-1975 than in the following quinquennium, but there are important differences between these categories. In particular, travel, which had experienced the highest growth rate in real terms until 1973, experienced a sharp decline in growth thereafter. The rise in transport cost and the world recession naturally contributed to this drastic decline (see annex table A.21).

446. Developed market-economy countries account for about three-quarters of world imports of services and 84 per cent of exports, and hence the shares of developing countries are about one quarter for imports and 16 per cent for exports. The countries members of EEC have by far the largest share in services exports and imports, followed by those of EFTA and the United States. Other developed market-economy countries — e.g., Canada, Japan, Australia, and South Africa — are essentially deficit countries.[217] The balance of trade of the developed surplus groups of countries may be contrasted with that of developing countries, and especially the oil-exporting countries among them (see table 39).[218]

447. Among the developed market-economy countries which have a trade surplus in services, the United Kingdom, Spain, Italy, France and the United States seem to top the list (see annex table A.23). The surplus developing countries are headed by Egypt and the Republic of Korea, although Egypt's (and Panama's) surpluses are mainly due to

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[214] This item comes under "shipment" in the IMF classification. The more familiar term "shipping" will be used throughout this study.

[215] See United States, Department of Commerce, International Trade Administration, *Current Developments in U.S. International Service Industries* (Washington, D.C., March 1980), p. 4.

[216] See A. Sapir and E. Lutz, *Trade in Non-factor Services: Past Trends and Current Issues*, World Bank Staff Working Paper No. 410, August 1980; Committee on Invisible Exports, *World Invisible Trade, op cit.*

[217] Calculations by the UNCTAD secretariat.

[218] The lack of total balance in table 39 is due in part to the exclusion of some countries and to the inconsistencies in the basic data sources. At any rate, the United States surplus is likely to be much higher than indicated in annex table A.19. While much of the United States surplus of invisibles is due to overseas investments, its surplus of non-factor services must be much more than shown by the figure in table 39, because of the accounting and other data problems discussed above.

TABLE 38

World[a] exports of non-factor services by various categories, selected years
(Millions of dollars)

Category of service	At current prices			At constant 1980 prices[b]		
	1970	1975	1980	1970	1975	1980
Shipping	12 879	27 490	53 316	32 206	38 403	53 316
Passenger services	3 032	6 917	16 003	5 422	8 698	16 003
Other transportation	8 015	22 889	46 634	23 808	39 633	16 634
Travel	18 016	41 785	92 548	52 983	68 446	92 548
Other official services	7 420	14 227	27 866	21 495	23 711	27 866
Other private services	19 000	56 000	116 000	59 000	93 000	116 000
TOTAL	68 362	169 308	382 367	194 914	271 941	382 367

Source UNCTAD secretariat calculations, based on IMF statistics

[a] Excluding the socialist countries

[b] For a note on the choice of price deflators, see annex C 3

TABLE 39

Balance of trade in non-factor services by selected groups of countries, 1977-1980
(Millions of current dollars)

Group	1977	1978	1979	1980
European Economic Community	9 551	13 400	10 183	10 164
European Free Trade Association	2 632	3 920	4 623	4 892
United States	3 792	3 793	1 408	3 852
Developing countries	−20 270	−25 711	−36 701	−42 578
of which:				
Selected oil exporters[a]	−18 987	−23 909	−33 623	−38 803

Source UNCTAD secretariat calculations, based on IMF statistics

[a] Algeria, Indonesia, Kuwait, Libyan Arab Jamahiriya, Saudi Arabia and Venezuela

canal revenues. The remaining countries (except the Republic of Korea) are substantial earners from tourism.

448. The deficit developed market-economy countries are led by the Federal Republic of Germany, followed closely by Japan. On the other hand, of the developing countries in annex table A.23. Saudi Arabia's deficit alone is almost equal to the combined deficits of the Federal Republic of Germany and Japan, the only non-oil-exporting countries with large deficits being Brazil and Argentina. It was mentioned earlier that the developing oil-exporting countries in general, and the capital surplus among them in particular, tend to experience high growth rates in their output of domestic services. For similar reasons these countries also tend to import substantial amounts of services, especially in the form of shipping, other private services and tourism. The growth of oil revenues and the related economic strategies have led to substantial imports of non-factor services by these countries. In 1973, for example, Saudi Arabia's balance of trade in non-factor services was -$388 million and in 1975 -$3,032 million (see annex table A.22). Clearly, trade in non-factor services has played an important role in the recycling of oil revenues mainly to developed market-economy countries, but also to a limited extent to non-oil-exporting developing countries, including the technologically-experienced developing countries, such as the Republic of Korea, Brazil and India.

449. The distribution of exports and imports of various categories of services in developed market-economy countries is rather similar to the pattern of global distribution discussed above, in that other private services, travel and shipping loom large in the share both of their total exports and their total imports. This is not quite true of developing countries, where other transportation accounts for a higher share of exports than does shipping, and the share in imports of the latter item is the highest of all. Furthermore, the share of travel in the developed countries' exports of non-factor services is less than its share in imports, while international travel accounts for no less than one-third of the developing countries' total exports of non-factor services.[219]

450. Similar tendencies may be observed in the overall balance of trade of these two groups of countries. The developed market-economy countries have a large surplus in other private services, smaller surpluses in other official and passenger services, and deficits of various (and varying) magnitudes in "other transportation", travel and shipping (see table 40). These signs and magnitudes indicate the underlying tendencies in the structure of non-factor services in developed market-economy countries as a whole, but, in view of the data problems mentioned above, they should not be taken at face value. In particular, it is likely that the developed market-economy countries' surplus in other private services is larger than appears from the data, and more significantly, that their apparent deficit in shipping is due to the use of open registries, as well as the existing accounting conventions. By contrast, developing countries run their highest deficit in shipping and a relatively large deficit in other official services. They also run a sizeable deficit in other private services, the magnitude of which is likely to be understated by the existing data.

[219] Calculations by the UNCTAD secretariat.

451. The above discussion of the composition and distribution of trade in non-factor services points to a number of basic conclusions:

(*a*) The size of trade in non-factor services is likely to be significantly larger than appears from the data, and the true impact on the balance of payments of certain categories of transactions (especially shipping) cannot be derived from the reported figures with any accuracy;

(*b*) The developed market-economy countries have the highest share of both exports and imports; and there are both major surplus and major deficit countries among them. But they have an overall surplus in services trade, which is also likely to be appreciably larger than that shown by the data;

(*c*) The most important categories of trade in (non-factor) services are other private services, shipping and travel, in the first two of which developed market-economy countries as a whole dominate the market;

(*d*) Developing countries as a group are better placed in obtaining earnings from international travel and other transportation than from other categories of international services, but (i) this is only relative to their participation in the export of other services, and (ii) the phenomenon tends to be concentrated in a relatively few countries;

(*e*) The major deficit developed market-economy countries are the Federal Republic of Germany and Japan, and the major deficit developing countries are the oil-exporting countries, led by Saudi Arabia. In general, the deficits of the developed countries are due to tourism and port services, and of developing countries to shipping and private services. The oil-exporting countries run a deficit in practically every item of (non-factor) services trade.

TABLE 40

Distribution of the balance of trade in non-factor services by major items in developed market-economy countries and developing countries, 1978-1980

(*Millions of current dollars*)

	1978	*1979*	*1980*
A. *Developed market-economy countries*			
Shipping	−2 120	−4 064	−1 320
Passenger services	658	885	717
Other transportation	−3 532	−4 069	−5 486
Travel	−2 685	−3 649	−4 399
Other official services	4 803	2 452	2 635
Other private services	13 972	12 604	12 239
B. *Developing countries*			
Shipping	−16 499	−18 366	−20 429
Passenger services	23	133	526
Other transportation	26	822	−605
Travel	1 829	271	−401
Other official services	−8 179	−12 380	−17 069
Other private services	−2 911	−7 181	−4 635

Source: UNCTAD secretariat calculations, based on IMF statistics.

D. The relative significance of services in international trade

452. The general analytical issues concerning tendencies towards specialization in services trade were briefly discussed in the previous section. A simple empirical approach to the determination of the relative significance of services in the international trade of individual countries could throw some light on the longer-term structural tendencies in world trade. The simplest method would be to examine the (absolute or relative) significance of a country's exports of services. Another way would be to compare various countries' balance of trade in services (see table 40 and annex table A.23 and the related discussion above) or its ratio to their total trade. Here, it is proposed to use an index of relative significance, which takes into account a country's exports, as well as its imports of both goods and services.

453. Let a country's (non-factor) services exports be x per cent of its total (merchandise plus non-factor services) exports, and its non-factor services imports be m per cent of its total imports; then the relative significance or relative export orientation of non-factor services is defined by the ratio r = x/m. (Alternatively, r may be defined as the ratio of the non-factor services exports, as a percentage of their imports, to total exports as a percentage of total imports). It follows that (*a*) if r is greater (or less) than unity, the country's exports of services relative to its total exports are more (or less) significant, as compared to the country's imports of services relative to its total imports; (*b*) if r for country A is higher than for country B, then the relative export orientation of country A's trade in services is greater than country B's (note that country A's exports of services, both absolutely and as a percentage of total exports, may in fact be less than country B's); (*c*) a country with r higher than unity may not necessarily enjoy a services trade surplus, although this is more likely to be the case; (*d*) a country with a high x may still have a low r because of a high m.

454. This index of relative significance is a useful guide for the likely trend of specialization in a country's foreign trade, because it indicates the country's relative export orientation in its services trade, regardless of whether or not (and the extent to which) this is in surplus.[220] A merit of the index r is that, to some extent, it takes into account the interdependence of merchandise and services trade, although it cannot reflect this interdependence explicitly. This interdependence may take various forms: for example, a country's export of tourism affects the size of its import of goods, and this is reflected in the denominator of the index r.

455. Table 41 shows a ranking of developed market-economy countries and developing countries according to the magnitude of r. Briefly, (*a*) the first three countries among the former group have exceptionally high tourist exports, while the other countries with r above unity tend to rely more on exports

[220] However, this is not to deny the fact that from a short-term balance-of-payments viewpoint, the sign, as well as the size, of the balance itself would still be a most important consideration.

TABLE 41

The relative significance of non-factor services in the current account of selected countries and territories, 1980

Developed market-economy countries	*Size of r*[a]	*Developing countries*	*Size of r*[a]
Spain	2.44	Bahamas	3.84
Austria	1.70	Barbados	3.34
Italy	1.48	Tunisia	2.69
Switzerland	1.29	Cyprus	2.64
United Kingdom	1.23	Egypt	2.32
France	1.21	Malta	2.21
Belgium-Luxembourg	1.71	Philippines	1.47
Norway	1.12	Republic of Korea	1.46
Finland	1.06	India	1.11
United States	1.06	Chile	1.01
Netherlands	1.02	Syrian Arab Republic	0.89
Sweden	0.84	Argentina	0.73
Federal Republic of Germany	0.77	Brazil	0.56
Canada	0.74	Ecuador	0.48
Australia	0.68	Ivory Coast	0.45
Japan	0.67	Congo	0.27
South Africa	0.56	Nigeria	0.23
		Venezuela	0.13
		Algeria	0.08
		Saudi Arabia	0.06

Source: UNCTAD secretariat calculations, based on IMF statistics.

[a] *r* = Ratio of the percentage share of non-factor services (NFS) receipts in total external receipts to the percentage share of NFS payments in total external payments.

of shipping and other private services; (*b*) among the developing group, the Bahamas, Barbados, Tunisia, etc., specialize in the tourist trade, Egypt is mainly dependent on canal revenues, while the Republic of Korea and India export significant amounts of shipping and other private services. Comparing the two groups of countries, there is a greater variation in r among the developing than among the developed countries, and this is a reflection both of a concentration of very high r's among developing countries which have a natural advantage in service exports and very low r's among the oil-exporting developing countries.[221] Any cross-comparison of the two groups of countries must, in any case, proceed with caution because of the differences in the levels of their economic development and in the relative balance of their various sectors (both domestic and foreign).

456. These observations call for a more detailed — but brief — discussion of the main categories of traded services: travel, shipping and other private services.

457. Travel includes expenditure on both (international) tourist and (international) business trips and visits, other than those which last for less than a full day or more than a full year. It is thus partly an income- and leisure-related and partly a trade- and output-related category of expenditure. That is, international business travel is more in the nature of an intermediate or complementary service. Inevitably, most of the total exports and imports of travel services are carried out by and among developed countries themselves, but it is not possible to measure the relative importance of the income-related and the complementary components of trade in travel. In a qualitative sense, both components must be important in the total travel trade among the developed countries themselves; much of the export of travel from developing countries (except the oil-exporting ones) to developed countries must be income-related, i.e., for tourist purposes in the normal sense of this term; and much of the imports of the developing from the developed countries must be complementary in nature. Only in the case of the oil-exporting countries is there a considerable amount of tourism expenditure abroad and a substantial amount of foreign business visits at home. There is, however, no easy way of verifying or quantifying these conjectures.

458. Tourism has been one of the fastest growing international industries in the past two decades, and an extensive literature on its various aspects already exists. It covers diverse but important issues affecting the industry, including the use of tourism as a strategy for economic development; foreign investment; the net foreign currency earnings and the technological aspects of this strategy; the social and economic costs and benefits and the multiplier effects of tourism, and so on.[222] Whatever the argu-

[221] Because of the data problems mentioned above, the actual ranking order must be treated with caution. Moreover, the size of the individual indices, and hence their ranking order, clearly depends on the definition of the index r itself, as is true of any other index. However, care has been taken to exclude anomalous cases.

[222] See, for example, B. H. Archer, *Tourism in the Bahamas and Bermuda: Two Case Studies*, Bangor Occasional Papers in Economics No. 10, University of Wales Press, 1977; *Tourism Multipliers: The State of the Art*, Bangor Occasional Papers in Economics No. 11, University of Wales Press; J. M. Bryden, *Tourism and Development: A Case Study of the Commonwealth Caribbean*

ments for and against a strategy of development through tourism, the fact is that a number of developing countries are dependent on the tourist trade for a substantial amount of their foreign exchange earnings as well as their domestic employment and output.

459. In table 42 r has been redefined to show the relative export orientation of travel in non-factor services trade. It shows (*a*) that, on the average, r is higher for the developing than for the developed market-economy countries, (*b*) that the ranking order has predictably changed (for both the developed and the developing countries) as compared with table 41, and (*c*) that, for some countries r is above (below) unity in table 42 and below (above) unity in table 41: for example, compare the positions of South Africa, the United Kingdom, Ecuador and the Republic of Korea in the two tables.[223]

460. The export of other private services is a dominant part of developed market-economy countries' exports of non-factor services. Once again, much of this is a part of trade among those countries themselves, but a sizeable proportion flows to developing — and especially the oil-exporting — countries. The category is made up of a large number of different and unrelated services, ranging from the more traditional items such as banking and (non-merchandise) insurance and reinsurance to the more recent and modern items, for example, technology, engineering and construction, consultancy, information and data processing, communications and telecommunications, advertising, franchising, etc. Many of these fall into the category of complementary services, the demand for them being a function of technical change as well as of regional and international economic growth and development.

461. In table 43 r has been once again redefined, this time to show the relative export orientation of other private services in non-factor services trade. It can be seen (*a*) that on the average, and in contrast to the case of travel, r is higher for the developed than for the developing countries; (*b*) that, nevertheless, it is higher than unity for some developing countries; (*c*) that the ranking order has once again changed from the previous two tables, with the United States and the United Kingdom leading among the developed and the Republic of Korea and Brazil among the developing countries; (*d*) that in the case of some countries — e.g., the Federal Republic of Germany and Venezuela — r is now significantly higher than unity. In this case, however, the data problem assumes a further dimension, because it is likely that, for some developed market-economy countries, some of the receipts for other private services exports are shown in the accounts as investment income, while, for some developing countries, a part of workers' remittances are classified as labour income and included in the exports of other private services.[224] Thus, the other private services exports would tend to be understated for developed market-economy countries and overstated for developing countries.[225]

462. The export of technology from developed market-economy countries to developing countries involves important questions concerning the strategy of economic development and the choice of technique, the nature and implications of dependence on modern technology, and the role and position of transnational corporations.[226] An interesting, though limited, development in recent years has been the growth of exports of technology from some technologically more experienced developing countries to some other, notably oil-exporting, countries.[227] This is due to at least four factors: the growth of oil revenues and their impact on the development projects of oil countries, the rise in the technological capabilities of countries like the Republic of Korea, India,

(Cambridge University Press, 1973), M T Sinclair, "The Theory of the Keynesian Income Multiplier and the Application to Changes in Tourism Expenditure in the Spanish Province of Malaga" (Ph D thesis, University of Reading, 1981), UNCTAD, *Elements of Tourism Policy in Developing Countries* (TD/B/C 3/89/Rev 1), United Nations publication, Sales No E 73 II D 3, J F E Ohiorhenuan (for UNCTAD), "The Social and Economic Implications of Technology Transfer in Jamaican Tourism" (TD/B/C 6/49 and Corr 1), and Centre on Transnational Corporations, *Transnational Corporations in International Tourism* (ST/CTC/18), United Nations publication, Sales No E 82 II A 9 For a general round-up of the main issues affecting the international tourist industry, see Robert Cleverdon, *The Economic and Social Impact of International Tourism on Developing Countries* (London The Economist Intelligence Unit, 1979), EIU Special Report No 60

[223] It may be useful to note the surplus of tourist trade in 1980 (as estimated by the UNCTAD secretariat), as a percentage of the trade surplus in total (non-factor) services, for the following countries *Developing countries* Bahamas (75 0), Barbados (92 8), Jamaica (317 6), Kenya (100 0), Malta (94 9), Seychelles (96 3), Tunisia (91 0), *developed market-economy countries* Austria (105 0), Greece (56 0), Israel (96 2), Italy (117 8), Spain (95 8)

[224] According to the standard IMF classification, "labour income" is the return on labour services rendered abroad for less than a period of a year This is likely to refer mainly to consultancy and similar fees in the case of developed countries and workers' remittances in the case of developing countries

[225] It may be useful to note the surplus of other private services trade in 1980 (as estimated by the UNCTAD secretariat) as a percentage of the total surplus in non-factor services trade, for the following countries Belgium — Luxembourg (105 8), Denmark (71 9), France (81 1), Switzerland (171 1), United Kingdom (83 4), United States (170 8)

[226] See further, "Technological dependence its nature, consequences and policy implications", report by the UNCTAD secretariat (TD/190), reproduced in *Proceedings of the United Nations Conference on Trade and Development, Fourth Session*, vol III — *Basic Documents* (United Nations publication, Sales No E 76 II D 12), "Strengthening the technological capacity of developing countries Advisory Service on Transfer of Technology progress report by the UNCTAD secretariat" (TD/B/C 6/33), September 1978, *Major issues arising from the transfer of technology to developing countries Report by the UNCTAD secretariat* (TD/B/AC 11/10/Rev 2), United Nations publication, Sales No E 75 II D 2, *The role of the patent system in the transfer of technology to developing countries* (TD/B/AC 11/19/Rev 1), United Nations publication, Sales No E 75 II D 6, P Streeten and S Lall (for UNCTAD), "Main findings of a study of private foreign investment in selected developing countries" (TD/B/C 3/111 and Corr 1), S Lall, "Transnationals, Domestic Enterprises, and Industrial Structure in Host LDCs A Survey", *Oxford Economic Papers*, vol 30, No 2, July 1978

[227] For a general discussion of these developments, see S Lall, "Developing Countries as Exporters of Technology A Preliminary Analysis" in H Giersch (ed) *International Economic Development and Resource Transfer*, Institut fur Weltwirtschaft an der Universitat Kiel, 1978, pp 589-616

TABLE 42

The relative significance of "travel" in total non-factor services trade in selected countries and territories, 1980

Developed market-economy countries	*Size of r*[a]	*Developing countries*	*Size of r*[a]
Italy	3.44	Kenya	5.17
Portugal	2.89	Barbados	4.31
Spain	2.76	Malta	3.31
Greece	2.14	Tunisia	2.97
Israel	1.50	Philippines	2.72
Austria	1.37	Bahamas	2.18
South Africa	1.31	Singapore	2.13
Finland	1.17	Syrian Arab Republic	1.87
France	1.15	Cyprus	1.80
Switzerland	1.07	Jordan	1.57
Canada	1.02	Ecuador	1.50
Australia	1.01	Egypt	1.46
United States	0.89	Mexico	1.20
United Kingdom	0.81	Chile	1.14
Sweden	0.57	Congo	1.10
Belgium-Luxembourg	0.50	Brazil	1.02
Federal Republic of Germany	0.43	Ivory Coast	0.98
Norway	0.43	Republic of Korea	0.91
Netherlands	0.35	Venezuela	0.83
Japan	0.22		

Source UNCTAD secretariat calculations, based on IMF statistics

[a] r = Ratio of percentage share of "travel" credit in total NFS credit to percentage share of "travel" debit in total NFS debit

TABLE 43

The relative significance of other private services in total non-factor services trade in selected countries and territories, 1980

Developed market-economy countries	*Size of r*[a]	*Developing countries*	*Size of r*[a]
United States	2.41	Republic of Korea	1.68
United Kingdom	1.85	Brazil	1.54
Sweden	1.61	Chile	1.54
Denmark	1.53[b]	India	1.13[b]
Finland	1.23	Venezuela	1.11
Federal Republic of Germany	1.16	Argentina	1.08
Belgium-Luxembourg	1.13	Ecuador	1.03
France	1.12	Indonesia	0.80
Israel	1.12	Singapore	0.69
Netherlands	1.11	Congo	0.61
Switzerland	1.08	Kenya	0.56
Canada	0.92	Barbados	0.51
Australia	0.83	Bahamas	0.42
Japan	0.81		
Italy	0.81		
Portugal	0.74		
Norway	0.63		
Austria	0.54		

Source UNCTAD secretariat calculations, based on IMF statistics

[a] r = Ratio of percentage share of other private services (OPS) credit in total NFS credit to the percentage share of OPS debit in total NFS debit

[b] 1978

Brazil and Argentina, the greater share of these countries in the production and export of heavy industrial products and "middle technology" and political and cultural considerations. These are interesting developments which, in the longer run, might have an impact on various aspects of domestic economic developments as well as interregional and wider economic relations among developing countries.

463. Shipping (or "shipment") is made up of merchandise freight and insurance, although insurance accounts for a relatively small share of total shipping costs. In general, a country's exports and imports of freight services are related to the size of its merchandise trade, its location and natural endowments for seafaring, its historical role and position in international maritime transport, and its present shipping capacity.

464. However, the existence of transnational corporations, together with the traditional arrangements in this industry — in particular, the use of open-registry fleets and the liner conference system — restrict competition and make it especially difficult for developing countries to increase their participation in world shipping. This helps to explain why the developed market-economy countries still owned a disproportionately large share of the world fleet in 1979 (83.2 per cent) in relation to the cargo they generated (53.6 per cent), while the developing countries' share in the same year (9.4 per cent) was very small in relation to the seaborne trade they generated (40.3 per cent). The share of the socialist countries of Eastern Europe of the world fleet (7 per cent) is close to their share of cargo generated (6.1 per cent).[228] As regards the liner conference system, the Convention on a Code of Conduct for Liner Conferences is designed to rectify the existing situation.[229]

465. The use of open-registry fleets (or flags of convenience) enables their beneficial owners to employ cheaper labour from the developing countries and avoid their own domestic tax and labour laws. The beneficial ownership and management of over 90 per cent of the deadweight tonnage registered under open-registry flags is in the hands of developed countries, and these flags "continue to be dominated by three countries and one territory (the United States of America, Greece, Japan and Hong Kong), which together beneficially own 73.9 per cent and manage 67.2 per cent".[230]

466. A consequence of the open-registry system is that the earnings of open-registry fleets are not recorded in the national accounts. This results in an understatement of the total freight earnings of the developed market-economy countries. Another reason for the inadequacy of balance-of-payments data is that "the account excludes freight earnings derived by the national vessels from carrying the country's own imports and from chartering of ships to the country's own nationals as these transactions do not result in receipts of foreign currency".[231]

467. In 1970 (estimated) world total freight costs were over $22 billion, or 7.75 per cent of the total (c.i.f.) value of imports. In 1980 total freight costs had increased to over $124 billion, while their ratio to the total value of imports had declined to 6.66 per cent. For developed market-economy countries, however, the percentage of total freight costs to the value of imports had declined considerably (from 7.26 in 1970 to 5.52 in 1980), whereas in the case of developing countries it had increased from 10.04 in 1970 to 10.49 in 1980 (see table 44).[232]

468. There remains the question of the present and future trends of specialization in trade in services. The data problem apart, the apparent pattern of participation in services trade by different countries and country groups should be viewed with caution, especially as regards development strategies and foreign trade policies of developing countries. Statically, many developing countries rely on their service activities for a sizeable proportion of their domestic employment, and most of them face balance-of-payments problems and difficulties. Dynamically, the need for the development of a diversified national economy and the considerations arising from the infant-industry argument justify the expansion of some or all of the service industries when there is adequate reason to believe that they can become competitive over the longer run. In any case, the question of relative specialization in services trade needs to be examined within the broader perspectives and prospects of world trade and development.

E. Summary and conclusions

469. Services are extremely heterogeneous in their production and consumption characteristics, and this makes generalizations about their historical growth, income-elasticity of demand, productivity performance, etc., difficult.

470. For these as well as other reasons, it would be helpful to classify services into both final and intermediate services; and as old, new and complementary services.

471. The accurate measurement of output and employment in services poses a number of problems, but the share of this sector in national product and total labour force is both high and rising, as the new services grow fast, the complementary services grow more slowly, while the old services tend to decline. In general, these patterns and tendencies are more marked in the case of developed market-economy countries.

472. The evidence on the level and growth of labour productivity in services is conflicting, but there are likely to be variations both among different

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[228] See, UNCTAD "Review of Maritime Transport, 1981" (TD/B/C.4/251), April 1982 (to be issued as a United Nations publication — TD/B/C.4/251/Rev.1), para. 23; "The maritime transport of hydrocarbons" report by the UNCTAD secretariat (TD/222/Supp.3), reproduced in *Proceedings of the United Nations Conference on Trade and Development, Fifth Session*, vol. III — *Basic Documents* (United Nations publication, Sales No. E.79.II.D.16); and "Control by transnational corporations over dry bulk cargo movements: report by the UNCTAD secretariat" (TD/B/C.4/203). See further, UNCTAD, *Trade and Development Report 1981* (United Nations publication, Sales No. E.81.II.D.9), part III, chap. 5.

[229] For the text of the Convention see *United Nations Conference of Plenipotentiaries on a Code of Conduct for Liner Conferences*, vol. II — *Final Act (including the Convention and resolutions) and tonnage requirements* (TD/CODE/13/Add.1), United Nations publication, Sales No. E.75.II.D.12.

[230] "Beneficial ownership of open-registry fleets 1981", report by the UNCTAD secretariat (TD/B/C.4/231), November 1981, para. 6 and table 1.

[231] "Review of Maritime Transport, 1981", *op. cit.*, para. 48.

[232] See further UNCTAD, "Open-registry fleets" (TD/B/C.4/220), March 1981; "Conditions for registration of ships" (TD/B/AC.34/2 and Corr.1 and Add.1), January 1982; "The repercussions of phasing out open registries" (TD/B/C.4/AC.1/5), September 1979; and "Legal mechanisms for regulating the operations of open-registry fleets during the phasing-out period" (TD/B/C.4/AC.1/6), September 1979.

TABLE 44

Estimates of total freight costs in world trade by country group, in 1970, 1979 and 1980[a]

Year	*Country group*	*Estimate of freight costs on imports (US$ million)*	*Value of imports (c.i.f.) (US$ million)*	*Freight costs as percentage of value of imports*
1970	World total[a]	22 626	292 070	7.75
	Developed market-economy countries	17 483	240 847	7.26
	Developing countries	5 143	51 223	10.04
1979	World total[a]	99 727	1 518 623	6.57
	Developed market-economy countries	66 889	1 194 720	5.59
	Developing countries	32 838	323 903	10.14
1980	World total[a]	124 046	1 863 011	6.66
	Developed market-economy countries	79 458	1 437 820	5.52
	Developing countries	44 588	425 191	10.49

Source: "Review of Maritime Transport, 1981: Report by the UNCTAD secretariat" (TD/B/C.4/251), table 23.

[a] Excluding countries that are not membres of IMF.

services and between different countries. Total factor productivity may be a more appropriate concept to use, although, once again, generalizations must be made with considerable caution.

473. Some services are tradeable, whereas many are not. The size and the composition of the domestic service sector, a country's natural advantage in supplying services such as tourism, and its static comparative costs in the production of other services are likely to account for the present size and significance of its trade in service products. The share of a country's trade in some services is unrelated to the size and composition of the domestic service industries. In the case of shipping, this is influenced by the existence of traditional institutions and restrictive practices in the industry.

474. Trade in factor services is technically a function of relative factor endowments, and of differential rates of return on capital and labour in the world market, but its volume and distribution are strongly influenced by political and institutional factors. Most of the investment income accrues to developed (and some oil-exporting) countries, while much of the labour remittances are received by a group of developing countries.

475. Trade in the new services will tend to rise with the growth of world *per capita* income and leisure, and, in the case of complementary services, with the growth of world output and technical progress. Empirical studies have indicated high income-elasticities of demand for the new services and sensitivity to price and exchange rate variations for both the new and the complementary services.

476. The share of services has apparently hovered around one-fifth of total world trade, but the available data, based on the existing accounting conventions, tend to understate the true figure and to distort its distribution among various countries.

477. Developed market-economy countries dominate in services trade, but their share of exports is significantly higher than that of imports. They have an overall surplus on the services account, but there are major surplus, as well as major deficit, countries among both developed and developing countries. The oil-exporting countries run the largest deficit in services trade.

478. An index of the relative significance of services exports has been used for ranking within a group of developed market-economy and of developing countries. The application of this index to trade in the main categories of traded services indicates a higher relative significance of tourism for the developing countries, and of other private services for the developed countries. It also shows important variations in each case, within both groups of countries. Developed market-economy countries dominate the export of shipping services, but this is grossly understated by the data, because of the use of flags of convenience as well as the accounting conventions.

479. Despite the current pattern of participation in the services trade, developing countries may expand their domestic and international services for employment, balance-of-payments and other reasons. Tendencies towards specialization in services trade would be influenced by past as well as future developments.

Chapter 2

PAYMENTS SURPLUSES AND EXTERNAL ASSETS OF CAPITAL-SURPLUS DEVELOPING COUNTRIES

480. For a number of years a number of oil-exporting developing countries, in order to meet the requirements of the world economy, have maintained a level of exports of petroleum which provided them with earnings significantly in excess of their capacity to use the funds for domestic development. As a result, from 1973 up to 1981 the current accounts of these countries have shown sizable positive balances. The ways with which the capital-surplus countries have disposed of the financial assets that are the counterpart of these balances have had far-reaching consequences for the international economy, not least on the economies of the developing countries themselves, and for the international financial system. The pattern of deployment of the financial assets, the related changes in their real values and the rates of return they earn also raise issues of importance not only to the countries to which these assets belong, but also to developing countries in general as regards their development prospects, and the future of economic co-operation among them.

A. Origin and magnitude of the surpluses

481. Although a number of oil-exporting developing countries have experienced a surplus on current account over the years 1973-1981, a notable feature of these surpluses has been the fluctuations over the years in both their size and the number of countries continuing to enjoy a surplus. During 1974, in the aftermath of the initial price rise, all countries members of the Organization of the Petroleum Exporting Countries[233] reported surpluses (see annex table A.40). However, in the subsequent year, Algeria, Ecuador, Gabon and Indonesia moved into deficit, and by 1978 Iran, Venezuela and Nigeria were also in deficit. The rapid contraction in the OPEC surplus reached its maximum with the drop from $30.3 billion in 1977 to $2.1 billion in 1978. The second round of oil price increases, in 1979, caused the reversal of this trend, so that by 1980 the deficits of all OPEC members, with the exception of Ecuador and Iran, were eliminated.

482. To the extent that Saudi Arabia, Kuwait, the United Arab Emirates and Qatar maintain or increase their current share in OPEC oil production, they will continue to retain their position as the Organization's principal holders of foreign assets. By the end of 1980, 72 per cent of OPEC members' net cumulative surpluses was attributable to these four countries. If the Libyan Arab Jamahiriya is included, the share rises to 81 per cent. As for Iran, its share has been declining rapidly as a result of its recent difficulties in the international capital market and the financial cost imposed by the conflict with Iraq.[234] This conflict has also generated some uncertainty concerning the extent of Iraq's holdings of foreign assets, although its portfolio is estimated to have reached $33.2 billion at the end of 1980, representing 9.6 per cent of the total for OPEC members.

B. Financial assistance to other developing countries

483. A distinguishing feature of the deployment of the OPEC surplus over the past five years has been the increased flow of concessional assistance to other developing countries. Over the period 1974-1981 some $55 billion have been transferred in net disbursements to developing countries, which represents over 15 per cent of the total identified investible surplus (see table 45). More than 68 per cent of this assistance was in the form of grants, while the average grant element of concessional loans was over 70 per cent. Total concessional commitments by nine members of OPEC more than doubled in absolute terms between 1977 and 1981, from about $7.6 billion to $16 billion, commitments in the latter year representing a level of assistance approximately four times higher that of 1974. Total cumulative commitments during the period 1977-1981 amounted to over $50 billion (see annex table A.42).

484. An important feature of financial assistance by OPEC countries is that it is entirely untied. A recent characteristic has been the increased reliance on channelling assistance through national and multilateral institutions of the member countries as distinct from direct (government-to-government) transactions. Furthermore, an increasing number of development projects have been assisted within co-financing arrangements involving more than one institution. While most of the lending operations have been associated with financing specific projects, other forms of assistance have been provided by some of the institutions. The OPEC Fund for International Development provides balance-of-pay-

[233] Since reliable data on financial assets of developing countries are available only for OPEC members, the discussion in this chapter is essentially focused on this group of countries.

[234] Iran's net external assets are estimated to total less than $10 billion at the end of 1981. See, A. Stoga and P. Bennett, "How fast is OPEC's surplus disappearing?", *The Banker*, vol. 131, No. 67, September 1981.

TABLE 45

Deployment of the OPEC surplus, 1974-1981
(Billions of current dollars)

	1974	1975	1976	1977	1978	1979	1980	1981	1974-1981
Identified investible surplus	53.2	35.2	35.7	33.5	13.4	61.3	87.0	43.2	362.5
Concessional assistance to developing countries[a]	3.6	5.8	5.4	6.7	7.0	8.3	9.8	8.5	55.1

Sources Investible surplus *Bank of England Quarterly Bulletin* (various issues), concessional assistance UNCTAD secretariat estimates

[a] Net flow to developing countries, thus excluding flows between OPEC members such as the 1980 and 1981 loans to Iraq

ments support as well as project loans. The Islamic Development Bank, which finances development projects in its member countries, has extended its operations to include a significant volume of foreign trade financing. In 1980, for example, foreign trade financing constituted 73.5 per cent of its total lending. The Arab Fund for Economic and Social Development gives priority to inter-country and regional projects and combines project loans with significant activities in technical assistance.

485. The total value of commitments granted by the OPEC-based multilateral institutions over the period 1977-1980 amounted to about $2 billion representing over 56 per cent of their combined paid-in capital. This ratio of commitments to paid-in capital demonstrates the rapidity with which the OPEC institutions have been transferring resources to other developing countries.

486. The proportion of GNP devoted to official development assistance has differed from country to country. The average for all OPEC members has declined in the four years 1978-1981, but only in 1980 did both the mean and the median decline, the former from 3.15 per cent in 1979 to 2.99 per cent. None the less, the performance of OPEC donors as a group remained substantially higher than that of DAC member countries over the same period, by a ratio of about 10 : 1.

C. The deployment of investible assets

487. The acquisition of external assets by the capital-surplus developing countries is critically influenced by their perceptions of the opportunity costs of holding financial assets relative to potential gains from leaving oil in the ground. If political considerations are left out of account, the greater the perceived opportunity costs of holding financial assets relative to real assets (oil in the ground), the more reluctant these countries will be to maintain current production levels, let alone increase them. Since the production decision is influenced, among other things, by the investment decision, movements in the real value of financial assets of these countries could have far-reaching global consequences.

488. Estimates of the disposal of OPEC investible surpluses during 1974-1981 are shown in table 46. Partly because of the lack of appropriate financial structures and institutions in developing countries,

TABLE 46

Estimated deployment of OPEC countries' investible surplus, 1974-1981
(Billions of dollars)

	1974	1975	1976	1977	1978	1979	1980	1981
Identified investible surplus[a]	53.2	35.2	35.7	33.5	13.4	61.3	87.0	43.2
Short-term investments	36.6	9.5	10.2	10.2	3.2	43.2	42.5	4.9
of which in:								
United States[b]	9.4	1.1	0.7	−0.5	−0.2	8.3	0.2	−3.5
United Kingdom[b]	18.2	3.4	3.0	3.2	−1.6	16.2	16.1	7.9
of which in:								
Eurocurrency deposits	(13.8)	(4.1)	(5.6)	(3.1)	(−2.0)	(14.8)	(14.8)	(8.1)
in other industrial countries[c]	9.0	5.0	6.5	7.5	5.0	18.7	26.2	0.5
Long-term investments	17.3	29.0	25.5	23.3	10.2	18.1	44.5	38.3
of which in:								
United States	2.3	8.5	7.2	7.4	0.2	−1.5	14.3	15.3
United Kingdom	2.8	0.9	1.4	0.6	−0.2	1.0	2.0	0.1
Other industrial countries[c]	3.1	5.8	4.3	5.8	2.6	8.7	16.7	13.6
International institutions[d]	3.5	4.0	2.0	0.3	0.1	−0.4	4.9	1.8
Developing countries	4.9	6.5	6.4	7.0	6.2	9.6	6.6	5.3
Other	0.7	3.3	4.2	2.2	1.3	0.7	—	0.3

Source Bank of England Quarterly Bulletin, June 1982

[a] The difference between the current-account position and identified foreign investment reflects, apart from recording errors, borrowing (net of repayments) by OPEC countries, direct investment of inflows, trade credits and other unidentified capital flows

[b] Including bank deposits and money-market placements

[c] Bank deposits only

[d] World Bank and IMF

the bulk of these surpluses have been channelled to the financial markets of the developed countries. Initially a large share of these investments were concentrated in bank deposits (including Eurocurrency deposits) and short-term government securities. In the following years, there was a shift towards placing a higher proportion in longer-term government securities and in other private securities. The table indicates that the cumulative identified investible surplus by OPEC member countries during 1974-1981 totalled some $360 billion. Nearly one-fifth of this amount ($69.2 billion) has been invested in the United States. An estimated $75 billion, or 21 per cent, has been invested in the United Kingdom. Investments in other industrial countries amounted to about $139 billion, or 38 per cent of the total. The balance of the investible total has been channelled to developing countries, the World Bank and IMF in the form of long-term loans and investments.

489. A distinguishing feature of these investments is that they are restricted to a few financial markets sufficiently well developed to allow absorption of the surplus without difficulty. As noted above, the bulk of OPEC investments was initially concentrated in the financial markets of the United States and the United Kingdom. However, more recently, particularly by 1980, an increasing proportion of these surpluses has been placed in assets denominated in the currencies of other developed market-economy countries (France, the Federal Republic of Germany, Japan, the Netherlands, Belgium and Italy).

490. The shift in the composition seems to have been largely determined by security considerations and the need for diversifying the portfolio. The United States' freeze on Iranian assets appears to have had some impact on the deployment of OPEC investments between banks in the United States and banks in other countries during 1980. Indeed, the consequences of the freeze have shown that the task of asset protection is not limited to the mere preservation of the purchasing power of the assets but to their very security. New OPEC placements with United States banks, including their off-shore branches, declined by $1.3 billion in 1980, compared with a $6.5 billion increase in 1979, while new placements with non-United States banks during 1980 were $7.5 billion, or three times the preceding year's level.[235] This development, however, may be partly due to the relaxation of restrictions on capital flows in the Federal Republic of Germany, Japan and Switzerland.

491. National restrictions on non-resident ownership seem to have inhibited the scope of direct investments and real estate acquisitions. This type of investment accounted for under 12 per cent[236] of the cumulative identifiable OPEC countries' investments in the United States and the United Kingdom between 1974 and 1979. Public and private securities and bank deposits have consequently constituted the major share of OPEC investments. By the end of 1980, an estimated 50 per cent[237] of OPEC countries' assets were in bank deposits, while some 20 per cent were invested in private and public securities.

492. Direct investment of OPEC countries' surpluses in developing countries, which has tended to increase in recent years, continues to account for a small proportion of their total assets. However, non-concessional flows originating in OPEC countries' surpluses and used eventually to finance balance-of-payments deficits of other developing countries have been very large indeed. The bulk of these flows, however, was not channelled directly but through the intermediation of the capital markets and banking system of the industrial countries. It is estimated that Eurocurrency deposits originating in OPEC countries have increased from $54.5 billion in December 1977 to $108.5 billion in June 1981. Over the same period Eurocurrency loans to non-OPEC developing countries increased from $39.1 billion to $75.8 billion.[238]

493. International financial intermediation is no longer the monopoly of the industrial countries. The emerging capital market in the Middle East and the mounting number and activities of Arab banks and investment corporations helped greatly in improving the access of developing countries to financial markets. The contribution of OPEC countries' financial institutions to the channelling of non-concessional funds to developing countries is best exemplified by the role performed by Arab banks in the syndication of medium-term Eurocurrency credits. While it is not easy to reconcile the varying sources of data relating to information on this score, all the evidence points to a rapid increase in its importance.

494. Available information indicates that lending by Arab banks in operations in which they acted as lead-managers rose in value from $1.1 billion in 1976 to over $4.0 billion in the first seven months of 1981. A significant proportion of such lending was directed to developing countries; the proportion is estimated to have increased from 46.6 per cent in 1976 to 61.2 per cent in the first seven months of 1981 (see table 47).

495. The developing countries' emerging capital markets and new commercial banks and financial institutions have undoubtedly increased competitiveness in financial markets, reduced the cost of borrowing and made it more accessible to developing countries, which had hitherto lacked adequate access. Moreover, as regards access to borrowing, the new institutions are likely to apply criteria for evaluating risk different from those of industrial countries' institutions. It has been argued that "lenders from developing countries have a better appreciation of the credit-worthiness of borrowers from other developing countries than lenders in the international capital markets".[239]

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[235] Bank for International Settlements, *Fifty-first Annual Report* (Basle, 15 June 1981), p. 122.

[236] Estimated from *Bank of England Quarterly Bulletin*, June 1981.

[237] Stoga and Bennett, *op. cit.*

[238] See Bank for International Settlements, *International Banking Developments*, Second Quarter, 1981.

[239] "Capital markets in developing countries: a study on borrowing by developing countries in the emerging capital markets of the Middle East"; report prepared by Mr. H. S. Nashashibi at the request of the UNCTAD secretariat (TD/B/C.3/165/Supp.2), para. 53.

TABLE 47

Geographical distribution of Arab Bank lending

(*Percentage share*)

Region	*1976*	*1977*	*1978*	*1979*	*1980*	*1981* [a]
Developing countries	46.6	93.2	83.6	61.2	70.4	61.2
Countries members of OECD	43.8	5.2	10.8	29.9	24.0	32.0
Countries members of CMEA	9 6	1.6	5.6	8.9	5.6	6.8
Total ($ million)	1 139	1 048	2 905	1 997	3 847	4 001

Source *Amex Bank Review* (various issues)

[a] First seven months

496. On the supply side, the new institutions start with zero portfolios. Thus, problems of an adequate capital base, which are becoming rather common for most of the long-established private international banks, do not arise. It should be noted, however, that unlike the long-established banks of industrial countries, most of the Arab financial institutions do not have important corporate relations and/or a domestic operating base. Consequently, the conception of risk in managing international portfolios becomes more critical, and solutions related to reduction of the risks involved in international lending to developing countries will significantly affect the future prospects of these institutions. In this respect, serious consideration should be given to proposals regarding guarantee arrangements which might be available in support of international financial intermediation by developing country institutions.[240]

D. Movements in the real values of external assets

497. The acceleration of world inflation during the past decade has seriously affected the real value of external assets of oil-exporting developing countries. As already noted, the bulk of these assets has been invested in bank deposits as well as in public and private securities. The average annual rate of return on money market investments in the major convertible currencies in the period 1974-1979 was about 7.7 per cent. In contrast, the annual increase in the UNCTAD price index of OPEC countries' imports was about 10.3 per cent in the same period, implying an erosion of 2.4 per cent annually in the real value of these assets. Similarly, investments in United States taxable bonds must have suffered an average erosion of 3.4 per cent of real value in the 1974-1979 period, and equity investments also failed to appreciate as rapidly as import prices advanced, as indicated by the movement of the New York stock exchange common stock price composite, which achieved an average annual appreciation of 7.9 per cent from 1974 to 1980 (see table 48). However, without precise data on the composition of the portfolio of the assets concerned, these figures can only be regarded as indicative. Even so, and even granted that there may have been a net positive return, as seems likely during the past two years, which have been characterized by high interest rates in the Eurocurrency market, such returns were, in all likelihood, inferior to the appreciation of the value of oil conserved in the ground, since the real price of oil rose by 10.3 per cent annually in the period 1974-1980.

[240] See, for example, the suggestions by a group of Commonwealth experts in *The World Economic Crisis: A Commonwealth Perspective* (London: Commonwealth Secretariat, 1980), appendix I.

TABLE 48

Rates of return on investments by OPEC members and real oil price movements, 1974-1980

Year	*Average rate of return on money market investment (%) (1)*	*Market price of US taxable bonds ($) (2)*	*Change of (2) over previous year (%) (3)*	*NY Stock Exchange common stock price composite ($) (4)*	*Change of (4) over previous year (%) (5)*	*Real price of oil* [a] *($ per barrel) (6)*	*UNCTAD price index for OPEC imports (1975 = 100) (7)*
1974	10.17	57.45	.	43.84	.	10.45	93
1975	7.19	57.44	0.0	45.73	4.3	10.72	100
1976	6.49	58.96	2.6	54.46	19.1	11.51	100
1977	6.09	56.89	−3.5	53.69	−1.4	11.48	108
1978	6.68	51.26	−9.9	53.70	0.0	10.24	124
1979	9.65	47.99	−6.4	58.32	8.6	11.54	147
1980	—	—	—	68.10	16.8	17.27	166

Sources Column (1) IMF staff estimates, columns (2) and (4) *Survey of Current Business*, United States Department of Commerce, June 1981 Prices are derived from average yields on the basis of an assumed 3 per cent 20-year bond, column (6) UNCTAD, *Handbook of International Trade and Development Statistics, Supplement 1980*, column (7) UNCTAD secretariat estimates

[a] The deflator used is the price index for OPEC imports shown in column (7)

E. Implications of recent developments in the oil market

498. The recent slump in the oil market has been very severe for most oil producers. The drop in crude oil prices and the rapidly falling production will have far-reaching consequences for most OPEC members. The need to finance large development projects and the dependence on oil as their only major export has caused some of them severe cash flow problems, as sales decline.

499. The immediate problem facing most OPEC countries concerns the balance of payments. For the first time in ten years the combined current balance of payments of OPEC countries may show a deficit in 1982. Most countries will have to draw on their reserves to finance current expenditure. The United Arab Emirates is running — for the first time — a large budget deficit, which is estimated to amount to $615 million. Likewise, Kuwait is facing a budget deficit of $1.5 billion and the Government is contemplating the possibility of cutting its expenditures and limiting the number of expatriate workers in Kuwait. Similarly, the Libyan Arab Jamahiriya and Nigeria have resorted to salary cuts for government employees and to import control to ease their financial constraint.

500. For the first time, in 1982 Kuwait's earnings on external assets will exceed oil sales revenues because of the continuing fall in exports. In the case of Iraq and Iran, the adverse effect of the falling oil prices has been further aggravated by the colossal cost of two years of hostilities between them, estimated at around $2 billion a month for each country. In consequence, the two countries ceased to be net suppliers of capital.

501. Until the recent meeting of OPEC held in Vienna in July 1982 there was increasing evidence of determination by OPEC members to defend the $34 market price. In fact, spot prices have firmed up and appear to be catching up with official prices. This trend, however, may be reversed if disagreement on producers' quotas continues for too long. The recent intensification of hostilities between Iran and Iraq has made the oil market even more uncertain and oil prices harder to predict.

502. The impact of the recent developments affecting the financial position of OPEC countries will certainly have repercussions on the world economy. There are basically two counteracting effects. The fall in the oil price in real terms may — if coupled with other policies, such as a fall in interest rates — stimulate growth and employment. However, more than 70 per cent of OPEC trade is with OECD countries and the postponement or cancellation of major development projects and contracts will certainly reduce demand for goods and services provided by developed countries. Such a development can only have an adverse effect on the prospects of recovery from the current recession in the world economy.

503. Whether the latter or the former effect will dominate cannot be determined with any degree of certainty. What is certain, however, is that lower real oil prices and the current excess of supply will lead to the almost total disappearance of OPEC surpluses during 1982. The implication of these developments is that a reappraisal of policies regarding the deployment of external assets and the management of domestic expenditure will have to be undertaken by oil-exporting countries. If the high levels of consumption and development projects are to be maintained, earnings on investment and other assets abroad will have to be sufficient to fill the financing gap. In the immediate future most OECs can resort to their reserves to finance current expenditure. However, in the longer run only a new financial investment strategy, resulting in higher real rates of return on external assets, can supplement the loss of real earnings from oil sales.

Chapter 3

ARMAMENTS EXPENDITURE AND DISARMAMENT: SOME CONSEQUENCES FOR DEVELOPMENT

504. Any comprehensive discussion of the question of arms expenditure and disarmament would have to take full account of a broad and complex set of interrelated issues of a political and social character. The present chapter, however, is concerned with a much narrower range of issues: those relating to the principal economic consequences of arms expenditure and the economic opportunities that might be presented by a slackening in such expenditure.

505. Since 1950 the General Assembly has adopted a number of resolutions appealing for an overall reduction in military spending, for the gradual reduction of military budgets by nuclear-weapon States and by other militarily significant States, and for the employment of the released funds for the promotion of economic and social progress, particularly for the benefit of the developing countries.[241]

506. During the last decade a number of studies were also prepared within the United Nations enquiring in detail into the relationship between disarmament and development and showing large benefits which could be gained from the reduction of military expenditure and use of the resources released to accelerate economic and social progress in the world, especially in the developing countries.[242] The recently completed report of the Independent Commission on Disarmament and Security Issues (Palme Commission) has come to similar conclusions.[243]

507. Based mainly on the evidence and conclusions of these studies, this chapter seeks to set out the magnitude of arms expenditure and to explore some of its economic consequences, particularly those regarding trade and development.

A. The diversion of resources to military purposes

508. The arms race means a continuing and expanding diversion of scarce material and human resources, while the most pressing needs of many people remain unmet. Today, *per capita* income in the developing countries is by a factor of 12-13 smaller on average than in developed countries. Some 570 million people in developing countries are undernourished; 800 million adults are illiterate; 250 million children do not go to school; 1,500 million people have little or no access to medical services. Moreover there are but few prospects that the situation will improve significantly by the end of the century.[244]

509. Even in the economically most developed countries there are millions of people with a living standard below the official poverty level. Gigantic resources are needed to solve such global problems as food, energy, raw materials, protection of the environment, and so on.

510. World military expenditure, according to unofficial estimates, reached at the beginning of the 1980s around $510-630 billion in current prices[245] (see table 49). Thus, they exceeded by a factor of 1.3-1.6 the total external debt of non-oil exporting developing countries and are about 15 to 20 times greater than the amount of official development assistance to the developing countries in 1980.[246]

511. Even in the 1970s, when the United States disengaged from the Viet Nam war and East/West

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[241] See, for example, General Assembly resolution 35/142 of 12 December 1980 on the reduction of military budgets.

[242] See, for example: *Reduction of the military budgets of States permanent members of the Security Council by 10 per cent and utilization of part of the funds thus saved to provide assistance to developing countries* (A/9770/Rev.1), United Nations publication, Sales No. E.75.I.10; *Economic and social consequences of the arms race and of military expenditures* (A/32/88/Rev.1), United Nations publication, Sales No. E.78.IX.1; and the most recent and most comprehensive "Study on the relationship between disarmament and development", by a group of governmental experts (A/36/356, annex). (For the printed text see *The Relationship between Disarmament and Development*, United Nations Centre for Disarmament, Study Series No. 5 (United Nations publication, Sales No. E.82.IX.1).)

[243] *Common Security: A Programme for Disarmament, The Report of the Independent Commission on Disarmament and Security Issues* (London and Sydney: Pan Books, 1982).

[244] World Bank, *World Development Report 1980* (Washington, D.C., 1980) and *ibid.*, 1981 (New York: Oxford University Press, 1981).

[245] Citation of these and other figures on arms expenditure drawn from the sources indicated does not constitute endorsement. It should be noted that the statistical base for calculations of world military expenditure and other economic aspects of the arms race discussed below is not very reliable owing to the lack of officially published data on many subjects, differences in coverage and prices among countries, problems of conversion from national currencies and so on. Therefore, the figures cited here should be regarded only as broad orders of magnitude. (These matters are discussed, *inter alia*, by a group of experts on the reduction of military budgets whose report was before the second special session of the General Assembly devoted to disarmament (A/S-12/7, annex).)

[246] The aid figures are drawn from *Development Co-operation: 1981 Review:* (Paris: OECD, 1981), table A.1.

TABLE 49

The estimated diversion of world resources to military use at or around 1980

Type of resource	*Unit of measurement*	*Estimate*
Military expenditure	(*a*) Billions of dollars	510-630
	(*b*) Percentage of world GDP	4.9-5.3
Labour force	Millions	About 50
Military production	Billions of dollars	125-150
Use of land	Percentage of total surface	½-1
Expenditure on military science and technology	Percentage of total world expenditure on science and technology	20-25
Number of persons engaged in military research	(*a*) Thousands	400-500
	(*b*) Percentage of world scientists and research workers	20-25

Source "Study on the relationship between disarmament and development" (A/36/356, annex), *op cit*, pp 46, 52, 58, and 61, Secretariat estimates

détente gained ever-widening acceptance, world military expenditures continued to grow, and in real terms exceeded in 1980 the level of 1970 by approximately one-fifth, showing an average yearly rate of increase of about 1.8 per cent over the decade.

512. The beginning of the 1980s may represent a new phase in the growth of world military expenditure. The United States, for example, has recently decided to accelerate sharply its military spending. The Government has planned to spend on armaments, in 1981-1986, $1,600 billion, increasing United States military outlays during this period by 9 per cent per annum in constant prices.[247] The growth of total world military expenditure in 1981 is estimated to reach 3 per cent.

513. Although the developed market-economy countries accounted for the main part of world military expenditure, a specific feature of the last decade has been the growing involvement of the developing countries. Their share of total world military spending between 1972 and 1981 practically doubled (see table 50).

514. The burden of arms expenditure is not confined only to the diversion of financial resources (see table 49). Under normal conditions economic growth depends to a great extent on the possibility of using as fully as possible available labour resources. However, according to various estimates, as a result of military activities more than 50 million people have been withdrawn from participation in socially useful production. This includes about 25 million wearing military uniforms, the remainder being the work force engaged in producing weapons, military equipment and other goods and services needed by the military.

515. Of the world's regular armed forces of some 25 million, about 60 per cent are accounted for by the armed forces of the North Atlantic Treaty Organization (NATO), Warsaw Treaty countries, and China, the remainder consisting mainly of the armed forces of developing countries.

[247] Stockholm International Peace Research Institute (SIPRI), *Armaments or Disarmament?* (SIPRI Brochure 1981), Stockholm 1981, p. 6; *Business Week*, 8 February 1982.

TABLE 50

Estimates of world military expenditure
(*Billions of dollars at 1979 prices and exchange rates*)

	1972	*1975*	*1979*	*1980*	*1981*
World total					
A	339	366	404	412	426
B	416	448	493	503	519
Developed market-economy countries and socialist countries of Eastern Europe					
A	275	274	286	291	301
B	329	330	346	354	366
(Percentage of world total)					
A	(81)	(75)	(71)	(71)	(71)
B	(79)	(74)	(70)	(70)	(71)
Developing countries	33	56	68	71	81
(Percentage of world total)					
A	(10)	(15)	(17)	(17)	(19)
B	(8)	(13)	(14)	(14)	(16)

Sources *World Armaments and Disarmament SIPRI Yearbook 1982* (London, Taylor and Francis, 1982), p 140, *Narodnoe Khozyastvo SSR w 1980 g* (Moscow 1981), p 523, *Pravda*, 18 November 1981

A = Official data for the USSR, SIPRI estimates for all other countries

B = SIPRI estimates

516. There are no official data for world military production. Various estimates show, however, that it may be close to a quarter of world military expenditure, thus representing about $125-150 billion. Weapons and other military goods are often the products of the most technologically advanced and modern industries: manufacturing as a whole, general machine building, the aerospace industry, electronics, shipbuilding, the automobile industry and so on. This is likely to have a negative impact on the technological and general economic progress of producing countries, on the assumption that technological manpower is in limited supply and that these industries have an important role to play in the production of investment goods.

517. Thus, in the United States in 1977, military demand accounted for over half of the total sales of the aircraft industry and for 46 per cent of new construction in the shipbuilding industry.[248] In the same year the military share of the annual output of the aerospace industry was 46 per cent in France and 70 to 80 per cent in the Federal Republic of Germany. For the United Kingdom, the share in 1980 was about 50 per cent.[249]

518. Military production diverts a significant share of the labour force from civilian branches of the economy. According to some estimates, from 4 to 6 million people are engaged directly in the production of weapons and other commodities of military importance, and from 3 to 6 million people are working indirectly for military purposes.[250]

519. The growing military use of various raw materials — the majority of them non-renewable — is also one of the consequences of the arms race (see table 51). Available estimates show that, for the majority of the most important minerals, the share of military consumption was in the range of from 2 to 8 per cent, and in the case of copper it even exceeded 10 per cent.

TABLE 51

Estimated military consumption of selected minerals as a percentage of total consumption

Mineral	*Percentage*
Aluminium	6.3
Chromium	3.9
Copper	11.1
Fluorspar	6.0
Iron ore	5.1
Lead	8.1
Manganese	2.1
Mercury	4.5
Nickel	6.3
Petroleum	5.0-6.0
Platinum group	5.7
Silver	6.0
Tin	5.1
Tungsten	3.6
Uranium	..
Zinc	6.0

Source As for table 49 (table III 3 of the source)

TABLE 52

Research and development expenditure per unit of output in civil and military production in three developed market-economy countries, 1975

Country	*Military R & D expenditure as % of value of production of military equipment*	*R & D expenditure as % of value of manufacturing output*
Federal Republic of Germany	32	1.9
United Kingdom	34	1.3
United States	43	2.3

Source *World Armaments and Disarmament SIPRI Yearbook 1981* (London Taylor and Francis, 1981), p 7

520. A feature of military use of raw materials is also the so-called "strategic" stockpiling in some countries, notably the United States. This involves an accumulation of considerable stocks of some commodities considered to be "strategic" and their periodic disposal for various reasons.

521. The growing use of scarce land area for military purposes is another reflection of military activity. Though in relative terms military use of land is not very large — less than 1 per cent of the total — military requirements for land are rising steadily. In many cases military bases, airports and other installations are located near major industrial centres in the most populated areas, and in this way they compete for the use of economically valuable land. There is also a serious degradation, or even in some cases durable destruction of the productivity, of land as a result of military use.[251]

522. It is in the field of science and technology, however, that the diversion of resources to military ends is greatest. Recent estimates indicate that up to 20-25 per cent of the world's scientific and research activities are directed toward military purposes. The research intensity of the average military product is some 20 times higher than that of an average non-military manufactured product (see table 52).

523. The impact on science and technology in the non-military sector is further enhanced by the ability of the military sector to attract the best research staff. A direct consequence of intensive use of technological knowledge for military purposes is a retardation of technological advance in the civil sector.

[248] M. Kaldor, "The Role of Military Technology in Industrial Development". Report commissioned by the United Nations Group of Governmental Experts on the Relationship of Disarmament and Development (see A/36/356, annex, appendix I).

[249] A/36/356, annex, pp. 53-54.

[250] *Ibid.*, annex, pp. 49-51.

[251] See, for example, Stockholm International Peace Research Institute (SIPRI), *World Armaments and Disarmament. SIPRI Yearbook 1982* (London: Taylor and Francis, 1982), chap. 11.

TABLE 53

Military expenditure as a share of GDP in four developed market-economy countries, 1971 and 1981
(*Percentage*)

Country	*1971*	*1981*
United States	7.1[a]	5.8
United Kingdom	4.9	5.0
France	4.0	4.2
Germany, Fed. Rep. of	3.4	3.4

Source SIPRI Yearbook 1981, p 166, *Ibid 1982*, p 150
[a] In Viet Nam war conditions

B. The incidence of armaments expenditure and disarmament for particular groups of countries

1. Developed market-economy countries

524. As already mentioned in this report, the present world economic crisis has presented the developed market-economy countries with the difficult task of attempting to combat simultaneously the problems of continuing stagflation and of unemployment. These problems have been considerably aggravated by large military spending.

525. For a number of years high rates of inflation have been regarded in this group of countries as one of the most important and challenging problems for governmental economic policies. The causes of inflation are many and complex. Military expenditure, however, could become a contributing factor. Government outlays on military expenditure, which represent a significant share of GDP (see table 53), increase demand without simultaneously expanding the volume of commodities to be sold to those whose income is derived from this expenditure. Military expenditure thus requires a concomitant increase in national savings if aggregate demand is to be unaffected. When military spending goes up without a decrease in other budget expenditure or increase in budget revenue, the addition to aggregate demand is likely to intensify inflationary pressures.

526. Military expenditure may also have indirect effects on the pace of price inflation by increasing the proportion of expenditure directed to firms that are relatively sheltered from the rigours of price competition, and by slowing the pace of productivity growth in non-military production by directing research and development efforts, as mentioned earlier, to the military sphere.

527. It is sometimes argued that military expenditure has a positive effect on employment. However, this is only true if the possibilities of employment from the alternative use of resources are not taken into account. For example, the Palme Commission, citing a study by the United States Department of Labour, has found that:

> A detailed study of military employment in the United States estimated that a billion dollars spent on defence in 1975 would have created 76,000 jobs, compared to 80,000 for local expenditure on health, and 104,000 for local expenditure on education. Since then, the contrast is likely to have become even sharper because military purchases are concentrated in manufacturing industries while other public purchases come largely from construction and services, where productivity is growing only slowly; and because pay has fallen faster as a share of military spending than as a share of other public spending.[252]

528. The last point deserves to be underlined, since the share of military expenditure devoted to procurement is, in general, rising in developed market-economy countries. Moreover, it is argued in some developed market-economy countries that the rate of inflation is higher in the military procurement sector than in the economy as a whole.[253]

2. The socialist countries of Eastern Europe

529. The current five-year plans (1981-1985) of the socialist countries of Eastern Europe provide for an annual average growth of national income (net material product) by 3.5 per cent, industrial output by 4.5 per cent, and agricultural production by from 1.1 to 4.5 per cent (depending on the country concerned).[254] They also envisage a considerable increase in the efficiency of social production and in real *per capita* income. However, even if central planning in principle allows the socialist countries of Eastern Europe to allocate available resources so that military expenditures do not distort the desired pattern of resource allocation, military outlays (which in the USSR,[255] for example, were 3.8 per cent of national income in 1980, against 6.3 per cent in 1970) nevertheless had some influence on the rate and pattern of their economic development.

530. As in the developed market-economy countries, disarmament and rechannelling the human and material resources thus released to civil ends could contribute substantially to accelerating the long-term rates of economic growth of the socialist countries of Eastern Europe, and permit a faster rise in the standard of living of their populations and improvement of the quality of life. It would also facilitate considerably the solution of some of the main specific problems of economic development of the socialist countries of Eastern Europe in the 1980s.

531. One of the most important of these problems seems to be the necessity to speed up scientific and technological progress and to raise considerably the productivity of labour.

532. The scarcity of labour must also be mentioned. To a greater or lesser extent, it is being felt in all socialist countries of Eastern Europe for demographic reasons, and is becoming one of the main factors constraining further growth of production and services.

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[252] Report of the Independent Commission on Disarmament and Security Issues, *op. cit.*, p. 77.

[253] *SIPRI Yearbook 1982*, p. 110.

[254] *Economic Survey of Europe in 1981* (United Nations publication, Sales No. E.82.II.E.1), pp. 160, 174 and 215.

[255] See *Narodnoe Khoziastvo SSSR w 1980 g.* (Moscow, 1981), pp. 380 and 523.

533. The socialist countries of Eastern Europe are also making serious efforts to save energy and other material inputs, and this can be facilitated by a reduction of military consumption.

534. The overall political climate that would allow a reduction of military expenditure would also be conducive to the greater participation of socialist countries of Eastern Europe in the international division of labour and would facilitate the development and improvement of efficiency of their foreign trade and external economic relations as provided for in their current five-year plans.

3. The developing countries

535. The developing countries as a group achieved in the 1970s some not insignificant economic results. For example, the growth rates of their GDP and of agricultural and manufacturing output were higher than those of the developed market-economy countries.[256] However, they did not manage to reach the target rates set in the International Development Strategy for the Second United Nations Development Decade (see annex table A.26). The shortfall was most pronounced in such basic fields as exports, agricultural production and, to a lesser extent, manufacturing output.

536. The full mobilization of their own resources is an essential ingredient for an acceleration of economic development of developing countries and for satisfying at least the basic needs of their populations in food, shelter, primary education, health care, etc. There are large differences in this respect among developing countries and heavy strains in many sectors of their economies. In these circumstances, it is particularly unfortunate when their scarce resources must be diverted to military ends.

537. The military expenditure of developing countries reached (at 1979 prices and exchange rates) $81 billion in 1981 (see table 50) as compared with $33 billion in 1972. The growth rate of military spending of developing countries over the period 1972-1981 was about twice as high as that of their GDP, implying an increasing burden of military expenditure. The share of military expenditure in the GDP of developing countries in 1980 reached 4.6 per cent.[257] This increase in their military spending reflected partly their perceived necessity to defend and strengthen their national security, although some other factors were also at work.

538. By 1975, over half of the military expenditure in the developing world was accounted for by the Middle East and more than one-third by the developing countries of South-East Asia and the Far East. Military spending over the last decade has also increased considerably in Africa and Latin America, although in the latter case expenditure in 1981 was lower than in 1979 (see table 54).

TABLE 54

Estimated military expenditure of developing countries by main regions

(Billions of dollars at 1979 prices and exchange rates)

	1972	*1975*	*1979*	*1980*	*1981*
Total	*33*	*56*	*68*	*71*	*81*
Middle East[a]	12	31	35	36	44
Saudi Arabia	2.7	6.5	15.6	18.5	22.5
South Asia and the Far East[b]	17.0	19.2	24.9	25.8	27.0
Africa[c]	6.5	10.2	11.7	12.5	13.6
Latin America	5.8	6.6	9.6	8.6	8.6

Source: SIPRI Yearbook 1982, op. cit., appendix 5B.

[a] Including Egypt.

[b] Excluding Democratic People's Republic of Korea, Mongolia, Democratic Kampuchea, Lao People's Democratic Republic and Viet Nam.

[c] Excluding Egypt.

539. The share of military expenditure in central government spending in 1978 was equal to 24 per cent in the Middle East, 15 per cent in South Asia, 11 per cent in Latin America and 10 per cent in Africa, as compared, for example, with 14 per cent for European countries members of NATO.[258]

540. The military burden in some developing countries in terms of the share of GDP is much higher than that of the major military powers.

541. It is clear that such military spending cannot but seriously restrict the possibilities of developing countries to carry out investments necessary for the development of their national economies and in many cases delay the fulfilment of plans and programmes for economic development.

542. The military burden of developing countries was also aggravated by the imports of weapons and military equipment, which increased by over 12 per cent per year in real terms during the 1970s. The United Nations Group of Governmental Experts on the Relationship between Disarmement and Development assumed that, at the beginning of the 1980s, the value of imports of armaments, other military goods and services by developing countries was about $20 billion, with non-OPEC developing countries' share being about $12 billion.[259] It can be seen from chart XVII that exports of major weapons from developed to developing countries has been a particularly dynamic sector, even more dynamic than exports of manufactures in general.

543. Imports of military equipment in developing countries have also been stimulated by intense competition and sales pressure from developed countries. In some developed-market economy countries this reflects a desire to ensure better use of the capacities of their military industries, to recover at least a part of the growing military R and D costs and to find new export commodities to cover the deficit in trade with oil-exporting developing countries through arms exports. For example, the aerospace industry of France, the strongest western Euro-

[256] *Trade and Development Report 1981, op. cit.*, annex table B.5; *United Nations Statistical Yearbook, 1979/1980* (United Nations publication, Sales No. E/F.81.XVII.1), pp. 15, 28.

[257] *SIPRI Yearbook 1981*, p. 156; World Bank, *World Development Report 1981, op. cit.*, table 2.11.

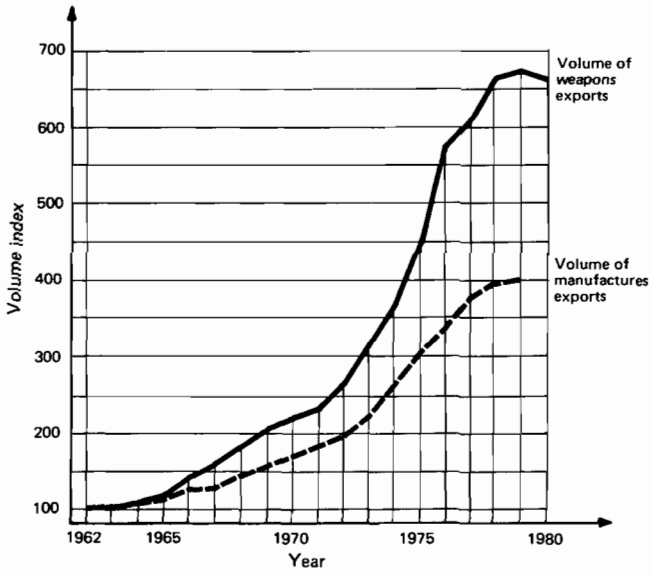
[258] "Study on the relationship between disarmament and development", *op. cit.*, annex table III.6, p. 71.

[259] *Ibid.*, para. 160.

CHART XVII

Exports of major weapons to developing countries and exports of manufactures to them, 1962-1980

Index numbers of volume (1962 = 100)



Source Exports of major weapons — *SIPRI Yearbook* (various issues). Export of manufactures — UNCTAD secretariat estimates

pean aerospace industry, exported 70 per cent of its production in 1978 and, of these exports, military sales accounted for 72 per cent.[260]

544. The purchase of armaments from abroad in the 1970s reduced the ability of non-oil exporting developing countries to import machinery and equipment and other commodities necessary for economic development. It therefore tightened the foreign exchange constraints (to the extent that they did not receive tied military aid) and contributed to the increase in the external debt of these countries.

545. In recent years there has also been a marked trend towards the establishment of arms industries in developing countries, representing a new type of diversion of scarce resources away from real economic development in the third world. By the end of the 1970s, about 25 developing countries produced equipment for their own armed forces, including some advanced types, and a number of these countries also began to export domestically-produced weapons to other developing countries (notably Brazil, but also Indonesia, Singapore, the Republic of Korea and some others). Among the reasons explaining this phenomenon is the desire to reduce dependence on foreign supplies and to save on imports of arms.

546. Economic growth in developing countries would be facilitated by the redeployment to constructive purposes of the efforts of the millions of people now in the armed forces. It is true that many developing countries have large labour reserves and the provision of employment is one of their important problems. Nevertheless, the military services draw away from the civilian economy able-bodied and often well-educated people: this represents in reality a kind of internal "brain drain" to the detriment of overall economic progress. The employment of such people who are well acquainted with the use of technically complicated equipment in the civilian sector would undoubtedly boost the growth of production in industry, agriculture and other branches of the economy.

547. A study prepared for the United Nations Group of Governmental Experts referred to above concluded that, in terms of opportunity cost, for the "average" developing country with a GNP *per capita* of around $350 (in 1970 prices) and a population of 8.5 million, the first $200 million of arms imported would (*a*) add approximately 20 infant deaths per 1,000 live births, (*b*) decrease average life expectancy by 3 to 4 years, and (*c*) result in 13 to 14 fewer literate adults out of every 100. These are substantial costs.[261]

548. The devotion of less of their own resources to military ends would thus represent a considerable contribution to the acceleration of the economic development of third-world countries and to the solution of their development problems.

549. The developing countries are also victims of a deterioration of the external environment resulting from the arms race, which diminishes the role of peaceful co-operation among States and hinders efforts towards establishing a new international economic order on a more equitable basis.

550. One specific aspect of economic relations of developing countries with both developed market-economy countries and the socialist countries of Eastern Europe needs to be stressed in connection with armaments expenditure. This is the possible transfer to developing countries of a part of the resources released by a reduction in armaments expenditure.

C. A disarmament scenario

551. An illustration of the possible contribution of disarmament to the development of the poorest regions of developing countries can be seen from the results of an econometric report prepared by W. Leontief and F. Duchin.[262] The report covers the period 1970-2000. A disarmament scenario used for the calculations assumed that world military expenditure in the year 2000 would be by a third lower compared with world military expenditure in the same

[260] H. Tuomi and R. Väyrynen, *Transnational corporations, armaments and development* (Finland: Tampere Peace Research Institute, 1980; Aldershot, Hants: Gower, 1982), p. 35.

[261] Bruce Russet and David Sylvan, "The Effects of Arms Transfers on Developing Countries" (see A/36/356, annex, appendix I).

[262] "Worldwide economic implications of a limitation on military spending" (report prepared for the United Nations Group of Governmental Experts on the Relationship between Disarmament and Development — see A/36/356, annex, appendix I). See also W. Leontief and F. Duchin, *Worldwide Implications of Hypothetical Changes in Military Spending* (prepared for the United States Arms Control and Armament Agency, Washington D.C., August 1980).

year under the assumption that the share of military outlays in GNP and their geographical distribution would remain constant during the period 1970-2000 (see table 55).

552. The model used in the report was highly aggregative and its detailed results were dependent upon a number of explicit and implicit assumptions, some of which could easily be questioned. However, the main conclusion of the report is unquestionable. It showed that even a relatively modest release of resources to peaceful purposes as a result of a reduction in arms expenditures could make a considerable contribution to the improvement of global prospects, including the speeding up of economic development of developing countries, especially of the least developed among them. This can be seen from the expected growth of *per capita* GDP, industrial employment and capital stock of the poorer developing countries (see table 56).

553. The real change could be even more favourable if the consequences of the accompanying overall improvement of the external environment are taken into account. In its turn, as already stressed in the present report, the acceleration of economic development of developing countries can serve as an "engine of growth" for the world economy as a whole.

TABLE 55

Alternative projections of the global military effort in 2000
(Billions of 1970 dollars)

	1970	2000		
		A	B	C
Military expenditure . .	214.6	646.0	1 286.7	420.9

Source Projections of W Leontief and F Duchin in their 'Worldwide economic implications of a limitation on military spending' *op cit*

Notes A = The share of military outlays in GNP and the geographical distribution of the military industry would be roughly the same throughout the period 1970-2000 (continuing arms race)

B = The military share doubles by the year 2000 as compared with 1970 (accelerated arms race)

C = The share of military outlays in GNP declines by 1990 to 75 per cent and by 2000 to 60 per cent of the 1970 level (disarmament)

554. It has already been emphasized that there are numerous factors in the current world economic picture which indicate that, if policies are not significantly changed, world economic growth will be substantially lower in the 1980s than in earlier decades, with particularly harmful consequences for developing countries. A relaxation of international tension and of the arms race and the re-direction of armaments expenditure to civilian use could play an important role in revitalizing the world economy and accelerating the development of developing countries.

TABLE 56

Projected economic gains in the poorer developing countries under a disarmament scenario by 2000

Region	Scenario		Percentage change
	Base[a]	Disarmament	
	A. Per capita *GDP (dollars)*		
Arid Africa	143.4	353.1	146.2
Low-income Asia . . .	136.1	190.4	39.8
Latin America:			
Resource poor . . .	418.2	488.1	16.7
Tropical Africa	244.9	381.5	55.8
	B. *Industrial employment (millions of man-years)*		
Arid Africa	20.6	48.4	134.9
Low-income Asia . . .	134.1	177.6	32.4
Latin America:			
Resource poor . . .	52.8	58.3	10.4
Tropical Africa	41.6	67.9	63.2
	C. *Capital stock (billions of dollars)*		
Arid Africa	57.3	135.8	136.9
Low-income Asia . . .	364.4	501.3	37.5
Latin America:			
Resource poor . . .	327.5	378.3	15.5
Tropical Africa	110.6	185.4	67.6

Source A/36/356, *op cit*, annex, table IV 2, and W Leontief and F Duchin, "Worldwide economic implications of a limitation on military spending", *op cit*

[a] Continuing arms race

ANNEXES

Annex A

SUPPLEMENTARY STATISTICS

Contents

List of tables

Explanatory notes

1. Unless otherwise indicated, the following classification of countries and territories has been used in this report. It has been adopted for the purposes of statistical convenience only and does not necessarily imply any judgement concerning the stage of development of a particular country or territory:

Developed market-economy countries: United States, Canada, EEC as at 31 December 1980 (Belgium, Denmark, Germany, Federal Republic of, Ireland, Italy, Luxembourg, Netherlands, United Kingdom), EFTA (Austria, Faeroe Islands, Finland, Iceland, Norway, Portugal, Sweden, Switzerland), Greece, Spain, Yugoslavia, Israel, Japan, Australia, New Zealand, South Africa.

Socialist countries of Eastern Europe: Albania, Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Poland, Romania, USSR.

Socialist countries of Asia: China, Democratic People's Republic of Korea, Mongolia, Viet Nam. In general, data for the People's Republic of China exclude Taiwan Province.

Developing countries and territories: All other countries and territories not specified above.

2. Generally speaking, analytical groupings (e.g. major oil exporters, fast-growing exporters of manufactures, countries classified by income levels and sub-groupings within geographical regions) are those used in the UNCTAD *Handbook of International Trade and Development Statistics: Supplement 1981*.[263] However, *South Asia* includes Afghanistan, Bangladesh, Burma, India, Nepal, Pakistan, and Sri Lanka and *East Asia* includes all other countries in *South and South-East Asia* as well as other countries in *Oceania.*

[263] United Nations publication, Sales No. E/F.82.II.D.11.

ANNEX TABLE A.1

World output[a] summary: annual rates of change in volumes, 1975-1983
(Percentage)

A. BY MAIN REGIONS

Region	Period			Forecast[c]	
	1975-1980	*1980*	*1981**	*1982*	*1983*
World	3.9	1.9	0.9	1.2	3.7
Developed market-economy countries	3.4	1.2	1.3	0.9	3.2
North America	3.5	−0.2	2.1	0.0	3.8
Canada	3.0	0.0	3.0	0.0	2.5
United States	3.6	−0.2	2.0	0.0	3.9
Western Europe	2.9	1.4	−0.2	1.3	2.5
France	3.3	1.2	0.5	2.7	2.7
Germany, Fed. Rep. of	3.6	1.8	−0.5	0.5	3.2
Italy	3.9	4.0	0.0	1.0	2.3
United Kingdom	1.6	−1.8	−2.0	1.3	1.6
Japan	5.1	4.2	2.9	2.0	4.0
Others	2.6	2.2	0.7	1.4	2.6
Developing countries	5.0	2.8	−0.8	1.6	5.5
Western hemisphere	5.1	5.7	0.1	2.7	5.2
North Africa	8.3	5.9	2.1	3.3	6.6
Other Africa	4.6	4.0	−1.4	5.1	5.1
Excluding Nigeria	1.9	2.2	1.9	3.3	4.0
West Asia	1.1	−6.0	−10.6	−6.8	5.4
South Asia	3.6	6.0	4.8	3.6	3.9
East Asia	8.1	5.9	6.7	5.6	6.7
China	4.9	5.0	3.0	4.0	5.9
Socialist countries of Eastern Europe	4.3	3.0	1.9	2.8	3.2
Memo item: Unemployment rates in OECD countries[b]	..	5.8	6.7	7.8	8.1
Canada	..	7.5	7.5	9.0	9.0
France	..	6.3	7.5	8.5	8.5
Germany, Fed. Rep. of	..	3.4	5.0	6.0	7.0
Italy	..	7.6	8.3	9.5	9.5
Japan	..	2.0	2.3	2.0	2.1
United Kingdom	..	7.0	10.5	11.0	11.0
United States	..	7.2	7.5	9.3	10.0

B. DEVELOPING COUNTRIES AND TERRITORIES BY MAJOR ANALYTICAL GROUPS

Group	Period			Forecast[c]	
	1975-1980	*1980*	*1981**	*1982*	*1983*
Major oil-exporters	3.7	−3.4	−6.4	−2.6	6.3
Oil sector	0.0	−11.4	−17.8	−16.3	4.9
Non-oil sector	8.1	5.3	3.8	7.2	7.1
Other oil exporters	6.5	6.7	6.7	5.0	6.4
Net oil-importing countries	5.3	4.9	1.5	3.8	4.7
Exporters of manufactures	6.6	6.7	−1.5	3.6	5.2
Least developed countries	3.9	2.8	2.8	3.2	3.4
Memo iten: MSA countries	4.2	5.0	4.5	3.7	4.0

Source UNCTAD secretariat calculations, based on official national and international sources

NOTE

Major oil-exporting developing countries are defined as those countries for which petroleum and petroleum products accounted for more than 50 per cent of their total exports in 1974 These countries are Algeria, Angola, Bahrain, Brunei, Congo, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libyan Arab Jamahiriya, Nigeria, Oman, Qatar, Saudi Arabia, Trinidad and Tobago, United Arab Emirates and Venezuela

Other oil exporters are Bolivia, Egypt, Malaysia, Mexico, Peru, Syrian Arab Republic, and Tunisia

Net oil-importing developing countries are all developing countries excluding the major oil-exporters and other oil exporters

Exporters of manufactures are developing countries with a *per capita* income greater than $1,000 in 1977, and whose exports of manufactures averaged more than 20 per cent of total exports during the period 1970-1977 and grew in volume at an average annual rate of more than 8 per cent during those years The countries included in this group are Argentina, Brazil, Republic of Korea, Singapore, Uruguay and Yugoslavia, and certain territories such as Hong Kong

[a] Gross domestic product/gross national product

[b] Total is weighted average of standardized unemployment rates in 15 OECD countries

[c] The forecasts have been prepared by the UNCTAD secretariat on the basis of recent forecasts of Project LINK and the econometric models covering 60 developing countries, and of consultations with experts For a brief description of Project LINK and the econometric models, see TD/B/C 3/134/Add 1, section II The UNCTAD secretariat contributes to the LINK econometric modelling system with regional models of developing countries and price forecasts for their principal export commodities

* Estimate

ANNEX TABLE A.2

World trade summary: annual rates of change in volumes and prices, 1970-1983
(*Percentage*)

A. DEVELOPED MARKET-ECONOMY COUNTRIES BY MAIN REGIONS

Country, region or group	Period				Forecast	
	1970-1980	1975-1980	1980	1981*	1982	1983
World exports						
Volume	5.8	6.0	2.3	−1.0	0.5	4.5
Unit value	14.1	11.5	19.4	−1.2	−0.5	4.8
Developed market-economy countries						
Export volume	6.4	6.5	3.8	1.5	1.7	4.8
Terms of trade	−2.1	−2.1	−8.2	0.0	3.5	2.0
Purchasing power of exports	4.2	4.4	−3.6	1.5	5.2	6.8
Import volume	4.9	5.7	−0.8	−2.3	2.4	4.9
North America						
Export volume	6.3	6.7	5.3	−2.2	−5.6	−1.0
Terms of trade	−2.7	−3.2	−8.6	3.5	4.0	1.2
Purchasing power of exports	3.4	3.2	−4.2	1.3	−1.6	0.2
Import volume	5.0	5.7	−7.0	2.3	−2.6	4.9
Western Europe						
Export volume	5.9	6.2	2.3	0.7	5.6	6.3
Terms of trade	−1.1	−1.0	−5.0	−2.1	0.4	0.7
Purchasing power of exports	4.7	5.1	−2.4	−1.4	6.0	7.0
Import volume	4.9	6.0	0.8	−4.5	3.8	5.8
Japan						
Export volume	9.5	9.3	18.2	10.8	2.0	7.0
Terms of trade	−5.7	−5.2	−20.2	2.4	2.9	1.6
Purchasing power of exports	3.3	3.6	−5.7	13.4	5.0	8.7
Import volume	4.3	4.5	−4.8	−2.3	5.0	1.0
Others						
Export volume	4.8	6.0	9.8	−4.5	6.4	3.4
Terms of trade	−2.1	−2.5	−6.4	0.0	−1.2	1.2
Purchasing power of exports	2.6	3.4	3.2	−4.5	5.2	4.7
Import volume	2.0	2.7	2.7	6.8	3.0	6.0

B. DEVELOPING COUNTRIES AND TERRITORIES BY MAIN REGIONS

Region	Period				Forecast	
	1970-1980	1975-1980	1980	1981*	1982	1983
Developing countries						
Export volume	1.7	3.8	−5.4	−0.6	−5.1	4.0
Terms of trade	7.3	3.3	14.1	−3.7	−4.6	−0.5
Purchasing power of exports	9.2	7.3	8.0	−4.3	−9.4	3.5
Import volume	6.8	5.2	4.2	3.7	3.5	3.6
Western hemisphere						
Export volume	2.3	7.0	3.5	6.0	0.2	4.1
Terms of trade	1.1	−1.8	0.5	−0.4	−5.2	0.0
Purchasing power of exports	3.4	5.1	4.0	5.7	−5.1	4.1
Import volume	3.9	2.5	4.0	1.5	0.3	1.3
North Africa						
Export volume	−3.3	2.4	−10.8	−20.6	−9.7	5.3
Terms of trade	13.2	7.5	31.0	7.0	−7.6	−1.1
Purchasing power of exports	9.4	10.1	16.8	−15.0	−16.6	4.1
Import volume	9.5	1.3	12.8	14.7	6.7	4.0
Other Africa						
Export volume	1.3	1.5	−1.3	−9.2	4.4	4.9
Terms of trade	4.0	4.4	13.2	−7.7	−4.4	0.0
Purchasing power of exports	5.4	6.0	10.0	−16.2	−0.2	4.9
Import volume	4.3	2.7	0.9	1.7	1.4	3.3

ANNEX TABLE A.2 (*continued*)

B. DEVELOPING COUNTRIES AND TERRITORIES BY MAIN REGIONS

Region	Period				Forecast	
	1970-1980	1975-1980	1980	1981*	1982	1983
West Asia						
Export volume	−0.3	−6.1	−14.6	−11.2	−14.8	2.4
Terms of trade	20.6	10.3	43.3	8.4	−4.3	−0.5
Purchasing power of exports	20.2	9.0	22.3	−3.8	−18.5	1.9
Import volume	16.8	10.7	11.4	10.4	7.8	5.4
South Asia						
Export volume	0.1	2.9	−11.3	−3.3	5.1	2.0
Terms of trade	−4.7	−5.5	−17.2	−7.4	−1.9	0.2
Purchasing power of exports	−3.8	−2.8	−26.6	−10.5	3.2	2.2
Import volume	0.8	1.4	0.3	−9.7	0.0	3.2
East Asia						
Export volume	9.3	12.5	1.9	7.8	6.5	5.7
Terms of trade	1.1	−1.1	−1.7	−6.0	−5.0	−0.6
Purchasing power of exports	10.5	11.2	0.1	1.3	1.2	5.1
Import volume	7.7	8.1	−0.5	6.2	3.9	5.2

C. DEVELOPING COUNTRIES AND TERRITORIES BY MAJOR ANALYTICAL GROUPS[a]

Group	Period				Forecast	
	1970-1980	1975-1980	1980	1981*	1982	1983
Major oil exporters						
Export volume	−0.1	−0.5	−13.7	−16.5	−14.7	3.9
Terms of trade	18.1	10.4	42.7	12.5	−5.5	−0.7
Purchasing power of exports	17.0	9.9	23.1	−6.0	−19.4	3.2
Import volume	14.0	8.3	12.6	12.0	5.7	4.8
Other oil exporters						
Export volume	7.5	14.9	14.5	1.1	9.6	3.6
Terms of trade	−0.2	−0.3	0.6	2.2	−5.5	0.0
Purchasing power of exports	7.3	14.5	15.3	5.1	3.5	3.7
Import volume	7.5	4.8	16.7	15.1	−1.7	3.2
Net oil-importing countries						
Export volume	7.0	9.4	6.6	7.8	7.5	5.6
Terms of trade	−3.5	−5.1	−13.5	−5.8	−4.6	−0.4
Purchasing power of exports	2.8	3.8	−7.8	1.5	2.6	5.2
Import volume	3.7	3.0	−4.6	−1.2	5.0	4.0
Exporters of manufactures						
Export volume	11.5	14.1	12.7	15.6	7.1	7.2
Terms of trade	−4.7	−6.0	−18.4	−5.1	−2.2	−0.6
Purchasing power of exports	6.3	7.3	−8.0	9.7	4.8	6.5
Import volume	5.7	4.7	−7.1	2.1	6.2	5.0
MSA countries						
Export volume	0.4	1.9	−3.2	−1.3	−2.4	2.7
Terms of trade	−2.9	−3.2	−13.0	−7.9	5.1	−0.7
Purchasing power of exports	−2.6	−1.3	−15.8	−9.1	2.6	2.0
Import volume	1.1	−1.5	−3.8	−3.4	2.4	3.1
Least developed countries						
Export volume	−0.8	3.4	2.7	4.4	6.7	3.8
Terms of trade	−1.7	−3.0	−7.8	−11.7	−3.7	2.8
Purchasing power of exports	−2.5	2.1	−5.3	−7.8	2.7	6.7
Import volume	2.4	4.0	2.3	−2.3	2.7	2.1

Source UNCTAD secretariat calculations, based on official national and international sources

Note The terms-of-trade calculations for groups of developing countries and territories have been made by the UNCTAD secretariat using a methodology briefly described in the UNCTAD *Handbook of International Trade and Development Statistics Supplement 1981* (United Nations publication, Sales No E/F 82 II D 11), p 456

[a] For definition of country groupings and description of forecasting techniques see notes to annex table A 1

* Estimate

ANNEX TABLE A.3

Annual rates of change of consumer prices, by main regions, 1970-1983
(*Percentage*)

Region	1970-1980	1975-1980	1980	1981*	Forecast 1982	Forecast 1983
Developed market-economy countries[a]	9.6	10.6	11.4	9.6	8.1	7.3
North America	7.8	8.9	10.2	8.6	6.4	6.0
Western Europe	11.3	13.0	13.6	11.9	10.5	9.1
Japan	9.0	6.5	7.1	4.8	4.5	4.0
Others	10.7	11.2	10.7	9.7	11.6	10.7
Developing countries and territories[b]	19.0	24.0	32.0	29.0	26.0	22.0
Western hemisphere	21.0	36.0	56.0	58.0	54.0	45.0
North Africa	3.0	8.0	14.0	10.0	10.0	9.0
Other Africa	5.0	13.0	16.0	20.0	22.0	17.0
West Asia	3.0	11.0	12.0	14.0	10.0	9.0
South Asia	6.0	7.0	12.0	13.0	10.0	8.0
East Asia	6.0	10.0	17.0	16.0	10.0	8.0

Source: UNCTAD secretariat calculations, based on official national and international sources.
[a] GDP private consumption deflator.
[b] Index of consumer prices.
* Estimate.

ANNEX TABLE A.4

Balance of payments summary of developing countries and territories, 1980-1983
(*In billions of current dollars*)

A. BY MAIN REGIONS

Region	Exports (f.o.b.)	Imports (f.o.b.)	Trade balance	Balance on non-factor services and private transfers	Investment income (net)	Current account balance	Total capital flows (net)	Changes in reserves (minus equals increase)
Total								
1980	554.2	434.4	119.7	−52.3	−31.5	35.9	17.6	−53.5
1981	546.2	463.8	82.4	−58.8	−38.6	−15.1	5.8	9.3
1982	511.7	488.6	23.1	−60.6	−40.0	−77.4	57.0	20.4
1983	581.7	547.6	34.0	−69.2	−46.6	−81.8	87.4	−5.6
Western hemisphere								
1980	111.2	114.0	−2.8	−8.1	−18.7	−29.6	27.3	2.3
1981	118.7	116.9	1.7	−9.1	−27.2	−34.6	31.9	2.7
1982	118.6	120.8	−2.1	−6.8	−32.9	−41.9	39.3	2.6
1983	134.3	131.0	3.2	−6.7	−35.5	−39.0	39.0	0.0
North Africa								
1980	45.2	31.8	13.5	−1.1	−2.6	9.9	−1.1	−8.8
1981	37.8	35.9	1.9	−2.4	−2.4	−2.9	−1.9	4.8
1982	29.8	39.5	−9.7	−2.5	−2.3	−14.5	8.3	6.2
1983	34.4	44.3	-9.8	−2.9	−3.3	−16.0	15.1	0.9
Other Africa								
1980	46.2	41.9	4.3	−10.1	−3.2	−8.9	12.8	−3.9
1981	38.8	42.7	−3.8	−11.1	−4.3	−19.2	11.8	7.4
1982	40.4	44.2	−3.7	−11.6	−5.0	−20.3	19.0	1.3
1983	46.5	49.3	−2.7	−12.7	−6.6	−22.0	22.6	−0.6
West Asia								
1980	200.2	81.9	118.3	−42.9	5.8	81.2	−46.2	−35.0
1981	190.0	88.9	101.1	−45.9	11.8	67.0	−57.7	−9.3
1982	154.2	97.3	56.9	−50.8	19.2	25.2	−34.4	9.2
1983	172.3	110.8	61.5	−58.9	20.2	22.8	−18.8	−4.0
South Asia								
1980	14.0	23.2	−9.2	3.9	−0.7	−6.1	6.7	0.6
1981	13.4	22.4	−9.0	4.3	−1.1	−5.7	3.2	2.5
1982	14.2	22.5	−8.3	4.9	−1.2	−4.6	3.4	1.2
1983	16.0	25.2	−9.2	5.2	−1.3	−5.4	5.1	0.3
East Asia								
1980	127.8	127.0	0.7	2.0	−11.2	−8.5	17.1	−8.6
1981	136.0	141.7	−5.8	1.2	−14.3	−19.0	17.8	1.2
1982	142.2	150.4	−8.2	1.9	−15.7	−22.0	21.4	0.6
1983	164.4	171.4	−7.1	2.1	−18.1	−23.0	24.4	1.4

ANNEX TABLE A.4 (*continued*)

B. BY MAJOR ANALYTICAL GROUPS[a]

Region	*Exports (f o b)*	*Imports (f o b)*	*Trade balance*	*Balance on non-factor services and private transfers*	*Investment income (net)*	*Current account balance*	*Total capital flows (net)*	*Changes in reserves (minus equals increase)*
Major oil exporters								
1980	311.5	135.5	175.9	−62.6	−0.9	112.4	−53.5	−58.9
1981	289.8	150.2	139.6	−68.6	5.8	76.8	−78.2	1.4
1982	238.2	163.8	74.4	−75.5	14.0	12.9	−32.3	19.3
1983	270.1	185.6	84.5	−86.4	12.8	12.8	−7.9	−3.0
Other oil exporters								
1980	41.8	47.1	−5.3	2.0	−8.4	−11.7	14.4	−2.7
1981	43.5	53.7	−10.2	0.2	−11.8	−21.8	22.8	1.0
1982	45.3	53.7	−8.4	3.9	−15.8	−20.3	21.0	−0.7
1983	51.6	59.4	−7.8	4.3	−16.8	−20.3	21.2	−0.9
Net oil-importing countries								
1980	200.9	251.8	−50.9	8.7	−22.2	−64.8	56.7	8.1
1981	212.9	259.9	−47.1	9.7	−32.7	−70.1	61.5	8.6
1982	228.1	271.0	−42.9	11.0	−38.1	−70.0	68.3	1.7
1983	260.0	302.7	−42.7	12.8	−42.6	−72.4	74.1	−1.6
Exporters of manufactures								
1980	113.2	132.5	−19.3	5.9	−14.9	−28.3	23.9	4.2
1981	130.2	141.8	−11.6	7.1	−22.1	−26.6	26.3	0.3
1982	140.9	148.2	−3.2	7.2	−24.8	−24.9	27.3	−2.4
1983	161.8	167.9	−6.1	8.0	−26.5	−24.5	27.1	−2.6
MSA countries								
1980	34.8	53.7	−18.9	4.5	−2.3	−16.7	14.8	1.9
1981	31.7	53.1	−21.4	4.6	−3.4	−20.2	17.2	3.0
1982	33.6	55.0	−21.5	4.8	−4.1	−20.7	20.0	0.7
1983	37.7	61.4	−23.7	5.1	−5.0	−23.6	24.2	−0.6
Least developed countries								
1980	6.7	13.6	−6.9	0.5	−0.1	−6.5	5.5	1.0
1981	6.2	13.3	−7.1	0.8	−0.6	−6.9	7.4	−0.5
1982	6.7	14.0	−7.3	1.0	−0.9	−7.2	7.5	−0.3
1983	7.9	15.5	−7.6	1.2	−1.1	−7.5	7.9	−0.4

Source UNCTAD secretariat calculations, based on IMF balance-of-payments tapes and official national and international sources 1981 figures are preliminary, 1982-1983 figures are forecasts

[a] For definition of country groupings see notes to annex table A 1

ANNEX TABLE A.5

Socialist countries of Eastern Europe: selected economic indicators, 1971-1985
(*Percentage*)

	Average annual rate[a]				*Change over preceding year*				
		1976-1980					*1981*		*1982*
	1971-1975 Actual	*Planned*	*Actual*	*1981-1985 Planned*	*1979*	*1980*	*Planned*	*Actual*	*Planned*
Growth of national income[b]									
Albania	6.6	6.6-7.0	..	..	..	..	12.7	..	..
Bulgaria	7.8	7.7	6.1	3.7	6.6	5.7	5.1	4.5[c]	3.6
Czechoslovakia	5.7	4.9-5.2	3.7	2.0-2.6	3.0	2.9	2.8	0.2[c]	0.5
German Democratic Republic	5.4	5.0	4.1	5.1	3.8	4.2	5.0	5.0	4.8
Hungary	6.2	5.4-5.7	3.2	2.6-3.2	1.9	0.8	2.0-2.5	1.8	1.0-1.5
Poland	9.8	7.0-7.3	1.2	..	2.3	−5.4	−3.7	−13.0	−1.6
Romania	11.3	11.0	7.2	7.1	6.2	2.9	7.0	2.1	5.5
USSR	5.7	4.7	4.2	3.4	2.2	3.5	3.4	3.2[c]	3.0
Growth of industrial output									
Albania	8.7	7.1-7.6	..	..	..	..	..	..	..
Bulgaria	9.3	9.2	6.0	5.1	5.4	4.0	5.6	5.6	4.5
Czechoslovakia	6.1	5.7-6.0	4.5	2.7-3.4	3.7	3.3	2.7	2.0	0.6
German Democratic Republic	5.8	6.0	4.9	5.1	4.8	4.7	5.0	5.1	4.6
Hungary	6.5	6.0	3.4	3.5-4.0	3.0	−2.1	3.3	2.3	2.0-2.5
Poland	10.8	8.2-8.5	4.7	8.8	2.7	0.0	0.0	−12.6	0.6
Romania	12.5	10.2-11.2	9.5	7.6	8.0	6.1	8.1	2.6	5.6
USSR	7.8	6.3	4.5	4.7	3.4	3.6	4.1	3.4	4.7
Growth of gross agricultural output[d]									
Albania	5.9	6.6-7.1	..	..	..	..	..	..	..
Bulgaria	..	3.7	2.1	3.4	6.0	−4.5	4.7	4.0	2.2
Czechoslovakia	1 4	2.7-2.8	1.8	1.8-2.2	−4.2	6.1	2.6	−3.4	3.2
German Democratic Republic	1.1	2.6	1.1	1.1	2.8	0.5	0.8[e]	3.0[e]	0.2[e]
Hungary	3.4	3.2-3.4	2.9	2.3-2.8	−1.1	4.3	3.0	0.0	4.0-4.5
Poland	1.1	3.0-3.5	0.3	5.9	−1.5	−10.7	5.0	4.1	5.0
Romania	6.5	5.1-7.6	4.9	4.5-5.0	5.5	−4.1	9.0	−0.9	6.0-7.9
USSR	..	3.0	1.7	2.5	−3.1	−2.5	11.7	−2.0	10.2

Source UNCTAD secretariat and the Department of International Economic and Social Affairs of the United Nations Secretariat, based on national statistical publications, plans and plan fulfilment reports

[a] Change in the five-year average output from the average of the preceding five years, expressed in annual compound rates

[b] Net material product (NMP produced) or net value added of the material sectors of production

[c] Preliminary

[d] Gross value of output at constant prices, except for the German Democratic Republic, where the data refer to the value of commodity production (i e, gross output less work in progress)

[e] Including food processing

ANNEX TABLE A.6

Socialist countries of Eastern Europe: growth rates of exports and imports by major area of destination and origin, 1980 and 1981

(Percentage increase over previous year, based on values in dollars)

Country	Exports		Imports	
	1980	1981	1980	1981
Bulgaria				
World	17.2	3.0	13.7	11.6
Developed market-economy countries	24.7	−11.5	26.6	29.0
Developing countries	40.6	28.5	17.1	32.1
Socialist countries[a]	11.2	−0.7	10.7	6.2
Czechoslovakia				
World	13.1	−0.1	6.5	−3.4
Developed market-economy countries	22.1	−10.0	8.3	−13.5
Developing countries	24.2	10.5	20.1	3.6
Socialist countries[a]	8.5	1.1	4.3	−0.6
German Democratic Republic[b]				
World	14.9	14.7	17.7	5.8
Developed market-economy countries	33.0	25.9	16.5	5.7
Developing countries	30.7	24.4	32.0	−32.7
Socialist countries[a]	7.5	11.9	16.4	11.3
Hungary				
World	8.5	1.3	5.7	−0.3
Developed market-economy countries	14.5	−12.8	10.9	−0.4
Developing countries	9.4	−18.5	17.6	0.3
Socialist countries[a]	4.4	6.5	−0.7	−0.4
Poland				
World	5.0	−21.9	8.9	−18.8
Developed market-economy countries	16.1	−32.1	1.3	−34.3
Developing countries	20.6	−10.7	28.2	−34.6
Socialist countries[a]	−3.7	−17.6	12.4	−5.5
Romania[b]				
World	24.0	4.6	20.9	−5.6
Developed market-economy countries	20.7	−10.9	5.6	−14.9
Developing countries	37.2	34.7	58.4	−16.4
Socialist countries[a]	21.0	3.7	11.5	12.2
USSR				
World	18.2	3.8	18.6	6.8
Developed market-economy countries	27.8	−2.1	20.0	3.9
Developing countries	14.6	10.4	39.8	28.9
Socialist countries[a]	13.8	4.9	10.2	−0.6
Total				
World	15.5	1.7	15.0	1.3
Developed market-economy countries	24.6	−5.8	14.0	−3.4
Developing countries	19.5	13.4	37.1	9.0
Socialist countries[a]	9.7	2.1	10.0	1.9

Source: Data provided by the secretariat of the United Nations Economic Commission for Europe.

[a] Socialist countries of Eastern Europe and Asia.

[b] Estimates for 1981 based on incomplete data.

ANNEX TABLE A.7

Price indices for internationally-traded goods, 1957-1981
(1970 = 100)

Year	Primary commodities (excluding crude petroleum)					Crude petroleum	Manufactures[c]
	Total[a]	Food[b]	Tropical beverages	Metals	Agricultural raw materials		
1950	97.2	88.2	..	55.4	175.0	..	69.0
1951	124.3	98.1	..	72.3	237.8	..	81.8
1952	106.2	91.8	..	84.7	155.4	..	100.0
1953	98.2	93.6	..	74.6	123.5	..	80.1
1954	109.2	113.4	..	70.1	123.5	..	78.4
1955	107.2	94.5	116.8	84.7	154.4	132.2	79.2
1956	103.2	91.8	113.7	87.0	135.9	127.4	82.6
1957	99.2	91.8	110.6	75.7	132.8	143.8	83.5
1958	90.3	85.3	109.9	70.4	110.8	141.3	83.2
1959	89.1	85.5	92.7	68.4	122.7	120.7	81.5
1960	89.0	84.3	86.4	69.7	128.3	115.7	83.5
1961	85.6	81.6	81.3	69.5	119.5	111.7	85.2
1962	83.8	83.2	79.4	67.9	114.6	109.1	85.2
1963	89.1	98.4	77.4	66.8	117.2	108.3	85.2
1964	95.1	95.7	89.3	83.0	117.3	102.5	87.0
1965	93.2	88.9	81.0	91.4	113.9	102.5	88.4
1966	96.2	88.9	84.4	98.2	116.8	102.5	90.6
1967	90.1	90.7	84.6	83.9	106.1	102.5	90.8
1968	89.4	87.8	85.3	86.2	103.4	100.0	90.8
1969	96.5	95.0	88.4	94.9	109.8	98.4	94.4
1970	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1971	94.3	102.0	92.3	84.6	99.5	127.3	105.6
1972	107.5	116.8	101.0	86.6	130.1	146.3	114.8
1973	165.6	179.8	124.6	127.1	233.2	208.3	135.2
1974	211.5	288.0	148.8	158.8	224.9	752.1	164.8
1975	173.4	226.8	143.1	128.0	180.5	826.5	185.2
1976	195.3	185.0	274.3	135.7	224.2	887.6	185.2
1977	237.7	178.2	475.0	145.7	231.4	956.2	201.6
1978	226.6	203.2	344.6	153.8	248.9	979.3	231.5
1979	263.8	231.8	364.7	199.6	303.6	1308.3	264.8
1980	289.4	310.7	320.2	220.9	316.1	2209.9	287.0
1981	247.0	268.0	249.0	191.0	285.2	2505.8	272.5

Source IMF, *International Financial Statistics* (various issues), UNCTAD, *Handbook of International Trade and Development Statistics* (various issues)

[a] The period 1950-1956 includes petroleum

[b] The period 1950-1956 includes tropical beverages

[c] United Nations unit value index of manufactured goods exported from the developed market-economy countries

ANNEX TABLE A.8

Commodity composition of developing countries' trade:[a] 1955, 1970 and 1979
(*Percentage*)

Commodity group	*Food, beverages and tobacco*	*Raw materials*	*Fuels*	*Chemicals*	*Machinery and transport equipment*	*Other manufactures*	*Total*
SITC	*0+1*	*2+4*	*3*	*5*	*7*	*6+8*	*0–9*
A. Total exports:							
Including fuels							
1955	32.8	28.8	24.9	0.9	0.4	11.8	100.0
1970	23.2	17.3	34.6	1.8	2.7	20.0	100.0
1979	11.8	8.1	57.2	1.6	5.3	15.4	100.0
Excluding fuels							
1955	43.7	38.3	.	1.2	0.5	15.7	100.0
1970	35.5	26.5	.	2.8	4.1	30.6	100.0
1979	27.6	18.9	.	3.7	12.4	36.0	100.0
B. Total imports:							
Including fuels							
1955	15.2	8.0	12.1	7.1	23.7	29.0	100.0
1970	12.5	6.8	8.5	9.4	33.8	26.6	100.0
1979	10.6	5.6	15.9	8.8	33.5	23.7	100.0
Excluding fuels							
1955	17.3	9.1	.	8.1	27.6	33.0	100.0
1970	13.7	7.4	.	10.3	36.9	29.1	100.0
1979	12.6	6.7	.	10.5	39.8	28.2	100.0

Sources United Nations, *Statistical Yearbook* (various issues)

[a] Excluding trade with socialist countries

ANNEX TABLE A.9

Share by destination of major areas in the value of total exports of developed market-economy countries, 1970-1980
(*Percentage*)

Year	*Destination*				
	World ($ million)	*Developed market-economy countries*	*Socialist countries of Eastern Europe and Asia*	*Developing countries*	
				Total	*Non-OPEC*
1970	224 210	76.9	3.7	18.7	15.2
1971	250 740	77.0	3.6	18.8	15.1
1972	297 740	77.5	4.0	18.0	14.0
1973	406 920	76.7	4.5	18.1	14.1
1974	541 660	73.5	4.9	21.0	15.6
1975	577 190	69.6	5.8	24.0	15.7
1976	642 101	71.3	5.3	22.9	14.4
1977	727 709	70.9	4.8	23.8	14.5
1978	871 987	70.8	4.9	23.8	14.6
1979	1 071 791	72.7	4.9	21.9	14.7
1980	1 292 484	70.5	5.0	23.3	15.4

Sources UNCTAD, *Handbook of International Trade and Development Statistics* (table A 1 of various issues)

ANNEX TABLE A.10

Share by major areas of destination of exports of developed market-economy countries, by selected commodity classes, 1970-1979

Year	World ($ million)	Destination: Developed market-economy countries (%)	Destination: Socialist countries of Eastern Europe and Asia (%)	Destination: Developing countries: Total (%)	Destination: Developing countries: Non-OPEC (%)
		SITC 27 and 28 (crude fertilizers, crude minerals, metalliferous ores, and metal scrap)			
1970	6 080	91.9	1.5	5.1	4.6
1971	5 500	92.7	1.7	5.5	4.8
1972	5 860	89.2	1.8	5.8	5.0
1973	8 590	88.7	2.0	6.4	5.8
1974	11 750	87.4	1.9	7.4	6.5
1975	11 270	84.1	3.2	8.5	7.3
1976	12 497	84.9	2.9	7.3	6.1
1977	12 932	84.5	3.1	8.5	7.1
1978	13 793	85.0	4.0	10.0	8.5
1979	19 650	86.2	3.7	9.8	8.5
		SITC 5 (chemical products)			
1970	19 420	69.9	5.5	23.4	19.5
1971	21 510	69.8	5.5	23.3	19.2
1972	25 580	70.4	5.6	22.8	18.8
1973	35 610	71.6	5.3	22.6	18.6
1974	56 560	69.3	6.2	24.1	19.5
1975	53 210	66.3	7.3	26.2	20.1
1976	60 346	70.2	5.9	22.7	17.5
1977	68 561	69.2	6.2	23.5	17.7
1978	85 312	69.0	6.1	23.9	18.2
1979	111 725	70.3	5.8	23.4	18.4
		SITC 67 (iron and steel)			
1970	14 090	73.7	7.3	19.0	14.6
1971	14 820	71.6	8.1	20.2	15.2
1972	16 720	72.1	8.5	19.3	14.0
1973	24 270	66.8	11.3	21.9	15.6
1974	41 030	60.9	11.7	27.4	18.4
1975	39 570	55.6	14.6	29.7	16.3
1976	37 763	60.2	15.3	24.5	14.0
1977	39 492	61.4	13.0	25.5	15.1
1978	48 524	58.3	14.9	26.6	15.6
1979	59 777	59.4	14.8	25.8	16.4
		SITC 6+8−(67+68) (manufactured goods, excluding iron and steel and non-ferrous metals)			
1970	49 200	79.8	3.1	17.0	13.8
1971	56 210	80.6	3.0	16.2	13.0
1972	67 400	81.8	3.2	14.8	11.4
1973	88 700	82.2	3.2	14.5	11.0
1974	111 490	79.6	3.8	16.4	11.7
1975	116 460	77.0	4.4	18.6	11.7
1976	131 966	77.2	3.9	18.8	11.0
1977	157 095	76.1	3.5	20.1	11.2
1978	192 006	76.6	3.1	19.9	11.2
1979	231 676	78.0	3.1	18.7	11.5
		SITC 68 (non-ferrous metals)			
1970	7 760	86.3	4.4	9.3	8.1
1971	6 690	86.1	3.8	10.2	8.7
1972	7 700	87.1	3.6	9.2	7.8
1973	11 200	85.7	4.8	9.6	8.0
1974	15 970	83.6	4.5	11.3	9.2
1975	12 250	80.5	6.1	12.3	9.0
1976	14 181	83.2	4.3	11.8	8.8
1977	16 232	80.1	4.1	13.2	9.2
1978	19 305	81.0	4.8	13.3	9.2
1979	25 860	84.0	4.0	11.5	8.9

ANNEX TABLE A.10 (*continued*)

Year	World ($ million)	Destination: Developed market-economy countries	Destination: Socialist countries of Eastern Europe and Asia	Destination: Developing countries: Total	Destination: Developing countries: Non-OPEC
		Percentage			
		SITC 7 (machinery and transport equipment)			
1970	78 620	73.8	3.4	22.0	17.6
1971	91 380	74.2	3.0	22.0	17.3
1972	108 730	74.3	3.3	21.8	16.7
1973	142 310	73.5	3.7	22.0	16.9
1974	179 340	69.5	4.4	25.4	18.7
1975	212 670	63.6	5.5	30.1	19.0
1976	241 884	64.3	4.7	30.4	18.1
1977	274 343	64.5	4.3	30.5	17.5
1978	326 470	65.2	4.4	29.6	17.2
1979	376 759	67.9	4.1	27.6	17.8

Sources 1970-1975 estimated from UNCTAD, *Handbook of International Trade and Development Statistics, 1979* (United Nations publication, Sales No E/F 79 II D 2), tables A 4, A 6, A 7 and A 10, 1976-1979 estimated from UNCTAD, *Handbook of International Trade and Development Statistics Supplement 1981* (United Nations publication, Sales No E/F 82 II D 11)

ANNEX TABLE A.11

Factor-intensity indices of trade in manufactures of selected countries and territories, 1963, 1973 and 1980

Country or area	Factor intensity: Labour skill index[a] 1963	1973	1980	Capital-intensity index[b] 1963	1973	1980	Value added per head[c] 1963	1973	1980
Exports from developed market-economy countries	100	100	100	100	100	100	100	100	100
Imports into developed market-economy countries									
From:									
Japan	90	102	104	82	92	91	86	97	98
Socialist countries of Eastern Europe	92	90	88	91	88	93	92	89	90
Developing countries and territories	79	79	82	74	72	75	77	76	79
Of which:									
Hong Kong	70	72	74	60	64	65	65	68	70
Rep. of Korea	74	75	79	62	65	72	68	70	76
Singapore	91	87	92	98	74	80	95	81	86

Sources *Yearbook of Industrial Statistics 1979 Edition*, vol 1 — *General Industrial Statistics* (United Nations publication, Sales No E 81 XVIII 8), OECD trade statistics The concordance between the trade data and the industry groups was based on that given by B Balassa (*A "Stages" approach to comparative advantage*, World Bank Staff Working Paper No 256, May 1977, appendix table 2)

[a] Wages and salaries per employee in 17 industry groups in the United States in 1970, weighted by the industry pattern of each trade flow

[b] Gross profits (i e, value added less wages and salaries per employee in the same industry groups, with corresponding weighting)

[c] Weighted means of *a* and *b*

ANNEX TABLE A.12

Imports of manufactures from Japan and from developing countries, classified by factor intensity, as a proportion of total imports into developed market-economy countries, 1963-1980

(*Percentage of total imports in each category*)

Imports from	*1963*	*1968*	*1973*	*1978*	*1980*
Japan:					
Labour-intensive products					
Low-skill intensity	8.7	9.0	4.9	3.5	3.0
Textiles and clothing	7.7	8.1	4.1	3.1	2.2
Other	10.2	10.0	5.9	4.0	3.7
High skill-intensity	2.8	6.9	9.1	11.6	10.3
Capital-intensive and resource-intensive products	3.0	4.4	6.4	8.9	8.9
Total	4.0	5.8	6.9	8.7	8.2
Developing countries:					
Labour-intensive products					
Low skill-intensity	13.1	14.9	20.8	25.8	25.5
Textiles	13.5	12.9	15.7	16.0	15.9
Clothing	18.8	24.4	35.9	42.8	41.4
Other	10.4	12.5	16.6	21.6	21.5
High skill-intensity	1.2	1.9	5.2	7.4	8.4
Capital-intensive and resource-intensive products	6.7	7.6	6.1	6.1	6.8
Total	6.3	7.3	8.4	10.0	10.5

Source: As for table 33.

ANNEX TABLE A.13

Exports from developing countries by main commodity groups, 1963-1979

Commodity group and period	*Primary commodities*				*Fuels* [d]	*Manufactures* [e]	*Total exports*
	Food [a]	*Agricultural raw materials* [b]	*Ores and metals* [c]	*Total*			
				(*$ billion*)			
Value:							
1977-1979 (average)	52.3	15.3	14.5	82.1	186.6	65.6	334.3
				(*Percentage per annum*)			
Value change:							
1963-1965 to 1971-1973	6.5	5.6	9.1	6.8	14.9	19.4	11.5
1971-1973 to 1977-1979	18.7	13.2	12.4	16.3	34.3	26.0	26.0
Unit value change:							
1963-1965 to 1971-1973	2.9	1.9	4.4	3.0	7.1	5.8	3.7
1971-1973 to 1977-1979	17.5	12.5	9.8	14.9	32.7	11.3	22.0
Volume change:							
1963-1965 to 1971-1973	3.5	3.8	4.5	3.7	7.3	12.9	7.3
1971-1973 to 1977-1979	1.1	0.6	2.4	1.5	1.3	13.3	3.9

Sources: United Nations, *Monthly Bulletin of Statistics* (various issues); UNCTAD secretariat estimates.

[a] Including beverages and tobacco (SITC 0+1+22+4).

[b] SITC 2 (less 22, 27 and 28).

[c] SITC 27+28+68.

[d] SITC 3.

[e] SITC 5-8 (less 68).

ANNEX TABLE A.14

Import and export growth, changes in terms of trade and internal economic performance of non-oil-exporting developing countries according to relative rates of growth of import volumes in 1965-1973 and 1973-1978

(Unweighted average of annual rates of growth)

(Percentage)

Volume of	Countries with average rate of growth of imports in 1973-1978										
	Equal to or greater than in 1965-1973[a]					Lower than in 1965-1973					
	Per capita income in 1977										
	Above $1000	$500-1000	Below $500	Total	LDCs	Above $1000	$500-1000	Below $500	Total	FGEM*	LDCs
Imports											
1965-1973	5.0	6.0	3.5	4.3	4.8	8.7	10.6	8.3	9.0	13.5	11.2
1973-1978	6.0	14.0	11.0	11.3	11.4	3.3	2.7	1.5	2.4	7.9	2.9
GDP											
1965-1973	4.5	5.3	4.0	4.3	3.3	6.7	6.4	3.3	5.2	8.7	3.8
1973-1978	2.3	6.9	3.6	4.3	4.1	3.5	4.3	2.1	3.1	6.4	3.3
Domestic investment											
1965-1973	2.1	8.0	6.7	6.7	6.1	9.2	18.7	7.9	11.0	13.0	16.1
1973-1978	8.6	16.0	10.4	11.6	9.3	3.9	4.2	3.7	3.9	9.1	3.8
Government consumption											
1965-1973	5.0	7.5	5.8	6.1	6.3	9.0	5.7	6.6	7.2	9.4	6.1
1973-1978	5.8	7.7	6.8	6.9	7.0	5.9	9.7	0.8	4.7	7.3	1.1
Private consumption											
1965-1973	4.9	4.4	3.5	3.9	3.2	6.4	7.4	3.1	5.3	7.7	3.5
1973-1978	1.9	8.4	4.3	5.1	5.6	3.0	3.7	2.1	2.8	5.2	3.7
Agricultural output											
1965-1973	3.9	2.7	2.1	2.4	0.8	1.4	4.6	1.2	2.1	1.7	1.5
1973-1978	2.8	7.8	2.5	3.8	3.3	1.1	3.1	1.2	1.6	0.9	3.7
Manufacturing output											
1965-1973	6.9	6.9	9.8	8.9	11.9	8.6	8.4	9.1	8.8	12.8	8.4
1973-1978	2.2	8.6	3.9	4.9	3.2	3.7	5.8	−0.1	2.6	7.0	1.9
Exports											
1965-1973	5.5	7.4	4.5	5.3	6.1	7.3	9.4	6.9	7.6	13.8	10.7
1973-1978	6.2	6.4	6.0	6.1	5.1	5.8	3.8	1.6	3.5	10.4	2.3
Terms of trade											
1965-1973	2.3	0.2	−0.2	0.1	−0.6	0.6	1.0	0.5	0.6	0.6	0.3
1973-1978	−3.0	4.9	1.8	2.2	2.6	−0.1	−0.5	−1.0	−0.5	−1.2	1.4

Source UNCTAD secretariat estimates, based on United Nations sources

Note The figures cover 78 non-oil-exporting developing countries Of these countries, 37 were countries with an average annual rate of growth of import volume in 1973-1978 equal to or greater than that of 1965-1973 (3 with GDP *per capita* above $1000 in 1977, 9 with GDP *per capita* of $500-1000, 25 with GDP *per capita* below $500, 12 were least developed countries), 41 were countries with an average annual rate of growth of import volume in 1973-1978 below that of 1965-1973 (14 with GDP *per capita* above $1000 in 1977, 10 with GDP *per capita* in the range of $500-1000, and 17 with GDP *per capita* below $500, 6 were fast-growing exporters of manufactures and 9 were least developed countries) Of the categories of developing country in the table only those referring to ranges of GDP *per capita* in 1977 are mutually exlusive

[a] Among the fast-growing exporters of manufactures there were no countries with an annual average rate of growth of import volume in 1973-1978 higher than in 1965-1973

* FGEM = Fast-growing exporters of manufactures

ANNEX TABLE A.15

Import and export growth, changes in terms of trade, and internal economic performance of selected developing countries[a] in 1965-1973, 1973-1976 and 1973-1978

(Unweighted average of annual rates of growth)

(Percentage)

	Period								
	Average			Highest rate			Lowest rate		
Income level	*1965-1973*	*1973-1976*	*1973-1978*	*1965-1973*	*1973-1976*	*1973-1978*	*1965-1973*	*1973-1976*	*1973-1978*
Countries with GDP per capita above $1000 in 1977									
Import volume	8.1	1.8	3.8	18.7	10.2	10.3	−1.0	−8.3	−1.9
GDP	6.3	2.3	3.3	12.9	8.3	8.7	1.2	−5.8	−4.4
Domestic investment	7.9	2.2	4.7	20.3	13.9	13.0	−0.8	−13.9	−12.8
Government consumption	8.3	7.0	5.9	16.0	14.4	10.1	2.3	−3.3	0.2
Private consumption	6.1	1.3	2.8	10.5	8.6	9.9	0.1	−8.7	−3.8
Agricultural output	1.9	0.8	1.4	7.1	9.3	7.8	−3.6	−12.0	−11.3
Manufacturing output	8.3	2.4	3.4	17.2	8.4	8.0	0.3	−6.3	−4.3
Export volume	7.0	4.1	5.9	14.7	24.2	17.2	−1.4	−11.8	−4.3
Terms of trade	0.9	−1.0	−0.6	5.3	16.0	13.9	−2.6	−20.0	−10.9
Countries with GDP per capita of $500-1000 in 1977									
Import volume	8.4	9.9	8.1	28.0	27.3	23.1	−0.7	−6.9	−9.5
GDP	5.9	6.0	5.6	12.6	11.7	10.3	0.2	1.6	−0.9
Domestic investment	13.6	12.2	9.8	77.1	40.6	25.9	3.5	−9.8	−4.6
Government consumption	6.6	11.1	8.8	11.6	35.7	22.7	−3.8	−2.4	4.3
Private consumption	6.0	7.0	5.9	14.1	17.6	12.3	−2.4	2.4	−1.3
Agricultural output	3.7	6.9	5.3	10.3	21.8	19.3	−2.1	−2.2	0.6
Manufacturing output	7.7	7.7	7.1	21.3	16.9	17.2	−1.7	−4.0	−0.3
Export volume	8.4	4.5	5.0	35.4	28.3	25.2	−2.2	−6.7	−5.5
Terms of trade	0.6	3.7	2.0	8.8	14.4	7.2	−5.9	−8.7	−7.8
Countries with GDP per capita below $500 in 1977									
Import volume	5.5	5.7	7.1	15.8	29.7	22.7	−10.3	−10.3	−8.6
GDP	3.7	2.3	3.0	8.3	10.6	9.8	−1.7	−17.0	−8.3
Domestic investment	7.2	5.9	7.7	26.4	52.5	27.5	−2.4	−21.5	−9.2
Government consumption	6.1	3.7	4.3	12.1	25.5	20.4	−9.2	−0.6	−22.3
Private consumption	3.4	2.8	3.4	8.4	13.3	12.8	−0.9	−17.3	−9.7
Agricultural output	1.7	2.2	2.0	7.5	19.1	13.0	−3.5	−26.7	−17.0
Manufacturing output	9.5	1.7	2.3	29.8	25.2	18.1	1.9	−28.9	−16.3
Export volume	5.5	3.8	4.2	14.8	25.0	20.6	−5.0	−14.5	−11.2
Terms of trade	0.1	1.0	0.7	6.6	22.0	17.3	−12.4	−16.9	−15.9
Analytical group									
Fast-growing exporters of manufactures									
Import volume	13.5	6.2	7.9	28.0	14.6	19.3	2.1	−1.3	1.6
GDP	8.7	6.2	6.4	12.9	10.1	10.3	4.5	1.0	0.9
Domestic investment	13.0	7.8	9.1	24.1	13.9	18.7	6.2	1.6	1.9
Government consumption	9.4	7.5	7.3	15.0	12.7	11.4	7.7	1.4	0.2
Private consumption	7.7	4.5	5.2	9.8	7.3	9.9	3.3	0.0	−1.4
Agricultural output	1.7	1.5	0.9	4.3	7.5	5.4	−3.6	−12.0	−11.3
Manufacturing output	12.8	6.6	7.0	21.3	16.9	17.2	6.2	−0.7	−1.1
Export volume	13.8	6.8	10.4	35.4	18.8	19.9	2.3	−3.1	4.7
Terms of trade	0.6	−1.1	−1.2	2.3	4.7	0.5	−2.0	−10.0	−6.6
Least developed countries									
Import volume	7.5	8.2	7.8	23.2	29.7	22.0	−1.9	−10.3	−8.6
GDP	3.5	3.1	3.8	12.6	10.6	9.8	−1.7	−7.1	−1.4
Domestic investment	10.4	6.3	6.9	77.1	31.2	27.5	−2.4	−14.9	−7.8
Government consumption	6.2	4.6	4.5	12.1	25.5	13.9	−0.5	−22.3	−16.0
Private consumption	3.3	4.7	4.8	8.4	13.3	12.8	−0.9	−0.8	−1.0
Agricultural output	1.1	4.1	3.5	10.3	19.1	13.0	−3.5	−1.7	−1.4
Manufacturing output	10.4	3.5	2.7	29.8	25.2	18.1	1.9	−9.6	−14.7
Export volume	8.1	4.7	3.9	26.3	25.0	16.9	1.5	−14.5	−11.2
Terms of trade	−0.2	2.7	2.1	5.0	22.0	17.3	−12.4	−4.9	−6.2

ANNEX TABLE A.15 (*concluded*)

Income level	Period 1965-1973	1973-1976	1973-1978
Total, 78 developing countries			
Import volume	6.8	5.9	6.6
GDP	4.8	3.2	3.7
Domestic investment	8.9	6.6	7.5
Government consumption	6.7	6.2	5.8
Private consumption	4.6	3.5	3.9
Agricultural output	2.2	3.0	2.7
Manufacturing output	8.8	3.3	3.7
Export volume	6.5	4.1	4.8
Terms of trade	0.4	1.2	0.7

Source UNCTAD secretariat estimates, based on United Nations sources

[a] The figures cover 78 non-oil-exporting developing countries (17 with GDP *per capita* above $1000 in 1977, 19 with GDP *per capita* of $500-1000, 42 with GDP *per capita* below $500, 6 are fast-growing exporters of manufactures and 21 are least developed countries) Of the categories of developing countries distinguished in the table, only the classification by GDP *per capita* in 1977 is mutually exclusive

ANNEX TABLE A.16

Import and export growth, changes in terms of trade and internal economic performance of selected developing countries[a] according to relative rates of growth of import volumes in 1965-1973 and 1973-1976

(*Unweighted average of annual rates of growth*)

(*Percentage*)

	Countries with average rate of growth of imports in 1973-1976										
	Equal to or greater than in 1965-1973[b]					Lower than in 1965-1973					
	Per capita income in 1977										
	Above $1000	$500-1000	Below $500	Total	LDCs	Above $1000	$500-1000	Below $500	Total	FGEM*	LDCs
Import volume											
1965-1973	−1.0	5.4	4.1	4.3	5.1	8.6	11.8	7.1	8.6	13.5	10.7
1973-1978	0.8	15.0	11.3	12.1	13.1	1.9	4.3	−1.0	1.2	6.2	1.7
GDP											
1965-1973	3.6	4.6	3.8	4.0	3.5	6.5	7.4	3.6	5.4	8.7	3.5
1973-1978	−2.9	6.2	2.5	3.4	1.9	2.6	5.8	2.0	3.0	6.2	4.8
Domestic investment											
1965-1973	−0.8	8.1	6.9	7.0	6.6	8.5	19.8	7.6	10.4	13.0	15.4
1973-1978	3.8	19.3	11.2	13.4	6.5	2.1	4.3	−0.6	1.4	7.8	6.0
Government consumption											
1965-1973	2.9	6.9	6.2	6.3	7.4	8.6	6.2	6.0	7.0	9.4	4.7
1973-1978	11.9	13.0	4.8	7.4	4.7	6.7	8.9	2.4	5.3	7.5	4.4
Private consumption											
1965-1973	4.6	4.0	3.4	3.6	3.3	6.2	8.3	3.4	5.4	7.7	3.3
1973-1978	−3.7	7.1	4.0	4.7	5.0	1.6	6.8	1.4	2.6	4.5	4.4
Agricultural output											
1965-1973	4.7	2.2	1.7	1.9	1.0	1.7	5.5	1.8	2.5	1.7	1.3
1973-1978	−4.3	7.0	3.0	4.0	2.8	1.1	6.8	1.1	2.3	1.5	5.8
Manufacturing output											
1965-1973	8.0	5.7	10.4	9.0	12.8	8.3	9.9	8.4	8.7	12.8	7.3
1973-1978	−0.4	7.8	3.2	4.4	2.6	2.6	7.6	−0.1	2.5	6.6	4.7
Export volume											
1965-1973	0.8	6.3	4.6	5.0	5.9	7.4	10.8	6.5	7.7	13.8	10.9
1973-1978	−4.3	5.2	5.6	5.2	5.6	4.7	3.8	1.7	3.2	6.8	3.5
Terms of trade											
1965-1973	5.1	0.5	0.2	0.4	0.2	0.6	0.8	−0.1	0.4	0.6	−0.8
1973-1978	−3.1	3.9	2.6	2.8	3.9	−0.9	3.5	−0.9	0.0	−1.1	3.4

Source UNCTAD secretariat estimates, based on United Nations sources

[a] The figures cover 78 non-oil-exporting developing countries 34 with an average annual rate of growth of import volume in 1973-1976 equal to or greater than that of 1965-1973 (1 with GDP *per capita* above $1000 in 1977, 10 in the range of $500-1000, 23 below $500 in 1977, 12 were least developed), and 44 with an average annual rate of growth of import volume in 1973-1976 below that of 1965-1973 (16 with GDP *per capita* above $1000 in 1977, 9 in the range of $500-1000, 19 below $500 in 1977, 6 were fast-growing exporters of manufactures and 9 were least developed countries) Of the categories of developing country in the table only those referring to ranges of GDP *per capita* in 1977 are mutually exclusive

[b] There were no countries with an annual average rate of growth of import volume in 1973-1976 higher than that of 1965-1973 among the fast-growing exporters of manufactures

* FGEM = Fast-growing exporters of manufactures

ANNEX TABLE A.17

Share of machinery and equipment in the imports of developing countries and territories classified by income level and export structure, 1970, 1975 and 1979

(*Percentage of total imports*)

Countries grouped by category	Commodity group: SITC 71 (non-electrical machinery)			SITC 72 (electrical machinery)			SITC 73 (transport equipment)			SITC 7 (machinery and transport equipment)			Lower bounds of the two highest shares for SITC 7					
	1970	1975	1979	1970	1975	1979	1970	1975	1979	1970	1975	1979	> 15	> 20	> 25	> 30	> 35	> 40
Countries with GDP per capita of less than $700 in 1977																		
Afghanistan	2.01	1.04	1.62[a]	2.38	1.85	3.78[a]	6.86	6.96	3.25[a]	11.25	9.85	8.56[a]						
Angola	16.62	17.96[c]	..	6.11	4.95[c]	..	12.79	11.63[c]	..	35.52	34.27[c]	..				*	*	
Antigua	10.32	5.24	..	6.52	5.65	..	6.48	3.57	..	23.32	14.46	..						
Bangladesh	..	5.03	9.64[b]	..	2.52[a]	3.84	..	1.21	4.92[b]	..	9.76	18.40[b]						
Benin	7.51	12.11	..	3.94	6.06[c]	..	9.38	7.80[c]	..	20.83	25.97[c]	..		*	*			
Burma	17.50	18.29	..	3.91	3.87	..	7.50	10.52	..	28.91	32.68	..			*	*		
Burundi	4.95	9.49	6.63[a]	4.71	4.05	9.70[a]	9.73	14.22	12.59[a]	19.39	27.76	28.92[a]			**			
Cap Verde	3.88	0.71	..	2.68	1.06	..	1.56	1.98	..	8.12	3.75	..						
Central African Republic	14.44	15.33	20.34	7.53	7.96	5.88	13.87	14.21	15.05	35.84	37.50	41.27					*	*
Chad	7.43	13.59	..	5.73	4.20	..	10.09	11.06	..	23.25	28.85	..		*	*			
Comoros	9.68	5.53[d]	..	2.39	5.24[d]	..	4.37	16.34[d]	..	16.44	27.40[d]	..	*		*			
Democratic Kampuchea	11.66	13.81[e]	..	6.28	6.17[e]	..	11.91	6.49[e]	..	29.85	26.47[e]	..			**			
Dominica	5.37	4.42	..	5.35	4.09	..	10.06	4.23	..	20.78	12.73	..						
Egypt	12.33	7.50	14.60	4.84	4.27	6.80	9.39	8.69	12.52	26.56	20.46	33.92				*	*	
Ethiopia	15.53	9.79	9.06[f]	5.88	4.89	4.76[f]	3.37	13.74	20.10[f]	34.78	28.51	33.92[f]					**	
Gambia	3.66	4.44	..	5.40	5.30	..	5.70	4.39	..	34.76	14.13	..						
Grenada	4.84	0.24[d]	..	3.17	1.04[d]	..	7.84	12.94[d]	..	15.85	14.27[d]	..						
Guinea-Bissau	..	1.38	7.15[g]	..	1.35	6.11[g]	..	14.44	6.77[g]	..	17.17	20.03[g]	*	*				
Haiti	5.20	8.04	6.02[g]	7.19	5.20	7.02[g]	8.20	7.12	6.73[g]	20.95	20.36	19.77[g]		**				
Honduras	13.85	14.61	15.82[b]	5.35	5.04	6.35[b]	0.22	8.24	10.68[b]	29.42	27.89	32.85[b]				*	*	
India	16.19	9.53	12.29[g]	4.26	3.69	3.59[g]	2.97	2.41	3.34[g]	23.42	15.63	19.22[g]	*	*				
Indonesia	16.78	17.28	16.33	5.86	8.30	7.67	1.59	11.59	7.91	34.23	37.17	31.91					*	*
Kenya	13.46	14.04	18.66[b]	5.49	5.29	5.03[b]	5.26	11.01	16.83[b]	34.21	30.34	40.52[b]					*	*
Lao People's Democratic Republic	5.70	8.31[c]	..	4.81	0.11[c]	..	8.02	7.23[c]	..	18.53	25.59[c]	..	*			*		
Lebanon	7.65	13.72	..	5.71	5.42	..	6.54	16.37	..	19.90	35.51	..	*				*	
Liberia	17.74	18.83	15.76[b]	7.05	5.01	4.25[b]	9.02	11.10	12.22[b]	33.54	34.94	32.23[b]					**	
Madagascar	12.83	11.67	16.94[b]	6.62	5.41	4.72[b]	0.61	7.41	9.19[b]	30.06	24.84	30.84[b]					**	
Malawi	12.77	12.56	21.23[b]	3.79	4.11	5.31[b]	3.51	13.51	10.70[b]	30.07	30.18	37.24[b]					*	*
Mali	6.96	8.70	10.93[f]	5.38	3.52	5.79[f]	8.69	9.79	13.17[f]	21.03	22.01	29.89[f]		*	*			
Mauritania	16.16	16.78	..	6.21	3.95	..	5.54	14.28	..	37.91	35.01	..					*	
Mozambique	17.19	8.50	..	4.88	4.88	..	3.11	5.20	..	35.18	18.58	..	*				*	
Niger	11.37	11.80	13.54[a]	5.69	5.76	4.84[a]	9.39	9.97	14.33[a]	26.45	27.53	32.71				*	*	
Niue	9.05	19.05	10.88[f]	4.45	2.74	6.64[f]	5.42	10.61	11.23[f]	18.91	32.40	28.75[f]				*	*	
Pakistan	17.71	11.76	13.05	5.67	6.11	4.88	7.89	5.96	6.04	31.27	23.83	23.97		*		*		
Philippines	20.04	18.18	14.09[b]	5.37	4.50	5.39[b]	9.97	9.20	8.06[b]	35.38	31.85	27.54[b]				*	*	
Rwanda	5.03	5.36	..	3.15	6.80	..	9.40	13.69	..	17.58	25.85	..	*			*		
Saint Kitts-Nevis	7.84	6.34[c]	..	5.54	9.14[c]	..	5.49	3.20[c]	..	18.87	18.95[c]	..	**					
Saint Vincent and the Grenadines	11.50	1.78[c]	..	1.28	1.78[c]	..	5.41	1.97[c]	..	18.14	15.53[c]	..	**					
Samoa	16.47	10.61	..	4.51	7.51	..	5.65	6.76	..	26.63	24.88	..		*	*			
Senegal	9.90	12.37	..	4.52	4.37	..	0.33	9.23	..	24.75	25.97	..		*	*			
Sierra Leone	10.97	8.37[c]	..	5.31	4.64[c]	..	9.36	7.59[c]	..	25.64	20.60	..		*	*			
Solomon Islands	17.84	17.03	..	3.88	4.99	..	8.99	7.66	..	30.71	29.68	..			*	*		
Somalia	4.35	15.62	9.06[f]	1.95	3.72[f]	3.80	0.22	12.36	15.33[f]	16.52	31.70	28.17[f]			*	*		
Sri Lanka	9.24	4.75	10.88	3.25	1.84	4.22	5.18	1.99	9.64	17.67	8.58	24.74	*	*				
Sudan	10.75	14.19	18.51[b]	3.78	2.33	5.47[b]	2.04	15.50	11.85[b]	26.57	32.02	35.83[b]				*	*	
Thailand	17.02	17.66	14.42[b]	8.09	5.86	7.43[b]	10.44	11.26	8.96[b]	35.55	34.78	30.81[b]				*	*	
Togo	9.48	12.07	14.90[g]	3.59	5.68	5.10[g]	9.15	9.25	11.18[g]	22.22	27.70	31.18[g]				*	*	
Tonga	3.49	4.82	3.90[b]	3.82	5.97	7.62[b]	9.80	3.45	5.45[b]	13.11	14.24	16.97[b]						
Uganda	13.66	11.05	12.83[f]	6.22	1.20	5.33[f]	14.52	22.04	8.68[f]	34.40	44.29	26.84[f]				*	*	
United Rep. of Cameroon	12.38	13.43	15.83	6.83	4.99	5.86	12.61	13.33	12.27	31.82	31.75	33.96				**		
United Rep. of Tanzania	20.09	16.16	17.48[f]	5.39	5.03	5.01[f]	14.84	11.67	10.56[f]	40.31	32.86	33.05[f]				*		*
Upper Volta	10.30	10.27	..	4.51	3.87	..	12.46	12.82	..	27.27	26.96	..			**			

ANNEX TABLE A.17 (*continued*)

Countries grouped by category	Commodity group: SITC 71 (non-electrical machinery)			SITC 72 (electrical machinery)			SITC 73 (transport equipment)			SITC 7 (machinery and transport equipment)			Lower bounds of the two highest shares for SITC 7					
	1970	1975	1979	1970	1975	1979	1970	1975	1979	1970	1975	1979	> 15	> 20	> 25	> 30	> 35	> 40
Vanuatu	7.23	6.50	..	4.79	8.33	..	11.95	10.23	..	23.97	25.15	..		*	*			
Yemen	3.55	6.12	9.38[f]	1.07	2.46	3.08[f]	3.98	7.02	13.46[f]	8.60	15.60	25.80[f]	*		*			
Zaire	13.17	12.56	..	6.95	7.48	..	14.11	12.68	..	34.23	32.72	..				**		
Zambia	19.03	15.82	22.44[g]	7.06	6.53	7.38[g]	12.58	12.98	9.81[g]	38.67	35.40	39.00					**	
OPEC countries with GDP per capita of more than $500 in 1977																		
Algeria	21.71	23.21	24.66[b]	6.38	8.13	9.28[b]	8.37	8.61	11.41[b]	36.46	39.95	45.35[b]					*	*
Ecuador	17.53	24.94	24.50[g]	5.84	7.55	7.82[g]	11.50	14.45	17.27[g]	34.87	46.94	49.59[g]						**
Gabon	16.39	17.50	13.69[g]	7.34	7.95	9.87[g]	15.12	14.16	18.08[g]	38.85	39.61	41.64[g]					*	*
Iran	22.84	21.92	24.58[g]	10.10	6.95	9.84[g]	7.59	14.20	9.76[g]	40.53	43.07	44.18[g]						**
Iraq	14.32	16.25	24.79[f]	7.88	6.74	9.29[f]	6.65	18.02	14.35[f]	28.85	41.01	48.43[f]						**
Kuwait	10.90	9.06	11.72[g]	12.20	11.03	11.57[g]	12.76	25.52	22.22[g]	35.86	45.61	45.51[g]						**
Libyan Arab Jamahiriya	12.54	14.28	16.77[b]	8.33	8.98	11.61[b]	8.78	11.01	13.27[b]	29.65	34.27	41.65[b]				*		*
Nigeria	16.58	17.58	15.88[b]	6.88	6.87	13.12[b]	13.90	17.52	14.71[b]	37.36	41.97	43.71[b]						**
Qatar	11.43	16.21	34.60	7.34	18.88	9.55	12.04	16.21	9.13	30.81	51.30	53.28						**
Saudi Arabia	11.15	13.03	13.89	8.36	7.85	14.22	13.23	20.18	13.08	32.74	41.06	41.19						**
United Arab Emirates	12.10	17.33	..	7.78	8.53	..	5.72	14.37	..	25.60	40.23	..			*			*
Venezuela	23.93	26.52	25.56[b]	8.26	7.20	8.91[b]	12.80	14.38	17.28[b]	44.99	48.10	51.75[b]						**
Fast-growing exporters of manufactures																		
Argentina	20.46	13.06	22.04[b]	5.75	4.07	8.72[b]	4.55	3.39	7.76[b]	30.76	20.52	38.52[b]				*	*	
Brazil	20.14	20.13	12.46	8.00	7.76	6.56	7.09	3.81	2.33	35.23	31.70	21.35				*	*	
Hong Kong	5.51	6.01	7.28	8.56	8.62	10.26	2.38	2.22	3.41	16.45	16.85	20.95	*	*				
Mexico	23.99	22.03	21.41[g]	11.43	6.31	8.48	14.77	17.06	15.38[g]	50.19	45.40	45.27[g]						**
Rep. of Korea	15.42	11.68	17.27[b]	6.70	7.05	8.60[b]	7.60	7.53	7.18[b]	29.72	26.26	33.05[b]			*	*		
Singapore	11.19	12.17	9.81	6.51	9.75	12.66	5.10	4.26	6.95	22.80	26.18	29.42			**			

Sources UNCTAD, *Handbook of International Trade and Development Statistics, 1979* (United Nations publication, Sales No E/F 79 11 D 2), *Ibid., Supplement 1980* (United Nations publication, Sales No E/F 80 11 D 10 and corrigendum), table 4 2, and *Ibid., Supplement 1977* (United Nations publication, Sales No E/F 78 11 D 1), table 4 1

[a] 1976 [b] 1978 [c] 1974 [d] 1973 [e] 1972
[f] 1976 [g] 1977

ANNEX TABLE A.18

The balance of payments of developing countries on current account and factors contributing to annual changes in the values of imports, exports and interest payments, 1971-1980

(*Millions of dollars*)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Major oil exporters[a]										
Current account balance	1 282.0	2 166.0	5 271.0	63 852.0	31 873.0	33 860.0	28 246.0	4 429.0	56 346.0	102 358.0
Change in value										
of imports	1 898.0	3 207.0	7 754.0	16 867.0	18 828.0	12 234.0	20 672.0	10 434.0	14 163.0	42 819.0
Price effect (%)	52.5	43.0	58.2	47.6	17.6	3.9	32.7	117.6	132.5	39.9
Volume effect (%)	44.1	52.4	33.6	40.1	76.5	95.3	61.6	−15.6	27.5	52.6
Change in value										
of exports	5 192.0	4 448.0	15 832.0	87 797.0	−12 551.0	24 990.0	14 904.0	−4 626.0	77 730.0	96 369.0
Price effect (%)	94.2	40.9	69.6	117.1	71.4	30.8	96.9	21.6	83.8	142.3
Volume effect (%)	4.8	55.1	22.2	−5.3	−160.7	65.1	2.7	−120.9	11.5	−26.7
Change in interest										
payments[b]	80.1	137.2	234.9	524.4	281.4	566.9	583.7	1 249.3	2 017.2	2 172.8
Interest rate effect (%)	8.1	2.2	37.2	28.5	8.3	27.4	−17.6	19.2	31.0	85.0
Other developing countries										
Current account balance	−12 490.0	−9 896.0	−9 260.0	−27 165.0	−34 227.0	−22 858.0	−22 859.0	−30 542.0	−45 108.0	−66 865.0
Change in value										
of imports	2 946.0	1 933.0	13 239.0	33 283.0	6 066.0	1 582.0	14 602.0	18 887.0	28 076.0	38 728.0
Price effect (%)	81.1	140.4	67.1	69.3	89.4	156.5	49.9	44.3	121.6	127.0
Volume effect (%)	17.4	−36.7	26.4	20.9	10.0	−55.0	46.3	51.6	−16.9	−20.4
Change in value										
of exports	−684.0	4 464.0	13 974.0	18 997.0	−1 433.0	10 972.0	14 008.0	9 628.0	23 563.0	23 619.0
Price effect (%)	68.1	44.2	59.4	111.9	23.3	4.5	94.4	0.4	69.6	83.0
Volume effect (%)	−165.5	52.0	32.0	−8.1	−122.2	94.8	4.7	99.6	26.1	14.6
Change in interest										
payments[b]	139.9	216.1	560.8	436.7	780.8	542.1	1 014.4	1 977.4	2 371.5	3 872.1
Interest rate effect (%)	−15.0	9.8	49.5	17.3	16.7	−19.0	19.0	34.8	21.9	52.0

Sources UNCTAD secretariat estimates based on UNCTAD, *Handbook of International Trade and Development Statistics Supplement 1981*, (United Nations publication, Sales No E/F 82 II D 11) and World Bank, *World Debt Tables* (various issues)

Note The factors contributing to annual changes in the value of imports and exports are derived from the following algebraic identity, where V is the value term, P the price term, Q the volume term and the subscripts 0 and 1 refer to the preceding year and current year, respectively $V(1) - V(0) = V(0)(P(1)-P(0))/P(0) + V(0)(Q(1) - Q(0))/Q(0) + (P(1) - P(0))(Q(1) - Q(0))$

The value of the price effect is $V(0)(P(1) - P(0))/P(0)$ and that of the volume effect is $V(0)(Q(1) - Q(0))/Q(0)$ The residual term $(P(1) - P(0))(Q(1) - Q(0))$ representing the interaction between price and volume changes has not been allocated in the table between the other two, principal effects

Defining the outstanding debt held externally as D, the average interest rate thereon as i and the value of interest payments as I, the value of the interest rate effect is $I(0)(i(1) - i(0))/i(0)$

[a] Algeria, Angola, Brunei, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libyan Arab Jamahiriya, Mexico, Nigeria, Qatar, Saudi Arabia, Syrian Arab Republic, Trinidad and Tobago, United Arab Emirates, Venezuela

[b] Based on public and publicly-guaranteed debt (medium- and long-term)

ANNEX TABLE A.19

Balance of payments on current account: summary for selected developed market-economy countries, 1979

(*Billions of dollars*)

Country	Balance on		
	Trade	*Services and private transfers*	*Current account excluding official transfers*
Canada	3.8	−8.3	−4.4
France	−1.6	4.8	3.2
Germany, Federal Republic of	14.7	−15.1	−0.4
Italy	−1.0	9.3	8.3
Japan	1.8	−9.6	−7.9
United Kingdom	−6.3	5.9	−0.4
United States	−29.4	34.0	4.5
Others	−18.0	5.4	−12.7
TOTAL	−36.1	26.3	−9.8

Source International Monetary Fund, *Annual Report* (Washington D C, 1980), table 8

ANNEX TABLE A.20

Percentage distribution of world[a] exports of non-factor services, 1970, 1975 and 1980

Category	*At current prices*			*At constant 1980 prices*		
	1970	*1975*	*1980*	*1970*	*1975*	*1980*
Shipping	18.6	16.2	15.1	16.5	14.1	15.1
Passenger services	4.4	4.1	4.5	2.8	3.2	4.5
Other transportation	11.6	13.5	13.2	12.2	14.5	13.2
Travel	26.0	24.7	26.2	27.2	25.1	26.2
Other official services	10.7	8.4	7.9	11.0	8.7	7.9
Other private services	28.7	33.1	33.0	30.3	34.4	33.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: UNCTAD secretariat calculations, based on IMF balance-of-payments statistics. For techniques used to estimate volumes at constant 1980 prices, see annex C.3.

[a] Excluding the socialist countries.

ANNEX TABLE A.21

Annual average growth of world[a] exports of non-factor services by main items, 1970-1980
(Percentage)

Item	*At current prices*			*At constant 1980 prices*		
	1970-1975	*1975-1980*	*1970-1980*	*1970-1975*	*1975-1980*	*1970-1980*
Shipping	16.4	14.2	15.3	3.6	6.8	5.2
Travel[b]	26.5	16.0	21.5	21.5	4.0	13.0
Other private services	23.0	15.7	19.3	9.7	4.5	7.0

Source: As for annex table A.20.

[a] Excluding the socialist countries.

[b] Growth rates are for 1965-1973, 1973-1980 and 1965-1980.

ANNEX TABLE A.22

Balance of trade in non-factor services of selected oil-exporting countries, 1970-1980
(Millions of current dollars)

Country	*1970*	*1971*	*1972*	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*
Saudi Arabia	−90	−95	−144	−388	−709	−3 032	−6 282	−8 248	−12 229	−19 385	−24 283
Venezuela	−397	−453	−516	−473	−684	−1 228	−1 726	−2 451	−3 305	−3 596	−3 737
Nigeria	−285	−346	−458	−889	−1 657	−2 395	−2 556	−2 998	−2 134	−2 490	−3 476
Indonesia	−299	−326	−383	−491	−881	−1 212	−1 558	−1 724	−2 112	−2 569	−3 095
Algeria[a]	−212	−219	−290	−458	−668	−925	−1 203	−1 426	−1 822	−2 848	−2 501
Libyan Arab Jamahiriya	−399	−337	−520	−810	−1 172	−1 342	−1 368	−1 313	−1 438	−1 657	..
Kuwait	..	..	..	..	..	−329	−444	−837	−1 159	−1 078	−1 711
Iran[a]	−382	−476	−531	−786	−1 543	−2 975	−4 094	−4 471	..	..	..
Iraq[a]	−68	−114	−47	−264	−650	−788	..	..	..	..	..

Source: As for annex table A.20.

[a] Excludes "passenger services".

ANNEX TABLE A.23

Balance of trade in non-factor services of the main surplus and deficit countries, 1979 and 1980
(*Millions of current dollars*)

Country/territory	*1979*	*1980*
A. *Main surplus countries*		
Developed market-economy countries		
United Kingdom	7 461	8 692
Spain	6 148	6 091
Italy	6 533	5 965
France	4 232	4 266
United States	1 408	3 852
Austria	2 768	3 164
Greece	2 117	2 534
Switzerland	1 686	1 932
Belgium-Luxembourg	2 094	1 659
Denmark	1 155	1 185
Developing countries		
Egypt	1 830	2 642
Republic of Korea	989	715
Bahamas	554	684
Tunisia	552	633
Panama	407	532
Malta	190	293
Cyprus	217	284
Barbados	202	251
Philippines	136	186
B. *Main deficit countries*		
Developed market-economy countries		
Federal Republic of Germany	−12 454	−12 975
Japan	−11 395	−12 195
Canada	−2 456	−2 856
Australia	−2 257	−2 617
Sweden	−1 551	−2 167
New Zealand	−923	−1 137
Developing countries		
Saudi Arabia	−19 385	−24 283
Venezuela	−3 596	−3 737
Nigeria	−2 490	−3 476
Brazil	−2 316	−3 178
Indonesia	−2 569	−3 095
Algeria	−2 848	−2 501
Argentina	−1 428	−1 865
Yugoslavia	−678	−670

Source: UNCTAD secretariat calculations, based on IMF statistics.

ANNEX TABLE A.24

Net investment income from abroad in selected countries, 1978
(Millions of dollars)

	1978
1. *Developed market-economy countries*	
(i) *Surplus countries*	
United States	21 547
Switzerland	3 452
Federal Republic of Germany	2 266
United Kingdom	1 601
France	1 428
Japan	864
(ii) *Deficit countries*	
Canada	−4 785
Norway	−1 869
Australia	−1 723
South Africa	−1 173
Spain	−930
Sweden	−778
2. *Developing countries (deficit)*	
Brazil	−4 232
Mexico	−2 791
Republic of Korea	−736
Argentina	−711
Philippines	−404

Source Based on *World Invisible Trade*, Committee on Invisible Exports, London, 1980, table 6

ANNEX TABLE A.25

Ratio of inflows of workers' remittances to merchandise exports in selected developing countries, 1967, 1973 and 1979

Country	*1967*	*1973*	*1979*[b]
Algeria	0.254	0.182	0.069
Bangladesh	..	0.049	0.210
Benin	0.054	0.071	0.166
Botswana	..	0.047	0.081
Democratic Yemen	0.837	1.340	5.638
Egypt	0.044	0.117	0.888
India	0.098	0.061	0.150
Jordan	0.583	0.608	1.754
Lesotho	0.781	0.830	..
Mali	0.379	0.169	0.330
Morocco	0.124[a]	0.274	0.513
Pakistan	..	0.208	0.765
Sudan	0.005	0.012	0.122
Syrian Arab Republic	0.032	0.104	0.088
Tunisia	0.133[a]	0.238	0.246
Upper Volta	0.566	0.804	0.596
Yemen	..	13.737	70.913
Yugoslavia	0.098	0.494	0.425

Source Based on G Swamy, *International Migrant Workers' Remittances Issues and Prospects*, World Bank Staff Working Paper, No 481, August 1981, table 3

[a] 1968

[b] Or latest year available

ANNEX TABLE A.26

Developing countries: development targets and accomplishments, 1970-1990
(Annual percentage volume rate of increase)

Item	1970-1980		1980-1990
	Target[a]	Actual	Target[b]
GDP	6.0	5.6	7.0
GDP *per capita*	3.5	3.0	4.5
Agricultural output	4.0	2.7	4.0
Manufacturing output	8.0	6.5[c]	9.0
Exports	7.1	3.1	7.5
Imports	<7.0	7.3	8.0

Sources: "Study on the relationship between disarmament and development" (A/36/356) *op. cit.*, annex, table II.3; *Trade and Development Report 1981 (op. cit.)*, tables 10, 12, and 31; *Statistical Yearbook, 1979/1980* (United Nations publication, Sales No. E/F.81.XVII.1), p. 14.

[a] Target rate indicated in the International Development Strategy for the Second United Nations Development Decade.

[b] Target rate indicated in the International Development Strategy for the Third United Nations Development Decade.

[c] 1970-1979.

ANNEX TABLE A.27

Gross domestic saving, 1960-1978
(Percentage of GDP in 1975 prices)

Year	Developed market-economy countries	Developing countries					
		Total	Major oil exporters	Fast-growing exporters of manufactures	Least developed countries	All others	Total excluding net oil exporters
1960	22.0	17.8	22.7	17.6	12.3	16.3	16.1
1961	22.2	17.5	24.5	18.1	13.7	14.4	15.6
1962	22.3	17.8	26.8	17.6	12.7	14.8	15.4
1963	22.4	18.2	27.0	17.7	13.3	15.3	15.8
1964	23.4	18.7	26.1	19.5	14.0	15.9	16.8
1965	23.7	19.6	27.7	20.4	13.9	16.2	17.4
1966	23.8	19.6	26.8	20.2	14.4	16.8	17.7
1967	23.2	19.0	26.4	18.3	16.3	16.4	17.1
1968	23.9	19.8	27.7	19.1	15.8	16.7	17.6
1969	24.4	20.9	27.3	22.0	14.9	17.9	19.2
1970	24.4	20.8	28.1	21.1	13.5	17.6	18.8
1971	24.2	21.1	30.4	22.2	9.5	16.8	18.6
1972	24.3	22.4	32.1	23.4	12.9	16.6	19.5
1973	25.0	25.1	36.2	25.3	9.4	18.6	21.0
1974	23.2	28.9	43.0	25.3	8.2	18.7	21.0
1975	21.2	26.7	37.6	25.3	7.4	17.6	20.6
1976	21.5	28.2	38.4	27.5	10.2	18.9	22.4
1977	21.7	28.1	37.2	29.0	9.9	18.8	22.9
1978	22.2	27.0	35.3	29.0	9.0	18.1	22.3

Source: UNCTAD secretariat calculations, based on national and international sources.

ANNEX TABLE A.28

Sectoral composition of gross domestic product:[a] selected countries and country groupings, 1960 and 1977
(Percentage of total GDP)

Group	*Agriculture*			*Industry*[b]			*Services*		
	1960	*1977*	*Change 1960-1977 (Percentage)*	*1960*	*1977*	*Change 1960-1977 (Percentage)*	*1960*	*1977*	*Change 1960-1977 (Percentage)*
Industrialized countries	6.4	3.8	−2.6	41.0	37.5	−3.5	52.5	58.8	+6.3
Australia	11.6	5.0	−6.6	37.1	32.6	−4.5	51.2	62.4[c]	+11.2[d]
Austria	11.1	4.6	−6.5	39.3	42.1	−2.8	39.5	53.4	+13.9
Canada	5.7	3.7	−2.0	33.4	31.3	−2.1	60.0	65.1	+5.1
France	9.8	4.7	−5.1	38.1	37.3	−0.6	52.1	57.8	+5.7
Germany, Federal Republic of	5.7	2.8	−2.9	53.2	48.6	−4.6	41.0	48.5	+7.5
Japan	12.8	5.2	−6.6	45.1	40.7	−4.4	42.1	54.1	+12.0
United Kingdom	3.5	2.5[e]	−1.0[f]	42.7	36.5	−6.2	5.8	60.1	+6.3
United States	4.0	2.8	−1.2	38.2	33.9	−4.3	57.9	63.4	+5.5
Developing countries	30.1	19.4	−10.7	28.1	36.1	+8.0	41.8	44.4	+2.6
Argentina	16.6	13.0	−3.6	37.5	44.8	+7.3	45.9	42.2	−3.7
Brazil	16.1	12.2	−3.9	35.1	36.7	+1.6	48.8	51.1	+2.3
Chile	11.1	10.3	−0.8	37.7	29.1	−8.6	51.2	60.6	+9.4
Egypt	29.9	30.2	+0.3	24.3	29.0	+4.7	45.8	40.9	−4.9
Ethiopia	64.5	51.9	−12.6	12.3	14.5	+2.2	23.2	33.6	+10.4
India	49.8	40.4	−9.4	20.3	25.2	+4.9	29.9	34.4	+4.5
Jamaica	10.3	8.9	−1.4	36.4	37.6	+1.0	53.2	53.6	+0.4
Kenya	38.2	38.3	+0.1	18.2	19.8	+1.6	43.6	41.9	−1.7
Pakistan	46.2	32.6	−13.6	15.6	23.2	+7.7	38.2	44.0	+5.8
Philippines	25.7	27.7	+2.0	28.0	34.5	+6.5	46.3	37.8	−8.5
Republic of Korea	39.6	24.0	−15.6	18.6	34.7	+16.1	41.7	41.3	−0.4
Sri Lanka	37.8	39.4	+1.6	16.3	20.6	+4.3	45.9	40.1	−5.8
Centrally-planned countries	21.5	16.4	−5.1	61.7	63.7	+3.0	16.8	19.8	+3.0

Source: Based on *World Tables, The Second Edition (1980)* (Baltimore and London; The Johns Hopkins University Press, for the World Bank), series III, table 4. The classification used in this table is that of the source.

[a] At current factor cost.

[b] Manufacturing, mining, construction, etc.

[c] 1975.

[d] Change 1960-1975.

[e] 1976.

[f] Change 1960-1976.

ANNEX TABLE A.29

Share by major areas of destination of total exports and exports of machinery and transport equipment of the United States, the European Economic Community and Japan, 1970-1980

Origin	World ($ million)	Developed market-economy countries	Socialist countries of Eastern Europe and Asia	Developing countries		World ($ million)	Developed market-economy countries	Socialist countries of Eastern Europe and Asia	Developing countries	
				Total	Non-OPEC				Total	Non-OPEC
		Percentage					Percentage			
		Total exports				*Exports of machinery and transport equipment (SITC 7)*				
United States										
1970	42 590	69.6	0.8	29.6	24.8	17 880	68.5	0.4	27.6	22.2
1971	43 490	69.4	0.9	29.7	24.3	19 460	68.7	0.5	27.0	21.2
1972	48 980	69.2	1.8	29.0	23.4	21 530	69.4	0.5	27.6	21.1
1973	70 250	66.8	3.5	28.7	23.6	27 870	67.8	1.2	27.7	21.6
1974	97 140	64.5	2.3	32.6	25.7	38 190	64.6	1.4	30.8	23.5
1975	106 160	60.9	2.9	35.8	25.7	45 710	58.3	1.9	36.3	23.8
1976	113 323	62.1	3.2	34.4	23.4	49 510	57.4	1.7	38.4	22.8
1977	117 926	62.1	2.3	35.3	23.6	51 027	58.1	1.2	37.8	22.4
1978	139 999	60.2	3.2	36.1	24.3	60 156	58.8	1.1	35.9	21.5
1979	173 645	60.5	4.3	34.8	26.2	71 507	61.0	1.2	36.3	25.1
1980	216 592	59.8	3.5	36.2	28.1	85 637	59.3	1.1	38.3	27.8
EEC										
1970	112 140	81.0	3.8	14.1	10.7	40 270	77.7	3.9	18.3	13.8
1971	128 130	81.2	3.6	14.1	10.5	46 740	77.7	3.7	18.5	13.7
1972	154 090	81.7	3.8	13.5	9.8	56 060	77.6	4.1	18.1	13.0
1973	210 340	81.9	4.2	13.0	9.2	73 610	78.2	4.4	17.3	11.9
1974	274 390	79.2	4.7	15.1	10.2	88 680	74.5	5.0	20.4	13.3
1975	295 770	75.1	5.4	18.6	10.8	107 360	67.8	6.2	25.9	15.3
1976	325 718	76.7	4.7	17.8	9.7	119 051	68.6	5.4	29.9	13.6
1977	379 202	76.2	4.3	18.8	9.9	137 673	68.8	4.8	26.3	13.2
1978	458 414	76.8	4.2	18.5	9.8	163 182	70.2	4.6	25.2	12.7
1979	573 382	78.8	4.1	16.6	9.8	194 860	72.8	4.3	22.8	13.2
1980	658 464	77.8	3.9	17.6	9.9	220 244	72.2	3.8	24.0	13.4
Japan										
1970	19 320	54.6	5.4	40.0	34.9	7 830	55.9	3.2	40.9	36.5
1971	24 020	54.9	4.8	40.3	34.6	10 590	57.3	2.6	40.1	35.4
1972	28 590	56.4	5.1	38.5	32.0	13 650	59.3	3.1	37.5	32.2
1973	36 930	51.8	5.3	42.9	55.6	18 200	55.6	3.0	41.4	35.7
1974	55 540	47.7	7.1	45.2	35.4	25 240	50.8	4.3	45.0	37.5
1975	55 750	42.3	8.4	49.3	34.2	27 410	45.6	5.9	48.4	35.8
1976	67 225	47.2	7.0	45.8	32.0	37 254	52.1	3.7	44.2	31.9
1977	80 470	47.5	6.1	46.4	31.6	44 737	51.2	3.3	45.5	30.8
1978	97 501	47.2	6.8	46.0	31.5	55 511	51.2	4.1	44.7	30.5
1979	102 964	47.8	7.2	45.1	32.1	55 259	53.7	4.3	42.0	29.8
1980	129 542	47.5	7.1	45.4	31.2	71 130	52.4	4.8	42.6	29.1

Sources: As for annex table A.10.

ANNEX TABLE A.30

Degree of industrialization in relation to GDP per head by major groups of countries, 1960 and 1978

Country group	1960		1978	
	Degree of industrialization[a] *(Percentage)*	*GDP per head*[b] *($1975)*	*Degree of industrialization*[a] *(Percentage)*	*GDP per head*[b] *($1975)*
Developed market-economy countries	37.4	3 430	38.4	6 130
Major industrial countries[c]	37.8	3 660	38.3	6 580
Other industrial countries[d]	35.7	4 110	38.4	7 180
Other countries	33.9	1 600	37.2	3 085
Non-oil exporting developing countries[e]	25.2	270	32.5	440
Of which:				
In Africa	19.6	235	24.7	305
In Asia and Oceania	19.7	165	28.7	270
In Latin America and the Caribbean	31.8	715	37.6	1 200
Least developed	11.8	140	16.7	150

Source United Nations, *Compendium of world development indicators, 1980* (PPS/QIR/3/1980)

[a] Share of industry (manufacturing, mining, utilities and construction) in GDP, derived from data in constant (1975) dollars

[b] Rounded to the nearest $5

[c] Canada, Federal Republic of Germany, Japan, United Kingdom, United States of America

[d] Austria, Belgium, Denmark, Finland, Luxembourg, Netherlands, Norway, Sweden, Switzerland

[e] All developing countries other than major oil exporters

ANNEX TABLE A.31

Population, GDP and GDP per capita for developing countries, classified by degree of industrialization, 1960 and 1978

Share of manufacturing in total GDP (Percentage)	1960				1978			
	No of countries	*Population (million)*	*GDP ($ billion)*[a]	*GDP per capita ($)*[a]	*No of countries*	*Population (million)*	*GDP ($ billion)*[a]	*GDP per capita ($)*[a]
5-9	25	197	35	175	20	227	40	175
10-14	21	596	95	160	21	149	43	290
15-19	9	101	51	505	18	921	215	235
20-24	5	50	26	520	8	200	155	775
25 and over	3	95	68	710	9	213	213	1 195
TOTAL[b]	63	1 039	275	265	76	1 710	707	415

Sources Based on data from the Statistical Office of the United Nations, the World Bank and national sources

[a] Valued at 1975 prices and exchange rates

[b] In addition, there are a large number of developing countries where manufacturing output represents less than 5 per cent of GDP

ANNEX TABLE A.32

Structure of manufacturing production in selected developing countries in relation to degree of industrialization, in or around 1978

Country	Percentage share of total manufacturing output[a]			Manufacturing output per head ($)
	Consumer goods[b]	Intermediate products[b]	Capital goods[b]	
More industrialized countries and territories				
Singapore	51.3	24.6[d]	24.1	680
Hong Kong	80.5	11.6	7.9	665
Venezuela	51.7	40.8[d]	7.5	450
Mexico[e]	59.8	28.6	11.6	300
Rep. of Korea	64.3	21.4	14.3	210
Chile	54.7	34.1	11.2	190
Mean[f]	60.4	26.8	12.8	415
Less industrialized countries				
Colombia[g]	68.3	23.3	8.4	120
Philippines[g]	74.5	16.1	9.4	95
Tunisia	72.5	20.0	7.5	70
Egypt[c]	65.1	22.0	12.9	50
Nigeria[c]	64.2	29.6[d]	6.2	35
Kenya	75.9	12.6	11.5	35
Indonesia	75.8	14.9[h]	9.3	25
India	48.7	29.0	22.3	20
Bangladesh	72.3	23.4	4.3	10
Mean[f]	68.6	21.2	10.2	50
(Mean excluding India)[f]	(71.1)	(20.2)	(8.7)	(55)

Source *Yearbook of Industrial Statistics, 1979 Edition* — vol I — *General Industrial Statistics* (United Nations publication, Sales No E 81 XVII 8)

[a] Percentage relates to 1978, unless otherwise specified

[b] "Intermediate products" industries include basic metals, petroleum refining, petroleum and coal products, chemicals and plastics, "capital goods" industries include electrical machinery (except radio, TV, etc), non-electrical machinery, and transport equipment, "consumer goods" industries include all other manufacturing

[c] Value added in 1977 at 1975 prices and exchange rates per head of total population

[d] Of which petroleum refining and petroleum and coal products accounted for Singapore — 15 1 per cent, Venezuela — 23 2 per cent, Nigeria — 12 9 per cent

[e] Output structure in 1976

[f] Unweighted

[g] Output structure in 1977

[h] Excluding petroleum refining and petroleum and coal products

ANNEX TABLE A.33

Structural change in relation to growth rate of manufacturing production by country groups, 1970-1980

(*Percentage per annum*)

	Index of structural change[a]			*Growth rate of manufacturing production*		
	1970-1973	*1973-1980*	*Change*	*1970-1973*	*1973-1980*	*Change*
Developed market-economy countries	0.60	0.47	−0.13	6.4	1.7	−4.7
Socialist countries of Eastern Europe	1.33	1.02	−0.31	8.7	6.7	−2.0
Developing countries	1.71	0.66	−1.05	9.5	4.7	−4.8

Source Based on United Nations indices of industrial production (United Nations, *Monthly Bulletin of Statistics*, various issues)

[a] See text, footnote 110, for definition These indices are based on data for 10 branches of industry and are not strictly comparable with those in annex table A 34, which are based on 18 industrial branches

ANNEX TABLE A.34

Structural change indices (*I*) in relation to growth rates of output (*g*) in manufacturing industry in Western Europe, United States and Japan, 1958-1978

(*Percentage per annum*)

	1958-1960 to 1968-1970		*1970-1978*		*Change*	
Region/country	*I*	*g*	*I*	*g*	*I*	*g*
Western Europe						
Belgium	1.07	6.5	1.02	3.4	−0.05	−3.1
Finland	1.04	6.9	0.87	3.1	−0.17	−3.8
France	0.94	6.3	1.32	4.4	+0.38	−1.9
Germany, Fed. Rep. of	1.02	6.3	0.77	2.0	−0.25	−4.3
Italy	0.94	8.3	0.66	2.9	−0.28	−5.4
Netherlands	1.36	6.8	0.79	2.9	−0.57	−3.9
Norway	0.93	5.3	0.90	1.5	−0.03	−3.8
Sweden	1.12	6.9	0.68	0.7	−0.44	−6.2
United Kingdom	0.77	3.3	0.73	0.7	−0.04	−2.6
United States	0.63	4.9	0.56	4.3	−0.07	−0.6
Japan	1.77	13.9	0.95	4.3	−0.82	−9.6

Sources *Economic Survey of Europe in 1980* (United Nations publication, Sales No E 81 II E 1), *Yearbook of Industrial Statistics, 1979 Edition*, vol I *General Industrial Statistics* (United Nations publication, Sales No E 81 XVII 8)

ANNEX TABLE A.35

Growth rates of manufacturing output and GDP in selected developing countries, 1963-1980

Country *	Manufacturing [a]		GDP [a]		Manufacturing as proportion of GDP 1980
	1963-1973	1973-1980	1963-1973	1973-1980	
	Percentage per annum				Per cent
Larger countries					
Argentina	7.8 [b]	−0.2	5.4	1.7	32
Brazil	9.2	6.8	7.7	7.6	30
India	4.5	4.0	3.1	3.3	17
Mexico	8.7	5.9	7.1	5.4	23
Smaller countries and territories					
Egypt	4.7	−2.7 [c]	5.1	7.6	23 [d]
Kenya	8.6	9.3 [c]	6.1	3.7	13 [d]
Nigeria	9.1	14.7 [c]	5.8	7.8	8 [e]
Hong Kong	12.7	4.6 [c]	9.0	8.7	26 [d]
Indonesia	9.2	12.8	6.2	6.8	11
Malaysia	..	10.2	7.2	7.3	17
Pakistan	8.3	4.4	6.5	4.9	16
Philippines	6.6	1.4	4.9	6.1	24
Rep. of Korea	20.1	18.3	9.8	7.8	35
Singapore	16.6	9.0	10.8	8.2	22
Chile	5.0 [b]	4.8 [f]	3.1 [b]	3.7 [f]	22
Colombia	6.9	4.6	6.1	5.2	22

Sources United Nations, *Statistical Yearbook* (various issues), United Nations, *Monthly Bulletin of Statistics* (various issues), United Nations, *Handbook of World Development Statistics*, 1979 (PPS/QIR/5)

[a] Based on values at constant prices

[b] 1963-1972

[c] 1973-1977

[d] 1978

[e] 1977

[f] 1972-1980

* Grouped according to absolute size of manufacturing sector

ANNEX TABLE A.36

Labour productivity in complementary service industries, 1953-1967

Country	Average rate of growth of labour productivity, 1953-1967 (Percentage)		Level of labour productivity relative to industry 1967	
	Transport and communications	Commerce and banking	Transport and communications [a]	Commerce and banking [b]
Austria	6.0	5.2	0.85	0.65
Belgium	6.6	4.5	1.25	0.95
France	4.9	4.8	0.73	0.85
Germany, Federal Republic of	6.4	6.4	0.95	1.06
Italy	4.5	5.5	1.43	0.88
Japan	7.7	8.9	1.22	0.67
Netherlands	4.7	3.9	1.19 [c]	0.81 [c]
Norway	5.9	4.2	1.57	0.88
United Kingdom	5.5	3.2	1.25	0.84
United States	7.4	6.4	1.20	0.80

Source Based on Y Sabolo, *op cit*, table 33 and appendix 6

[a] Labour productivity in transport and communications as a ratio of labour productivity in industry

[b] Labour productivity in commerce and banking as a ratio of labour productivity in industry

[c] 1966

ANNEX TABLE A.37

Growth of GDP, total and by sector, in selected OPEC member countries, 1970-1973, 1973-1978 and 1978-1980
(Average annual percentage change at constant 1975 prices)

Sector	Iraq	Saudi Arabia	Kuwait	Libyan Arab Jamahiriya	Iran	Venezuela	Indonesia	Algeria	Nigeria	Ecuador	Gabon	Average
Agriculture												
1970-73	0.83	2.37	2.53	24.60	2.80	2.63	4.93	1.03	−3.27	9.77	4.03	1.7
1973-78	3.52	2.72	6.26	17.58	3.84	4.37	3.38	0.54	3.72	0.44	8.02	3.4
Mining												
1970-73	10.90	22.90	2.53	−10.03	11.10	−2.03	17.27	2.83	21.77	181.10	6.90	8.1
1973-78	8.04	3.48	−8.42	0.38	−4.38	−8.88	4.84	0.96	0.58	11.10	5.16	−0.9
Manufacturing												
1970-73	11.00	4.73	13.23	27.87	17.47	5.63	14.77	8.13	8.03	13.50	36.83	10.1
1973-78	18.08	4.78	19.34	24.14	7.62	5.50	12.22	5.38	17.54	7.20	13.10	8.5
Utilities												
1970-73	8.40	10.60	14.77	16.43	18.63	9.80	7.40	16.90	28.67	11.47	−0.67	13.1
1973-78	22.60	7.54	9.05	18.50	12.86	9.86	11.94	14.08	20.90	10.12	15.40	12.8
Construction												
1970-73	9.43	13.73	−8.08	14.24	9.23	20.97	22.67	22.10	27.30	22.87	44.23	18.3
1973-78	43.28	25.10	13.38	10.60	13.00	11.06	13.64	12.08	14.38	6.66	22.24	14.8
Services												
1970-73	5.03	7.47	22.00	27.87	5.67	6.50	8.90	5.27	3.63	12.83	10.73	9.6
1973-80	11.92	12.38	8.20	15.42	11.35	7.66	8.58	6.18	13.42	5.16	14.96	9.6
Total GDP												
1970-73	7.63	18.60	4.43	−3.50	12.09	2.70	9.80	5.40	7.37	16.33	10.60	8.2
1973-78	10.08	5.80	−3.78	4.60	2.74	1.66	6.58	4.55	7.40	4.64	9.74	4.3
1978-80	9.60	9.50	−4.70	8.50	−14.70	−0.30	−11.70	32.00	10.90	6.40	6.00	1.5
Non-oil GDP												
1970-73	4.54	7.30	15.38	30.59	13.07	6.78	8.04	7.05	2.34	12.19	15.18	8.3
1973-78	13.54	12.66	9.60	14.49	8.51	7.13	7.13	6.26	10.32	4.36	13.66	8.7
1978-80	16.30	12.80	39.30	20.80	−1.60	0.00	−5.70	38.20	13.10	7.80	14.40	5.5
Total GDP adjusted for income effect of terms of trade												
1970-73	8.50	29.90	17.80	0.60	21.40	9.90	11.50	7.60	9.00	10.10	12.10	14.3
1973-78	18.30	15.70	−3.00	14.60	8.90	4.00	9.00	8.40	10.20	7.40	15.60	8.50
1978-80	25.30	21.20	10.50	15.40	−14.00	20.50	−8.70	98.70	20.10	10.60	36.40	9.00

Source 1970-1973 and 1973-1978 UNCTAD secretariat estimates, based on data of the Department of International Economic and Social Affairs of the United Nations Secretariat, and United Nations, *Monthly Bulletin of Statistics*, March 1982 1978-1980 UNCTAD secretariat estimates

ANNEX TABLE A.38

The structure of gross domestic expenditure in the low and medium absorbers and high absorbers among 11 selected oil-exporting developing countries, 1970-1980
(Percentage of GDP at current prices)

	Government consumption	Private consumption	Domestic saving	Domestic capital formation
Total				
1970-1973	14.7	51.2	34.2	21.4
1974-1978	16.1	41.1	42.9	28.6
1979-1980	16.7	39.5	43.8	28.0
LMA[a]				
1970-1973	18.1	38.8	43.2	18.3
1974-1978	19.3	29.1	51.6	26.2
1979-1980	21.5	27.8	50.7	27.4
HA[a]				
1970-1973	11.8	61.5	26.6	24.1
1974-1978	12.1	55.4	32.5	31.5
1979-1980	12.1	52.1	35.8	28.6

Source 1970-1978 Calculated from data in United Nations, *Handbook of World Development Statistics 1979* (PPS/QIR/5), 1979-1980 based on United Nations, *Monthly Bulletin of Statistics*, March 1982

[a] See the note to table 11

ANNEX TABLE A.39

Movements in the non-oil GDP deflator and import price index of 11 selected oil-exporting developing countries, 1970-1978

(*Average annual percentage increase*)

	Low and medium absorbers (LMA)[a]		*High absorbers (HA)*[a]		*Total*	
	Non-oil GDP deflator	*Import price index*[b]	*Non-oil GDP deflator*	*Import price index*[b]	*Non-oil GDP deflator*	*Import price index*[b]
1970-1973	12.2	12.5	9.2	11.6	10.2	12.1
1974-1978	18.2	12.1	13.9	11.3	15.6	11.7

Source Non-oil GDP deflator calculated from data provided by the Department of International Economic and Social Affairs of the United Nations Secretariat, import unit values estimates by the UNCTAD secretariat, used as a proxy for import price index

[a] See the note to table 11

[b] This index is the UNCTAD unit value index of imports into OPEC countries It shows a much lower rate of increase than that of the corresponding index compiled by the OPEC secretariat, which for 1974-1978 is estimated at 22 per cent annually The latter index presumably takes into account discriminatory pricing of capital goods exported from industrial countries to OPEC countries Independent evidence confirms that the import content of capital projects in selected OAPEC countries is 40-100 per cent higher than similar projects in OECD countries (See *Ente Nazionale Idrocarburi* hp4 (ENI), *The Interdependence Model* (Seminar on Development through Co-operation between OAPEC, Italy and South European countries, 7-9 April 1981), Vol III — *Annexes*, annex 2, p 12

ANNEX TABLE A.40

Payment balances on current account of selected oil-exporting developing countries, 1973-1980[a]

(*Millions of current dollars*)

	1973	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*Cumulative balance, 1973-1980*
Low absorbers	5 746	35 191	28 151	29 277	25 708	12 633	36 034	75 467	248 207
Saudi Arabia	3 015	24 109	17 438	17 605	15 807	1 686	13 092	43 797	136 549
Kuwait	1 408[b]	5 848[b]	6 684	7 171	5 645	6 986	14 960	16 687	65 389
United Arab Emirates[b] . . .	1 039	3 567	2 853	3 419	3 707	3 151	6 552	12 192	36 480
Qatar[b]	284	1 667	1 176	1 082	549	810	1 430	2 791	9 789
Medium absorbers	1 190	17 923	8 251	10 350	11 507	4 898	24 165	20 862	99 146
Libyan Arab Jamahiriya . .	222	2 768	556	2 988	3 392	2 211	7 543	11 078[b]	30 758
Iraq	813	2 856	2 971	2 627	3 025	2 853[b]	8 074[b]	9 944[b]	33 163
Iran	155	12 299	4 724	4 735	5 090	−166[b]	8 548[b]	−160[b]	35 225
High absorbers	−181	12 017	−846	−1 997	−6 941	−15 127	859	10 340	−1 876
Venezuela	883	5 829	2 201	319	−3 128	−5 698	371	4 261	5 038
Nigeria	−10	4 904	57	−363	−1 003	−3 743	1 718	3 083	4 643
Algeria	−446	571	−1 679	−905	−2 328	−3 558	−1 739	219	−9 865
Indonesia	−530	548	−1 135	−925	−71	−1 436	946	2 818	215
Ecuador	−12	23	−239	−29	−377	−730	−646	−616	−2 626
Gabon	−66	142	−51	−94	−34	38	209	575[b]	719
TOTAL	6 755	65 131	35 556	37 630	30 274	2 404	61 058	106 669	345 477

Sources IMF, *Balance of Payments Statistics Yearbook*, Vol 31 (1980) and Vol 32 (1981)

Note For the classification into low, medium and high absorbers see text, paragraph 205

[a] Net payments on goods, services and income account, including private unrequited transfers and excluding official unrequited transfers Countries selected are the OPEC member countries

[b] UNCTAD secretariat estimates

ANNEX TABLE A.41

The share of value added and exports of the oil sector in total GDP and total exports of 11 selected oil-exporting developing countries, 1970-1978

(*Percentage, based on data in current prices*)

Group	1970-1973		1974-1978	
	GDP	Exports	GDP	Exports
LMA[a]	41.1	95.5	53.1	98.0
HA[a]	15.3	73.9	24.9	86.7
Total	27.9	88.7	39.4	94.4

Source As for annex table A 38

[a] See the note to table 11

ANNEX TABLE A.42

Concessional financial assistance from selected OPEC member countries to other developing countries (bilateral and multilateral), 1977-1981[a]

(*Millions of dollars*)

Country	1977	1978	1979	1980	1981
			Commitments		
Algeria	171.5	228.8[b]	163.3[b]	262.0[b]	396.2
Iran	290.2	12.0	0.1	56.7[c]	..
Iraq	218.6	603.3	1 182.8	2 504.9	1 100.8
Libyan Arab Jamahiriya	222.6	605.1	211.6	725.3	1 120.0
Kuwait	1 851.2	1 793.9	1 988.9	3 352.7	4 617.0
Qatar	104.5	214.2	353.3	616.8	551.1
Saudi Arabia	2 512.1	2 128.3	3 412.6	3 917.8	4 346.7
United Arab Emirates	1 214.1	875.2	1 097.6	1 218.8	983.5
Venezuela	1 041.0	528.0	673.0	625.0	..
TOTAL	7 625.8	6 988.8	9 083.2	13 281.0	(13 070.3)
			Disbursements		
Algeria	102.1	228.8[b]	163.3[b]	262.0[b]	(366.2)
Iran	211.0	278.0	25.0	3.0	..
Iraq	111.8	563.8	1 028.8	2 202.8	(695.7)
Libyan Arab Jamahiriya	121.2	524.1	429.6	217.9	(785.5)
Kuwait	1 433.3	1 685.6	1 847.4	1 482.8	(1 722.8)
Qatar	102.7	214.5	249.8	591.3	(415.8)
Saudi Arabia	2 303.8	1 981.0	2 901.3	3 230.5	(3 645.5)
United Arab Emirates	1 577.2	779.6	1 117.6	1 210.6	(862.2)
Venezuela	723.0	746.0	494.0	612.0	..
TOTAL	6 686.1	7 001.4	8 256.8	9 812.9	(8 494.0)

Source UNCTAD, based on national and multilateral sources

[a] Including contributions to IDA

[b] Preliminary estimates of disbursements by the Algerian Ministry of Finance, commitments in these years are assumed equal to disbursements

[c] *Development Co-operation, 1981 Review* (Paris OECD, 1981)

ANNEX TABLE A.43

National and expatriate labour force in five low and medium absorbers among oil-exporting developing countries, 1975-1980

Country	Number		Annual growth rate 1975-1980 (percentage)	Share[a]			
				Nationals		Other	
	1975	1980[b]		1975	1980	1975	1980
Saudi Arabia							
Nationals	1 026.5	1 133.3	2.0	57	49	43	51
Other	773.4	1 163.9	8.5				
Total	1 799.9	2 297.2	5.0				
Libyan Arab Jamahiriya							
Nationals	449.2	525.8	3.2	57	51	43	49
Other	332.4	510.2	8.9				
Total	781.6	1 036.0	5.8				
Kuwait							
Nationals	91.8	117.2	5.0	31	31	69	69
Other	208.0	259.9	4.6				
Total	299.8	377.1	4.7				
United Arab Emirates							
Nationals	45.0	52.7	3.2	15	14	85	86
Other	251.5	333.8	5.8				
Total	296.5	386.5	5.4				
Qatar							
Nationals	12.5	15.6	4.5	23	15	77	85
Other	53.7	90.7	11.1				
Total	66.2	106.3	9.9				
Total							
Nationals	1 625.0	1 844.6	2.6	50	44	50	56
Other	1 619.0	2 358.5	7.8				
Total	3 244.0	4 203.1	5.3				

Source J S Birks and C A Sinclair, *International Migration and Development in the Arab Region* (Geneva, ILO, 1980)

[a] Per cent of total labour force

[b] Estimates by the authors

ANNEX TABLE A.44

Growth of net material product, total and by sectors, in the socialist countries of Eastern Europe, 1956-1980

(Average annual percentage change based on data in constant prices)[a]

Country	1956-1960	1961-1965	1966-1970	1971-1975	1976-1980 Plan	1976-1980 Actual
			Net material product			
Total	9.1	6.2	7.4	6.2	5.3	4.1
Bulgaria	9.5	7.0	8.7	7.8	7.7	6.1
Czechoslovakia	7.5	1.2	6.9	5.7	4.9	3.7
German Democratic Republic	7.7[b]	2.6	5.2	5.4	5.0	4.1
Hungary	5.8	4.5	6.8	6.2	5.4-5.7	3.2
Poland	6.6	6.0	6.0	9.8	7.0-7.3	1.2
Romania	10.8	8.9	7.7	11.3	10.0-11.0	7.2
Soviet Union	8.7	6.4	7.8	5.7	4.7[c]	4.2
			Agriculture[d]			
Total	..	1.1	−0.7	0.7	3.2	1.7
Bulgaria	28.3[b]	2.9	−4.5	2.3	3.7	2.1
Czechoslovakia	−1.7	−4.2	4.1	3.0	2.7-2.8	1.8
German Democratic Republic	9.2[b]	1.8	−0.4	2.1	2.6	1.1
Hungary	2.7[b]	0.7	−0.5	3.5	3.2-3.4	2.9
Poland	4.0[b]	1.1	−3.6	3.2	3.0-3.5	0.3
Romania	12.2	−0.1	−4.0	4.7	5.1-7.6	4.9
Soviet Union	..	1.2	−0.6	2.5	3.0	1.7
			Industry[e]			
Total	..	8.2	9.3	7.8	6.3	4.9
Bulgaria	15.9	11.7	11.2	9.0	9.2	6.0
Czechoslovakia	10.5	5.2	6.3	6.6	5.7-6.0	4.5
German Democratic Republic	9.2	5.9	6.4	6.5	6.0	4.9
Hungary	7.5	8.1	6.1	6.4	6.0	3.4
Poland	9.9	8.6	8.3	10.4	8.2-8.5	4.7
Romania	10.9	13.0	11.8	12.9	10.2-11.2	9.5
Soviet Union	10.4	8.6	8.5	7.4	6.3	4.5

Sources National statistics, CMEA statistical yearbooks, plan and plan fulfilment reports and ECE, *Economic Survey of Europe in 1981* (United Nations publication, Sales No E.82.II.E.1), table 3.1.1, and pp. 133, 174 and 215.

[a] Change from the year preceding the period specified to the final year of the period, unless otherwise stated.

[b] Current prices.

[c] Net material product distributed.

[d] Cumulative output in the five-year period expressed as an annual percentage rate of growth over cumulative output in the previous five-year period.

[e] Gross output.

ANNEX TABLE A.45

Distribution of net material product of the socialist countries of Eastern Europe by major sectors, 1970-1980
(Percentage share)[a]

Country	Agriculture and forestry			Industry and construction			Transport, communications, trade and other economic activities		
	1970	1975	1980	1970	1975	1980	1970	1975	1980
Bulgaria	22.8	22.1	16.7	59.8	60.9	60.8	17.4	17.0	22.5
Czechoslovakia	10.5	8.7	7.3	73.4	78.4	75.5	16.1	12.9	17.2
German Democratic Republic	12.8	11.1	8.5	66.2	66.5	75.1	21.0	22.4	16.4
Hungary	21.7	17.9	15.8	55.6	57.3	60.1	22.7	24.8	24.1
Poland	17.3	14.8	15.3	64.4	70.8	64.0	18.3	14.4	20.7
Romania	19.5	16.6	15.2	69.5	65.5	68.6	11.0	17.9	16.2
Soviet Union	22.0	17.1	15.2	61.5	64.0	61.4	16.5	18.9	23.4

Source ECE, *Economic Survey of Europe in 1981* (United Nations publication, Sales No E.82.II.E.1), p. 127

[a] Due to differences in coverage and price bases, figures differ from those derived directly from national statistics

ANNEX TABLE A.46

Distribution of industrial output of the socialist countries of Eastern Europe by major branches, 1960-1980
(Percentage share)[a]

Country	Electricity, heating and fuel	Engineering	Chemicals	Metallurgy	Light industry[b]	Food processing	Other
Bulgaria							
1960	4.8	12.3	3.8	1.2[c]	21.6	33.7	22.6[d]
1970	7.3	20.0	7.5	3.2[c]	16.8	25.4	19.8[d]
1980	6.4	28.4	9.0	4.0[c]	12.8	20.2	19.2[d]
Czechoslovakia							
1960	10.6	24.8	4.7	2.2	12.6	20.1	15.0
1970	10.2	29.8	7.0	1.6	11.2	15.9	14.3
1980	10.3	30.4	8.5	0.8	10.6	13.9	15.5
German Dem. Rep.							
1960	12.2	24.5	8.8	8.5	13.4	23.0	9.6
1970	11.9	30.5	10.1	7.7	10.9	18.3	10.6
1980	11.3	34.8	10.6	7.6	9.7	15.8	10.2
Hungary							
1960	14.1	25.1	4.4	3.4	14.1	18.8	10.1
1970	14.1	28.9	9.1	1.5	11.1	16.3	9.0
1980	13.5	30.1	13.2	9.6	9.5	14.6	9.5
Poland							
1960	11.8	15.9	5.5	2.6	16.2	26.8	11.2
1970	10.3	25.6	8.9	1.4	14.4	17.9	11.5
1980	7.9	34.9	9.4	9.8	13.1	14.9	10.0
Romania							
1960	11.5	24.3	6.6	8.5	16.6	19.0	13.5
1970	8.3	25.1	10.4	1.8	14.0	17.3	13.1
1980	5.7	35.5	9.0	0.8	14.7	12.9	11.4
Soviet Union							
1960	7.7	20.1	5.2	..	22.8	23.6	20.6[e]
1970	9.7	23.2	6.6	..	17.0	20.9	22.6[e]
1980	9.1	27.4	7.6	..	16.4	18.1	21.4[e]

Source CMEA, *Statistical Yearbook* (in Russian), Moscow, 1981, pp. 76-79

[a] Figures are not strictly comparable because of the use of national classifications of industrial branches

[b] Including glass, textiles, clothing, leather and shoe industries

[c] Ferrous metallurgy only

[d] Including non-ferrous metallurgy

[e] Including ferrous and non-ferrous metallurgy

ANNEX TABLE A.47

Crude oil production by region, 1960-1981
(*Millions of tons*)

Region	*1960*	*1970*	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*
World	1 052.1	2 362.5	2 871.7	2 879.2	2 733.1	2 954.3	3 066.7	3 094.1	3 198.3	3 074.0	2 859.0
Developing countries	495.4	1 381.4	1 767.3	1 759.8	1 597.3	1 782.5	1 830.5	1 778.2	1 838.8	1 692.7	1 455.6
Major petroleum exporters	465.5	1 212.7	1 600.4	1 593.7	1 429.4	1 616.1	1 653.3	1 594.2	1 662.2	1 489.2	1 302.0
OPEC	438.7	1 144.9	1 520.1	1 508.9	1 333.7	1 514.0	1 542.3	1 469.6	1 520.5	1 323.7	1 125.2
Others	26.8	67.8	80.3	84.8	95.7	102.1	111.0	124.6	141.7	165.5	176.8
Other developing countries	29.9	168.7	167.3	166.1	167.9	166.4	177.2	184.0	176.6	203.5	153.6
Developed market-economy countries	389.3	582.3	601.4	575.0	550.7	548.5	576.8	618.3	647.4	653.8	672.6
North America	373.5	550.1	559.6	533.3	499.4	482.1	485.1	506.8	508.5	508.2	552.0
Western Europe	15.1	22.8	22.6	22.6	30.8	45.3	69.7	89.6	116.5	126.0	117.7
Others	0.7	9.4	19.2	19.1	20.5	21.1	22.0	21.9	22.4	19.6	2.9
Socialist countries	167.4	398.8	503.0	544.4	585.1	623.3	659.4	697.6	712.1	727.5	730.8
USSR	147.9	353.0	429.0	458.9	490.8	519.7	545.8	573.5	586.0	603.0	609.0
China	5.5	28.2	54.8	65.8	74.3	83.6	93.6	104.1	106.1	105.8	105.9
Others	14.0	17.6	19.2	19.7	20.0	20.0	20.0	21.0	20.0	18.7	15.9

Sources United Nations, *Yearbook of World Energy Statistics*, *BP Statistical Review of the World Oil Industry*, *Petroleum Economist*, January 1982

ANNEX TABLE A.48

Primary energy inputs for electricity generation in OECD countries, 1960-1980
(*Million tons of oil equivalent*)

Type	*1960*	*1970*	*1973*	*1977*	*1978*	*1979*	*1980*[a]	*Variation 1979-1980 (Per cent)*
Solid fuels	227	354	376	447	454	496	532	7.3
Oil	33	153	249	237	235	224	196	−12.5
Natural gas	50	111	120	119	120	127	130	2.4
Nuclear	1	18	45	114	132	134	145	8.2
Hydro/other	151	199	214	229	243	254	255	0.4
Total inputs	462	835	1 005	1 146	1 181	1 229	1 257	2.3
Electricity generated TWh[b]	1 721	3 518	4 306	4 849	5 054	5 118	5 187	1.34

Source IEA, *Energy balances of OECD countries* (various issues)
[a] Preliminary
[b] Terawatt hours

ANNEX TABLE A.49

Gross domestic product, primary energy requirements and energy output ratio in OECD countries, 1960-1980

	1960	*1970*	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*
					$ billion					
Gross domestic product (GDP) (at 1975 prices and exchange rates)	2 181	3 502	4 068	4 080	4 081	4 284	4 449	4 619	4 776	4 834
					Million tons oil equivalent					
Primary energy[a] requirements	1 896	3 153	3 597	3 566	3 451	3 645	3 720	3 838	3 919	3 812
					Ratio					
Energy/GDP	0.869	0.900	0.884	0.874	0.846	0.851	0.836	0.831	0.821	0.788

Sources GDP OECD, Main Economic Indicators (various issues), IEA, *Energy balances of OECD countries* (various issues)
[a] Includes requirements of international marine bunkers

Annex B

TECHNICAL ANNEX

The tables in this annex relate to the results of regression analyses referred to in the text of parts II and III of this report.

LIST OF TABLES

ANNEX TABLE B.1

Elasticity of volume growth with respect to value added per person employed (V/E) in manufacturing industry in developed market-economy countries, 1970-1978:[a] regression analysis

	Constant	*Coefficient of V/E*	*D W*[b]	R^2
United States[c]	0.12	0.81	2.12	0.411
	(0.47)	(3.13)		
Western Europe[d]	−0.33	1.22	1.69	0.153
	(−0.44)	(1.59)		
Japan	0.33	0.47	2.37	0.152
	(1.01)	(1.47)		

Source *Yearbook of Industrial Statistics 1979 Edition*, vol. I — *General Industrial Statistics* (United Nations publication, Sales No. E.81.XVII.8).

[a] Excluding tobacco and petroleum refining. The variables being expressed in logarithms, the coefficients can be interpreted as elasticities.

[b] Durbin-Watson test.

[c] Excluding leather and leather products.

[d] Weighted averages for 8 countries.

ANNEX TABLE B.2

Elasticity of volume growth with respect to factor-intensity indicators in manufacturing industry in developed market-economy countries, 1970-1978:[a] regression analysis

		Coefficient of				
	Constant	*Skill intensity*[b]	*Physical capital intensity*[c]	*Dummy*[d]	*D W*[b]	R^2
United States[f]	−0.02	0.60	0.21	−1.16	1.76	0.713
	(−0.23)	(1.21)	(0.84)	(−4.45)		
Western Europe[g]	−0.24	0.45	0.49	−0.19	2.12	0.616
	(−3.48)	(2.54)	(2.42)	(−2.78)		
Japan	−0.21	1.62	−0.15	−0.08	2.34	0.311
	(−1.19)	(1.33)	(−0.21)	(−0.14)		

Source As for annex table B.1.

[a] See footnote *a* to annex table B.1.

[b] Wages and salaries per person employed expressed as a percentage of the mean for all manufacturing industry.

[c] Value added minus wages and salaries per person employed, expressed as a percentage of the mean for all manufacturing industry.

[d] Textiles and clothing = 1, other industries = 0 (for Western Europe and Japan), basic metals = 1, other industries = 0 (for United States).

[e] Durbin-Watson test.

[f] See footnote *c* to annex table B.1.

[g] See footnote *d* to annex table B.1.

ANNEX TABLE B.3

Productivity indicators in industry in socialist countries of Eastern Europe, 1971-1980
(Average annual percentage change)

	Capital intensity[a]		*Productivity*			
			Labour[b]		*Capital*[c]	
Country	*1971-1975*	*1976-1980*	*1971-1975*	*1976-1980*	*1971-1975*	*1976-1980*
Bulgaria	6.9	8.4	6.2	4.4	−0.6	−3.6
Czechoslovakia	4.9	5.3	5.9	3.7	1.1	−1.5
German Democratic Republic	6.1	5.4	6.2	4.4	0.1	−1.0
Hungary	7.8	9.2	6.1	4.5	−1.5	−4.3
Poland	6.2	8.9	7.3	4.3	1.0	−4.2
Romania	6.5	6.7	6.2	5.8	−0.3	−0.8
Soviet Union	7.0	5.9	5.8	2.8	−1.1	−2.9

Source ECE, *Economic Survey of Europe in 1981* (United Nations publication, Sales No. E.82.II.E.1), chap. 3, table 3.3.2.

[a] Value of fixed assets per employee.

[b] Gross output per employee.

[c] Ratio of gross output to fixed assets.

ANNEX TABLE B 4

Agricultural employment and labour productivity in socialist countries of Eastern Europe, 1971-1980
(Average annual percentage change)

Country	Employment		Productivity	
	1971-1975	*1976-1980*	*1971-1975*	*1976-1980*
Bulgaria	−4 1	−2 6	7 3	3 6
Czechoslovakia	−2 7	−1 1	5 4	3 3
German Democratic Republic	−2 3	−0 4	5 2	1 6
Hungary	−2 8	−1 6	7 6	3 5
Poland	−1 4	−2 4	4 7	0 7
Romania	−4 5	−4 9	11 5	9 2
Soviet Union	−0 2	−1 2	1 0	2 8

Source As for annex table B 3

ANNEX TABLE B 5

The sensitivity of traded goods prices to changes in aggregate demand, 1956-1980: regression analysis

Commodity group	Constant term	Exchange rate	Aggregate demand	Inflation rate
Primary commodities[a]	−0 57	−0 30	8 05	3 49
	(−4 2)	(−0 6)	(4 1)	(4 4)
Food	−0 33	−1 27	3 70	3 04
	(−1 3)	(−1 0)	(2 1)	(2 1)
Beverages	−0 65	2 74	9 73	3 90
	(−3 1)	(3 6)	(3 3)	(3 2)
Metals	−0 50	−0 24	7 77	2 79
	(−3 4)	(−0 4)	(3 7)	(3 2)
Agricultural raw materials	−0 83	−1 11	12 46	4 32
	(−4 9)	(−1 8)	(5 1)	(4 4)
Petroleum	0 10	1 30	−8 11	5 34
	(0 2)	(0 5)	(−0 9)	(1 4)
Manufactures	−0 03	−0 61	−0 25	1 33
	(−0 7)	(−3 7)	(−0 4)	(5 0)

Source UNCTAD secretariat calculations based on international sources

Note Coefficients are based on regressions of rates of growth of the variables indicated on the rate of growth of each price index Figures in parentheses are t values The exchange rate refers to a GDP weighted index of the US dollar exchange rate with respect to the rest of the world Aggregate demand is proxied by the GDP of the developed market-economy countries and inflation by their GDP deflator

[a] Excluding petroleum

ANNEX TABLE B.6

Annual change of "employment-corrected" double factorial terms of trade, 1960-1977: regression analysis

(Implicit annual rate of change)[a]

		I		*II*
Minerals (except fuels)	A	−0.0042		
		(−0.74)		
	B	−0.0034		
		(−0.63)		
Non-ferrous metals[b]	A	−0.1670	A	−0.0064
		(−1.72)		(−1.23)
	B	−0.0088	B	−0.0014
		(−0.94)		(−0.28)
Six crops[c]	A	−0.0378	A	−0.0280
		(−9.99)		(−5.05)
	B	−0.0302	B	−0.0204
		(−7.80)		(−3.58)
Four crops[d]	A	−0.0430	A	−0.0449
		(−6.37)		(−5.47)
	B	−0.0353	B	−0.0373
		(−5.09)		(−4.45)
All agricultural products	A	−0.0269		
		(−8.20)		
	B	−0.0373		
		(−5.63)		

Source Forthcoming study by Professor John Spraos (see text, footnote 29)

Note In procedure (I), the value of the developing countries' production is proxied by the value of exports, while in (II) it is obtained by multiplying current output by current quoted prices or current export unit values In procedure (A) the employment normalization is with respect to the total economically active population in developing countries, while in (B) it is with respect to the same parameter in developed market-economy countries

[a] The implicit rates are given by log-linear regressions The figures in brackets are t-values In percentage terms, the implicit coefficients must be multiplied by a factor of 100

[b] Antimony, cooper, lead, *mercury*, nickel, silver, zinc

[c] Cocoa, coffee, cotton, rubber, sugar, tea

[d] Cocoa, coffee, rubber, tea

ANNEX TABLE B.7

Sensitivity of structural change indices (I) to growth rates of manufacturing production (G) for developed market-economy countries, 1958-1960 to 1978:[a] regression analysis

Period	*Constant*	*Coefficient of G*	*D W*[b]	R^2
1958-1960 to 1968-1970				
Western Europe[c]	0.39	0.11	1.98	0.582
	(1.71)	(2.89)		
Western Europe and Japan	0.46	0.09	2.84	0.764
	(3.45)	(5.08)		
Western Europe, Japan and USA	0.38	0.10	2.41	0.746
	(2.76)	(5.13)		
1970-1978				
Western Europe	0.58	0.12	1.96	0.503
	(4.98)	(2.66)		
Western Europe and Japan	0.60	0.10	2.05	0.479
	(5.56)	(2.71)		
Western Europe, Japan and USA	0.67	0.06	1.60	0.164
	(4.74)	(1.33)		
Change between the two periods				
Western Europe	0.45	0.16	2.79	0.568
	(2.12)	(3.04)		
Western Europe and Japan	0.35	0.13	2.71	0.722
	(2.49)	(4.56)		
Western Europe, Japan and USA	0.23	0.11	2.31	0.649
	(1.86)	(4.08)		

Source See annex table A 34

[a] Linear regressions Figures in brackets are t-values

[b] Durbin-Watson test

[c] Excluding Italy If Italy is included, the R^2 falls to 0 273, with the coefficient of *G* at 0 06 (1 62)

Annex C

METHODOLOGICAL NOTES

Contents

ANNEX C.1

A method of deflation of national accounts which preserves consistency between the external and internal balances

1. An examination of savings performance requires that national accounts be deflated to avoid biases caused by any large movements in relative prices. However, this poses the difficulty of the choice of deflator, as the deflated foreign balance does not equal the difference between exports and imports (both deflated by their own price index). The generally accepted solution to this problem is to add to the balance equations a terms-of-trade adjustment, which may be interpreted as real income gains or losses due to movements in the terms of trade (see below).

2. The terms-of-trade adjustment is defined as the difference between the foreign balance deflated by an appropriate single index and the foreign balance computed by deflating exports and imports by their own indices. In this study the single deflator was defined as a weighted geometric average of the export and import price indices.

Mathematical derivation

Y = Gross domestic product
C = Consumption
I = Gross domestic investment
X = Exports
M = Imports
S = Gross domestic savings
B = Current-account balance
P_x = Export price index
P_m = Import price index
TOT = Real income effect of terms of trade
P_{xm} = Geometric average of export and import indices
g = Ratio of exports to sum of exports and imports

Current prices:

(1) $Y = C + I + X - M$
(2) $S = I + B$
(3) $X = M + B$

Constant prices:

(1) $Y' = C' + I' + X' - M' + TOT'$
(2) $S' = I' + B'$
(3) $X' + TOT' = M' + B'$

where: $TOT' = (X - M)/P_{xm} - (X/P_x - M/P_m)$
$= X\,(1/P_{xm} - 1/P_x) - M\,(1/P_{xm} - 1/P_m)$
$P_{xm} = P_x^{\,g}\, P_m^{(1-g)}$
$g = X/(X + M)$

Note: A prime (′) indicates that the variable in question is expressed in 1975 prices.

ANNEX C.2

Patterns of demand for food and raw materials

1. The decomposition procedure used for table 22 was as follows:

2. The change in the value of imports (at constant prices) of an individual commodity i from developing countries into developed market-economy countries from period 0 to period 1 can be expressed as:

(1) $$\Delta M_i = M_{i1} - M_{i0}$$

3. Summing over n commodities, this can be written as:

(2) $$\sum_{i=1}^{n} \Delta M_i = \sum_{i=1}^{n} m_{i1} C_{i1} - \sum_{i=1}^{n} m_{i0} C_{i0}$$

where C_i represents consumption in developed market-economy countries and m_i is the proportion of consumption met by imports from developing countries.

4. The right-hand side of (2) can be divided into two broad elements representing, respectively, the influence on imports from developing countries of the change in domestic consumption of the relevant commodities, and the influence of the change in the proportion of consumption met by imports from developing countries:

(3) $$\sum_{i=1}^{n} \Delta M_i = \sum_{i=1}^{n} m_{i0} (C_{i1} - C_{i0}) + \sum_{i=1}^{n} C_{i1} (m_{i1} - m_{i0})$$

5. For natural materials, the first element on the right-hand side of (3) can be regarded as the net effect of three distinct factors, *viz*:

(i) the overall growth in domestic absorption of industrial raw materials (reflecting the growth of industrial production as a whole);

(ii) changes in the commodity pattern of consumption of natural industrial materials; and

(iii) displacement of natural by synthetic materials.

6. Equation (3) can then be expressed as:

(4) $$\begin{aligned} \sum_{i}^{n} \Delta M_i = {} & \sum_{i}^{n} m_{i0} C_{i0} \left\{ \sum_{i}^{n} C_{i1}^* \Big/ \sum_{i}^{n} C_{i0}^* - 1 \right\} \\ & + \sum_{i}^{n} m_{i0} \left\{ C_{i1} - C_{i0} \left[\sum_{i}^{n} C_{i1} \Big/ \sum_{i}^{n} C_{i0} \right] \right\} \\ & + \sum_{i}^{n} m_{i0} C_{i0} \left\{ \sum_{i}^{n} C_{i1} \Big/ \sum_{i}^{n} C_{i0} - \sum_{i}^{n} C_{i1}^* \Big/ \sum_{i}^{n} C_{i0}^* \right\} \\ & + \sum_{i}^{n} C_{i1} (m_{i1} - m_{i0}) \end{aligned}$$

where $\sum C_i$ represents the consumption of natural materials only and $\sum C_i^*$ the consumption of both natural and synthetic materials.

7. For food, beverages and tobacco, it can be assumed that there has been no displacement of natural by synthetic materials, i.e., that $\sum C_i$ is equal to $\sum C_i^*$.

ANNEX C.3

Techniques used to compute trade volumes of services

1. This annex sets out the main techniques used to compute trade volumes of services as reported in part IV of this report. The data in current terms were taken from the IMF balance-of-payments data base. They were converted from SDRs into United States dollars using the exchange rate given in the IMF data base of *International Financial Statistics* (IFS).

2. The values were converted into volumes in 1980 prices using the following deflators:

(a) *Shipment:* Ocean freight index for liner services, Federal Republic of Germany, according to United Nations, *Monthly Bulletin of Statistics*;

(b) *Passenger services:* IATA air freight tariff index;

(c) *Credit items of other services:* National consumer price indices converted into United States dollar terms applying market rates of exchange, both data series taken from IFS; and

(d) *Debit items of other services:* Consumer price index for industrialized countries according to IFS.

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