



General Assembly

Distr.
GENERAL

A/37/518
13 October 1982

ORIGINAL: ENGLISH

Thirty-seventh session
Agenda item 71 (c)

DEVELOPMENT AND INTERNATIONAL ECONOMIC CO-OPERATION: TRADE
AND DEVELOPMENT

World inflation and the development process

Note by the Secretary-General

1. The Secretary-General has the honour to transmit to the members of the General Assembly the report of the Secretary-General of the United Nations Conference on Trade and Development requested by the Assembly in paragraph 4 of its resolution 34/197 of 19 December 1979.
2. It will be recalled that, in its resolution 36/145 of 16 December 1981, the General Assembly took note with interest of the intention of the Secretary-General of UNCTAD to provide an in-depth study of the world inflationary phenomenon for consideration by the Trade and Development Board at its twenty-fifth session and subsequently by the General Assembly.
3. At its 597th meeting, on 15 September 1982, the Trade and Development Board decided that the comments made on the report of the Secretary-General of UNCTAD entitled "World inflation and the development process" (TD/B/914 and Corr.1) should be incorporated in its report and transmitted to the General Assembly.
4. The Board considered that report under items 3 and 4 of its agenda. An account of its discussion on these items is contained in chapter I of the report of the Board on the first part of its twenty-fifth session. 1/

1/ Official Records of the General Assembly, Thirty-seventh Session, Supplement No. 15 (A/37/15), vol. II, part one.

ANNEX

Report of the Secretary-General of the United Nations Conference
 on Trade and Development regarding world inflation and the
 development process

CONTENTS

<u>Chapter</u>	<u>Paragraphs</u>	<u>Page</u>
I. Introduction	1 - 23	3
A. Legislative mandate	1 - 2	3
B. History of intergovernmental discussions	3 - 8	3
C. Summary and conclusions	9 - 23	5
II. The emergence of world inflation	24 - 45	9
A. The post-war experience	24 - 34	9
B. Review of recent policy developments, 1971-1982	35 - 45	13
III. Domestic and international factors in world inflation	46 - 81	16
A. Domestic factors in the developed market-economy countries	48 - 59	16
B. The international transmission of inflation: some global aspects	60 - 69	23
C. Price behaviour of internationally traded goods: the post-war experience	70 - 81	25
IV. Consequences of world inflation for developing countries ..	82 - 111	31
A. Modes of transmission of inflation to developing countries	82 - 94	31
B. The impact of rising domestic price levels in developing countries	95 - 106	33
1. Impact on income distribution	96 - 101	33
2. Government budget	102	35
3. Growth and development	103 - 106	35
C. The impact of world inflation on the balance of payments of developing countries	107 - 111	36

CHAPTER I

INTRODUCTION

A. Legislative mandate

1. In its resolution 34/197 of 19 December 1979, the General Assembly requested the Trade and Development Board "to discuss measures to combat the world inflationary phenomenon with a view to accelerating the real growth of the developing countries and increasing their import capacity in a context of just and stable financial markets" (paragraph 3). In this context, the Secretary-General of UNCTAD was also requested "with the assistance of experts, if necessary, as envisaged in Trade and Development Board decision 144 (XVI), to prepare a report on this subject for consideration by the Trade and Development Board and subsequently by the General Assembly at its thirty-sixth session" (paragraph 4).

2. As a result, the Secretary-General of UNCTAD has devoted increased attention to this issue within the context of UNCTAD activities under the mandate as laid out in decision 144 (XVI) of the Trade and Development Board. At its twenty-third session he informed the Board that the secretariat felt that the major shifts in policy stances which had recently taken place indicated that a comprehensive review of policy developments was required and that he proposed to submit such a study to the Board at its twenty-fifth session. The Board took note of the proposal and agreed to consider the report at its twenty-fifth session.¹ The present report seeks to provide an analytical framework to assist governments in identifying policy measures which might be taken at the national and international levels to control inflation while safeguarding the development process in developing countries.

B. History of intergovernmental discussions

3. The subject of inflation received explicit intergovernmental attention in UNCTAD at the fourteenth session of the Trade and Development Board in decision 114 (XIV) of 13 September 1974, requesting the Secretary-General of UNCTAD "to prepare, with the assistance of experts, as he deems appropriate, an analytical report on the influence of inflationary processes on world trade and international economic relations, within the competence of UNCTAD, paying special attention to the problems of developing countries, and in particular the least developed among them".

4. In pursuance of this decision, the UNCTAD secretariat prepared an analytical study² and submitted it for discussion by a Group of Experts, serving in their individual capacities, convened in Geneva from 28 July to 1 August 1975. The reports of the Group of Experts³ and of the Secretary-General of

¹ *Official Records of the General Assembly, Thirty-sixth Session, Supplement No. 15 (A/36/15)*, part three, annex I, Other decisions, (h).

² "Inflationary processes in the international economy and their impact on developing countries" (TD/B/AC.18/2).

³ *Official Records of the Trade and Development Board, Fifteenth Session (First part), Annexes, agenda item 4, document TD/B/579.*

UNCTAD⁴ were both submitted to the Trade and Development Board at its fifteenth session. No further action was taken by the Board on the matter at that time.

5. The debate on the issue was resumed in 1976 in the context of the Paris-based Conference on International Economic Co-operation (CIEC). It was not until after the end of that Conference, when its inconclusive results were reported to the General Assembly at its thirty-second session, that the issue of world inflation was again intensively considered within the United Nations system. At that time, the General Assembly, in its resolution 32/175 of 19 December 1977 and in cognizance of the conclusions of CIEC that "inflation disturbs the functioning of the international economic and monetary order and is damaging to the economic progress of both developed and developing countries", and taking also into account the report submitted to the Secretary-General of UNCTAD by the Group of Experts on inflationary processes in the international economy and their impact on developing countries, requested the Secretary-General of UNCTAD "to establish a high-level governmental group of experts..... (a) To prepare a broad and comprehensive study of the present inflationary phenomenon whose effects continue to exert a negative influence on the economies of all countries, particularly the developing countries; (b) To formulate recommendations on possible measures to combat the international inflationary process and make it possible to formulate policies designed to reduce the economic and social effects of inflation". The study was to be transmitted to the General Assembly together with the Board's comments thereon for its decision as to appropriate further action.

6. In response to this request, a meeting of the Group of High-level Governmental Experts on the Effects of the World Inflationary Phenomenon on the Development Process was held from 24 July to 4 August 1978. At that meeting, a consensus among governmental experts from developing and developed market-economy countries was reached regarding the analysis of the world inflationary phenomenon. With respect to conclusions and recommendations, a broad consensus prevailed within the Group, although points of disagreement arose with respect to specific issues. The report of the Group was submitted to the General Assembly at its thirty-third session.⁵

7. The General Assembly took no direct action on the report but, in its resolution 33/155 of 20 December 1978, took note of it and requested "the United Nations Conference on Trade and Development, at its fifth session, to recommend international policy measures to combat the world inflationary phenomenon, as apparent in the decline of some of the major currencies, and to eliminate the economic and social effects of internationally transmitted inflation on developing countries, taking into account the conclusions and recommendations contained in the report of the Group of Experts".

8. At its fifth session, in May 1979 at Manila, UNCTAD was unable to undertake successful negotiations regarding this issue on the basis of the General Assembly resolution and the report of the Group of Experts. As a result, the General Assembly, at its thirty-fourth session, in resolution 34/197 of 19 December 1979, recalling, *inter alia*, resolution 33/155, and noting "with regret that the United Nations Conference on Trade and Development, at its fifth session, did not take a firm decision on international policy measures to combat the world inflationary phenomenon or on the conclusions and recommendations contained in the report of the Group of Experts", recognized that the world inflationary process seriously affected the economies of the developing countries and affirmed the urgent need for the implementation of policies to control inflation. In this context, the General Assembly, as noted above, requested the Trade and Development Board to discuss the issue, and further requested the Secretary-General of UNCTAD to prepare a report for consideration by the Board and subsequently by the General Assembly.

⁴ *Ibid.*, document TD/B/558.

⁵ See *Official Records of the Trade and Development Board, Eighteenth Session, Annexes*, agenda item 5 (c), document TD/B/704.

C. Summary and conclusions

9. The emergence of inflation as a global phenomenon and the associated prolonged stagnation of economic activity have marked the decade of the 1970s as unique in modern economic history. Previously, rates of inflation had varied substantially from country to country and were explicable primarily by domestic factors specific to each country. In the course of the 1970s, however, as inflation accelerated on a wide scale, differences in inflation rates among countries decreased markedly, both at the global level and at the regional level (with the exception of the developed market economies). This phenomenon may have been a reflection of the increasing importance of external factors, particularly in the case of developing countries.

10. Whereas excess aggregate demand played a role in stimulating inflation in the 1960s and early 1970s, cost-push factors appear to have been the primary cause of inflation in the late 1970s and so far in the 1980s. However, it is extremely difficult to attribute quantitative shares in a given rate of inflation according to source and draw conclusions therefrom regarding the specific causes of inflation. At the national level, inflation must be seen as the result of complex, dynamic interactions among factors such as imbalances in demand and supply, price changes arising in the external sector, and institutional and market rigidities which govern the way in which price changes are transmitted through the economy. For example, the practice of linking wage levels to the consumer price index, either explicitly or implicitly, taken with that of cost-plus pricing on the part of firms to achieve a targeted rate of return, implies that, once begun, inflation gathers a momentum difficult to counteract.

11. The structure of government expenditure and taxes may also be seen as a contributing factor to the continuation of inflationary pressures. Very often, large parts of government expenditure are indexed to or move closely with the rate of inflation. While taxes are not explicitly linked to the inflation rate, the tax structures and policies of many countries are such that increases in price levels will tend to increase revenues. While it is felt that this phenomenon tends to act in a counter-cyclical fashion in situations of demand-pull inflation, it is also tantamount to an increase in the cost of living. Furthermore, because increases in the price level will generally affect nominal expenditure and revenue to a different extent, tax rates must be periodically revised to maintain the desired consistency between tax and expenditure structures. An added complication is that periodic revision of tax rates invites the attention of special interest groups, who attempt to influence the way in which tax rules and rates are revised.

12. Inflation is generally accompanied by monetary expansion. Such expansion may in some cases have triggered the inflation; in most cases, however, it appears rather to serve to accommodate an inflation whose causes lie elsewhere. When serious rigidities such as those mentioned above exist, a non-accommodating monetary policy primarily affects real levels of economic activity rather than price levels, particularly in the short run. Thus, for example, an increase in the price level in the face of unchanged monetary policy generally produces a simultaneous fall in real output, i.e., "stagflation". The fact that modern industrialized market economies are not isolated, but are closely interlinked through the international trade, finance and monetary systems, further complicates the picture. It means that once inflation is under way in a number of major economies and is being transmitted throughout the system via, *inter alia*, prices of internationally traded goods, it is very difficult for an individual country to combat successfully an inflation which is being continually fuelled from abroad. Further, if the country in question is a major reserve-currency and financial-market country, the consequences in terms of exchange rate and interest rate movements may be to increase inflationary pressures on the rest of the world.

13. While prices of internationally traded goods are governed over the very long term by a combination of price levels in the major trading and reserve-currency countries, exchange rate movements and trends in productivity, in the shorter term

a large number of other factors may also be operating. This is particularly true in the case of most primary commodities, the prices of which showed extreme volatility during the 1970s. Furthermore, while the price trend of primary commodities, excluding crude petroleum, was not significantly different from that of manufactures during the 1970s, this was in itself a departure from earlier experience, when, generally speaking, the terms of trade of primary commodities were declining. This recent experience suggests that supply factors had a greater influence on the prices of primary commodities than considerations of demand. By the same token, the radical change in the structure of the international market for crude petroleum which took place in 1973 must be recognized as having had an impact on the inflationary process.

14. Developing countries have been seriously affected during the 1970s by the transmission of price inflation to their economies. Higher prices for their imports and exports have had a direct impact on domestic price levels. In addition, increased expenditure in the developing countries resulting from rises in export prices has put an upward pressure on the level of domestic prices. In many developing countries, particularly in Africa and Asia, price inflation had been contained at relatively low levels during the 1960s. Changes in the prices of traded goods were responsible in the 1970s for the emergence of serious price inflation in the domestic economies of these countries. In some other developing countries the external price movements were superimposed on existing upward pressures originating in the domestic economy and reflecting both monetary and structural factors. High rates of price inflation have had a number of negative consequences for developing countries, including the widening of their current-account deficits, increased pressure on their public finances and a worsening distribution of income.

15. Many developing countries have also suffered adversely from policies followed by developed market-economy countries specifically to combat inflation. Higher interest rates, resulting from virtually exclusive reliance in the United States on monetary restraint to combat inflation, have increased net financial costs of external borrowing in many developing countries. Moreover, the slow-down in the growth of output brought about by that monetary restraint has contributed to a sharp decline in primary commodity prices. Although the latter has played a part in the easing of inflationary pressures in developed market-economy countries, it has put severe strains on the external accounts of most developing countries. Many developing countries who saw the period of rapid inflation begin with a sharp increase in import prices are seeing inflation rates ease with a fall in their export prices.

16. Inflation must be seen as the result of a complex set of forces interacting at the national and international levels in a manner which often reinforces inflationary pressures arising in a given part of the system. A successful anti-inflationary strategy must therefore consist of a complex set of domestic and international policy measures which must be applied in a co-ordinated manner if serious damage to growth and employment prospects is to be avoided. Such a strategy necessarily requires a strong international, as well as national, consensus for its successful implementation.

17. However, there appears to be a fundamental lack of consensus in some major developed market-economy countries on how to deal with various social and economic issues, reflecting in part a struggle over the distribution of income among various social and economic groups. Inflation tends to aggravate this phenomenon since it changes the distribution of income, often in ways which increase the sense of injustice felt by various groups, thus accentuating the difficulty of achieving broad national agreement on complex economic issues. Indeed, it may be argued that inflation is not only a contributing factor to a weakening of the social and political consensus among social and economic groups but also in part a manifestation of it.

18. A consequence of this weakened consensus at the national level is that governments are finding it increasingly difficult to agree at the international level on a broad range of economic issues, including the rules and institutional framework governing international economic relations. This state of affairs is particularly significant in the area of international trade. The stagnation in international

trade stemming from widespread efforts to control inflation through restrictive monetary and fiscal policies has contributed to the severe pressures to which the external accounts of many developed and developing countries have been subjected. As a consequence, many governments have strenuously pursued export promotion measures in an attempt to reduce their current-account deficits and to stimulate their domestic economies in order to alleviate worsening employment conditions. More seriously, from the point of view of the world economy, many governments are adopting various formal and informal measures to restrict imports, in an attempt to reverse declining employment trends in particular sectors.

19. The continuing controversy in developed market-economy countries over appropriate interest and exchange rate policies is another symptom of the deepening divisions in the international community over economic matters. In particular, the impact of United States monetary policy on the exchange rate of the United States dollar and on interest rates in international financial markets has been viewed by many as having had a profound impact on the economic prospects of the rest of the world - particularly those of the developing countries, as mentioned earlier. However, in spite of the urgency of finding a solution which would cushion the impact on the world economy of domestic monetary policies in individual countries, the required consensus with respect to international co-ordination in this area does not appear to be forthcoming.

20. Certain broad policy conclusions are suggested by this analysis. At the national level, a prerequisite of a successful set of anti-inflationary policies is a basic agreement among the economic groups in society as regards the rules by which the distribution of income is decided. This includes not only the way in which wage bargaining is carried out but also the extent to and the manner in which the government redistributes income among social groups. The process of achieving a social and political consensus which is involved and the differences in economic structures make it inevitable that the policies eventually adopted vary substantially from country to country: there can be no unique policy formula which will successfully combat inflation in every economy.

21. However, there are two areas where significant externalities impinge on the working of the international economy, with particularly severe consequences for developing countries. First, as long as the United States dollar serves as the major international reserve currency and international financial markets effect a large proportion of their operations in that currency, the domestic monetary policy of the United States will have a major impact on the international financial and monetary systems. A restrictive monetary policy in the United States substantially increases, for example, the financial burden on capital-importing developing countries. Secondly, the simultaneous adoption of deflationary aggregate demand policies, and especially restrictive monetary policies, by major developed market-economy countries has a profound recessionary impact on the international economy, both directly by reducing demand and indirectly by inducing restrictive policies in other economies. In such situations, developing countries not only face a slackening demand for their exports but also suffer an adverse movement in their terms of trade, due to the nature of international primary commodity markets.

22. The broad thrust of domestic economic policies should be co-ordinated by national governments in a way that takes into account their impact on the rest of the international community. The international implications of the anti-inflationary policies of individual countries are unlikely to be addressed successfully, however, in the absence of a reasonably wide range of policy instruments at the national level to combat inflation. When, for example, control of the growth of the money supply is the sole means through which a country is fighting inflation, the international consequences of this policy cannot be taken into consideration without calling into question the country's entire anti-inflationary programme. When, on the other hand, a government is fighting inflation through a variety of policy measures, it may be possible to alter the mix of such policies in a way that minimizes adverse external repercussions without weakening their domestic effectiveness.

23. Finally, there are two other general points which require some emphasis. First, given the nature and complexity of the causes of the world inflationary phenomenon, it is unlikely that it can be combated successfully through restrictive

monetary and fiscal policies alone, if this is to be done without incurring excessive costs in terms of unemployment of labour and idle resources. Secondly, where policies have unavoidably negative impacts on the economic environment of developing countries, it would seem appropriate that the international community should consider ways and means of minimizing such consequences. In addition, since the ability of the poorer developing countries to adjust to external pressures is quite limited, measures should be adopted to insulate those countries from the vagaries of the international economic environment.

CHAPTER II

THE EMERGENCE OF WORLD INFLATION

A. The post-war experience

24. Although increases in domestic price levels had been recorded in most countries throughout the post-war period, a general concern regarding the possibility of a "world inflationary phenomenon" did not arise before the late 1960s. Apart from a sharp rise in commodity prices in 1951, until the mid-1960s price increases were generally moderate in most regions, with the exception of developing countries in the Western Hemisphere. During this period it was widely believed that a certain amount of inflation was unavoidable and was sometimes even a necessary concomitant of economic growth, particularly in the case of developing countries. Furthermore, the periodic bouts of price increases suffered by individual developed market-economy countries were generally of a cyclical nature. Since inflation was associated with high levels of business activity, it was felt that instruments of aggregate demand management could be applied effectively in most cases.

25. During this period inflation rates in most developing countries were no higher than those in the developed market-economy countries. Overall rates of inflation for the developing countries need to be interpreted carefully, however, as differences within this group have generally been larger over the post-war period than within the group of developed market-economy countries. The weighted average for developing countries has been largely influenced by very high rates of inflation in a few countries. In the majority of developing countries price increases were relatively low until as late as 1971, and generally were below those of the majority of developed market-economy countries.

26. The 1970s marked a sharp departure from the patterns of world inflation which had characterized the post-war era. The weighted average rate of increase in the indices used to deflate gross domestic product (GDP), holding exchange rates constant at 1975 levels (the domestic component of world inflation), accelerated from 5.5 per cent per annum for the period 1960-1970 to 12.3 per cent for 1970-1978. Furthermore, an examination of the annual rates of inflation indicates that the acceleration was already beginning in the late 1960s. On the other hand, the global rate of inflation accelerated from 5.8 per cent for the period 1960-1970 to 15.2 per cent over the period 1970-1978. The methods used for both these calculations and the results are given in table 1 below.⁶ However, while such global indices provide useful illustrations of the magnitude of change over the past two decades, they do not provide any information on how far inflation is common to all regions and whether the indices are unduly influenced by a few countries with very high inflation rates. Table 2 below contains more detailed information on a regional basis: the median rates of inflation and the coefficients of dispersion of

⁶ In general, the interpretation of aggregations of national rates of inflation causes more problems in a system of flexible exchange rates than in a system of fixed exchange rates with a single monetary standard. See, for example, W. S. Salant, "A Supranational Approach to the Analysis of Worldwide Inflation", in L. B. Krause and W. S. Salant (eds.), *Worldwide Inflation: Theory and Recent Experience* (Washington D.C.: Brookings Institution, 1977), pp. 633-655.

groups of countries, computed on the basis of consumer price indices (for which data are more readily available than for GDP deflators).

27. Table 2 confirms the validity of a picture of inflation accelerating on a broad front. Furthermore, a sustained trend of diminishing dispersion of inflation rates among developing countries was already perceptible by 1970, when inflation started to accelerate in the developed market-economy countries. This may indicate that international factors were gaining in importance as contributors to inflation in the developing countries during the late 1960s and early 1970s.

28. Narrowing differentials in inflation rates, while the rates themselves accelerated, are apparent at the regional level as well as globally. Africa and Asia, both areas of relatively stable price levels in the 1950s and 1960s, with slowly mounting rates of inflation by 1970-1971, experienced a sharp acceleration of inflation in 1973-1974. While there were rather erratic movements in the coefficients of dispersion for these regions, there was a pronounced downward trend for the 1970s as a whole. Latin American countries, where high rates of inflation have been traditional, exhibited similar trends.

29. There were, however, subtle differences between the experience of developing and developed market-economy countries over the late 1960s and early 1970s. First, the dispersion of inflation rates increased among developed market-economy countries in 1968 and 1969, while the median rate of inflation remained relatively stable, implying that inflation rates had begun to accelerate in some economies. By 1970 inflation had spread to enough developed market economies to be reflected in a sharp increase in the median rate of inflation. On the other hand, inflation in developing countries generally increased, with a considerable time-lag, a significant upward movement occurring only in 1972.

30. In 1973 and 1974 inflation accelerated in all regions and the coefficient of dispersion fell in all developing regions. For the first time since 1951, developing and industrialized countries reached a peak of inflation virtually simultaneously. While crop failures and food shortages were probably important causes of inflation in many developing countries during the early 1970s, these countries were also faced with large price increases for manufactured goods and for petroleum products. Many of them also enjoyed a significant growth in their export revenues as a result of the strongest commodity boom in the post-war period, which was also to some extent a result of the unusually synchronized upswing in 1972 and 1973 of the developed market-economy countries. In 1974-1975, the rates of growth of output and investment fell and industrialized countries experienced a severe recession.

31. The annual increase in the index of import unit values (in dollar terms) of the developing countries other than major oil exporters accelerated from 6 per cent in 1972 to 25 per cent in 1973 and 47 per cent in 1974. Nevertheless, import volumes of these developing countries could still be expanded in 1973 and 1974, since foreign exchange earnings grew with rising prices for primary commodities. Moreover, increased borrowing from international financial markets in 1974 and 1975 also helped to increase foreign exchange availabilities. The subsequent decline of growth in real GDP was consequently less pronounced in the developing than in the developed market-economy countries.

32. There was some tendency for the pace of inflation to slacken in all regions except South America between 1974 and 1978. However, rates of inflation were still far above 1971-1972 levels. In connection with a general business upswing the rise in the consumer price index in most industrial countries started to re-accelerate by the end of 1978, leading to a substantial increase in inflation rates in all major countries except Japan in 1979. Rates of unemployment still remained high by traditional standards, indicating that the problem of stagflation had not been resolved. In 1979, petroleum prices also rose sharply, reinforcing the resurgence of inflation already under way.

33. In 1980, the developed market-economy countries registered a new peak of inflation at 13.6 per cent and their dispersion coefficient dropped markedly. Italy, the United Kingdom and the United States of America, where inflation had been increasing since 1977, registered new record rates of inflation in 1979 and

TABLE 1

WORLD INFLATION: a/ THE GDP DEFLATOR AND ITS COMPONENTS,
1966-1978

(Per cent increase over preceding year)

	Global inflation	Domestic component	Exchange rate component
1966	3.93	3.89	0.04
1967	4.43	4.40	0.03
1968	4.53	3.98	0.52
1969	5.50	5.15	0.34
1970	8.31	7.71	0.55
1971	5.19	6.46	-1.19
1972	-2.26	6.43	-8.17
1973	7.47	11.89	-3.95
1974	30.59	19.37	9.41
1975	16.58	15.16	1.23
1976	33.63	13.64	17.59
1977	20.71	14.86	5.10
1978	14.07	11.53	2.27
Annual averages:			
1960-1970	5.77	5.52	0.23
1970-1978	15.17	12.34	2.52
1960-1978	9.85	8.50	1.24

Source: UNCTAD secretariat calculations, based on international sources.

Note: The calculations for each year have been made with the aid of national GDP deflators and exchange rates vis-a-vis the United States dollar. Global inflation is calculated by dividing world GDP valued at current prices and exchange rates by world GDP valued at 1975 prices and exchange rates; the domestic component is calculated by dividing world GDP valued at current prices and 1975 exchange rates by world GDP valued at 1975 prices and exchange rates; and the exchange rate component is calculated by dividing world GDP valued at 1975 prices and current exchange rates by world GDP valued at 1975 prices and exchange rates.

a/ Excluding socialist countries of Eastern Europe and Asia.

TABLE 2

PATTERNS OF WORLD INFLATION, 1966-1980

	Developed market-economy countries	Developing countries				
		Total	Africa	Asia	South America	Central America & Caribbean
Median annual rate of increase in prices (%)						
1966	3.8	3.3	2.9	4.0	8.1	1.8
1967	3.4	2.1	1.5	4.2	10.5	1.3
1968	3.6	2.5	1.9	2.3	5.7	2.5
1969	3.2	3.3	3.8	3.4	6.4	2.2
1970	5.8	3.7	3.2	4.2	6.0	3.2
1971	6.2	4.0	4.0	4.2	7.5	3.0
1972	6.5	5.5	5.5	6.3	11.3	5.0
1973	9.1	11.3	6.7	14.4	16.9	13.6
1974	15.1	18.1	15.0	24.3	24.6	17.5
1975	12.7	15.2	16.6	12.7	23.3	15.2
1976	10.3	9.8	10.8	7.2	26.8	7.0
1977	11.2	11.6	12.7	10.1	35.6	9.7
1978	8.3	9.5	10.1	6.7	28.2	8.2
1979	9.6	12.3	11.3	9.4	30.8	14.7
1980	13.6	15.3	12.3	14.5	41.2	16.8
Coefficient of dispersion a/						
1966	0.55	2.23	1.65	2.61	5.57	2.25
1967	0.51	2.37	3.19	1.14	4.06	1.69
1968	0.76	1.94	2.64	1.27	3.27	1.50
1969	0.88	1.43	1.16	1.49	3.06	1.40
1970	0.47	1.30	1.58	1.03	2.37	0.70
1971	0.55	1.05	0.99	0.91	2.37	1.35
1972	0.38	0.83	0.88	0.54	5.28	0.43
1973	0.42	0.90	0.85	0.87	3.43	0.68
1974	0.61	0.59	0.60	0.37	1.89	0.40
1975	0.57	0.81	0.87	1.11	4.20	0.59
1976	0.90	1.17	1.04	1.95	3.13	0.76
1977	0.77	0.74	0.71	0.56	1.62	0.55
1978	0.91	0.83	0.84	1.03	1.32	1.05
1979	1.03	0.83	0.75	0.86	1.59	0.44
1980	0.58	0.96	0.76	0.77	1.12	0.24

Source: UNCTAD secretariat calculations based on consumer price indices in International Monetary Fund, *International Financial Statistics* (various issues).

a/ The sum of the ranges of the second and third quartiles divided by the median.

1980. France reached nearly the same level of inflation as in 1974-1975, while Japan, the Federal Republic of Germany and a number of other Western European countries performed much better than the average for the group of industrial countries as a whole and than they themselves had done in 1974-1975. In part, this reflected the appreciation of their currencies vis-a-vis the dollar, which mitigated the impact of increased import prices on their domestic economies.

34. In developing countries, too, inflation was more rapid in 1979 and 1980 in all regions, though the increase in Africa was relatively modest.

B. Review of recent policy developments, 1971-1982

35. Policies in developed market-economy countries, which have varied over the years since 1971, may be divided into three broad periods: 1971-1974, 1975-1978 and 1979-1982, each of which began with a recession. In the first and third periods major policy changes in the United States formed the background against which policy makers in other countries were forced to reappraise their own policy stances, and in both of the last two periods major increases in commodity prices intensified downward pressures on final demand of a cyclical nature while imparting further momentum to underlying inflationary trends.

36. The period 1971-1974 was notable for the replacement of the Bretton Woods framework of fixed but adjustable exchange rates by a régime of generalized floating in 1973 after it proved impossible to establish a new system of par-value exchange rates, following the decision by the United States authorities to suspend the convertibility of the dollar into gold in August 1971.⁷ One of the arguments in favour of generalized floating at that time was the increased flexibility in the conduct of monetary policy which it was thought would follow.

37. The controversy over the appropriate exchange rate regime took place against the background of efforts to recover from the 1970-1971 recession. Although the timing differed considerably among them, the governments of most developed market-economy countries undertook expansionary measures. In the United States this took the form of tax cuts, increases in government expenditure, and an increase in the rate of monetary expansion. Broadly similar measures were taken in the United Kingdom. In the Federal Republic of Germany and in Japan, however, relatively greater emphasis was given to stimulating investment, while in France a major stimulus was provided by wage increases in the public sector.

38. While policies were generally expansionary, the objective of price stability was by no means ignored. In both the United States and the United Kingdom, incomes policies which were employed towards this end appeared to have had some initial success but were phased out in both countries in 1974. A generalized improvement in output and employment levels, combined with the beginning of a commodity price boom in 1973, prompted recourse to monetary restraint in the major developed market-economy countries in the course of that year and in 1974.

39. A commodity price boom and large oil price increases in 1974 and the onset of a serious recession ushered in the second period, which was broadly characterized by moderately expansionary policies on the part of the United States without agreement on the part of other major industrialized countries to take co-ordinated measures designed to restore growth to the world economy. Most of them pursued moderately

⁷ In fact, an agreement on new exchange rates was reached by the Group of Ten meeting at the Smithsonian Institution in Washington, D.C. in December 1971. But the exchange rates agreed upon could not be successfully defended against speculation in the foreign exchange markets, and in March 1973 all major currencies were permitted to float. Subsequently, an agreement was reached by the Interim Committee of the International Monetary Fund at a meeting held in Kingston, Jamaica, in January 1976 to give equal legal status to pegged and floating exchange rates.

expansionary fiscal policies in 1974 and 1975, while maintaining significant monetary restraint through most of 1974. Thus, the net effect of monetary and fiscal policies was on balance clearly expansionary only in 1975.

40. From 1976 to 1978, policy makers attached growing importance to lowering what were regarded as unacceptably high rates of inflation. With a regime of floating exchange rates in place, monetary policies were conducted with less regard to their exchange rate consequences than hitherto. The United States pursued a policy which gave priority to sustaining employment and growth, although monetary target ranges were also lowered gradually. And at the fourth summit of industrialized countries, held in Bonn in July 1978, a formal agreement was reached to implement co-ordinated measures to stimulate growth and employment without rekindling inflation.

41. A widening current-account deficit and declining exchange rate of the US dollar vis-à-vis the currencies of its major trading partners led to a sharp reversal of policy in the United States in November 1978. This took the form of large-scale intervention in foreign exchange markets on the part of the United States authorities, financed in part by foreign currency borrowings and accompanied by an increase in the Federal Reserve discount rate. Widespread disillusionment with floating rates was reflected by the agreement in the European Economic Community to establish the European Monetary System which became operational in March 1979 and by the earlier decision of the Swiss authorities to impose limits on its exchange rate vis-à-vis the deutsche mark.

42. With the onset of recession in mid-1979, combined with a resurgence of inflation, policy makers perceived a dilemma which has persisted to the present, namely, that restrictive monetary and fiscal policies could not be pursued vigorously without fear of jeopardizing the employment situation, whereas they feared that expansionary measures in favour of job creation and stimulation of growth would endanger efforts to stabilize the price level. In the United States the Government decided to move decisively to restore credibility in its efforts to reduce inflation. In October 1979, the Federal Reserve Board shifted its operational practice to reserve base management, increased the discount rate, and established reserve requirements for banks' managed liabilities. The subsequent increases in US interest rates induced large movements of capital across the exchanges. The reaction by policy makers in other countries to defend their currencies led to increases in interest rates in nearly all the developed market-economy countries. Thus, economic policies became decisively deflationary notwithstanding evidence of mounting unemployment.

43. In February and March 1980, the United States authorities raised the discount rate still further, and imposed selective credit controls as well. This was followed by the Depository Institution Deregulation and Monetary Control Act of 1980, which facilitated the process of financial innovation already under way but at the same time envisaged imposing, after a transition period, reserve requirements on all banks and savings and loan associations not already members of the Federal Reserve System. As was the case a few months earlier, these measures were followed by a tightening of monetary policies by various means in all major developed market-economy countries and some smaller ones as well. While most countries which raised interest rates did so in response to increases in US interest rates in order to avoid increases in costs associated with declines in their exchange rates, the United Kingdom was under no such pressure, due to the oil-related strength of the pound, but in any case regarded high interest rates as a necessary consequence of its own anti-inflationary policy. Only in Japan, and temporarily in France and the Netherlands, did interest rates fall as some countries began to accord somewhat greater priority to combating the worsening employment situation. A few smaller Western European countries managed to utilize incomes policies to reduce the weight given to monetary policy. Japan was, however, unique in setting a quantified GDP growth target for 1981 which it sought to achieve by a package of measures announced in September 1980 which included increases in expenditures on public works, and investment incentives in energy conservation, construction and electric power generation.

44. In 1981 and the first half of 1982 most countries have maintained restrictive policy stances in the face of containing recession. An exception to this general

pattern was France, where a new Government embarked on an investment-oriented expansionary policy in an effort to slow the trend of rising unemployment.

45. Despite some tendency for inflation to fall and for unemployment to surpass previous post-war peaks, interest rates remained extremely high in 1981 and 1982. One major factor appears to have been the emergence of large United States government deficits in 1980 and 1981 and the prospect for their substantial increase in 1982 and 1983 due to the large tax cut enacted early in 1981 while monetary policy has remained restrictive. Monetary policy also remained restrictive in most other countries up to mid-1982 as priority continued to be given to defending exchange rates and price stabilization.

CHAPTER III

DOMESTIC AND INTERNATIONAL FACTORS IN WORLD INFLATION

46. Three explanations may be suggested for the world-wide nature of contemporary inflation. The first would see inflation as a world-wide phenomenon simply because of the coincidence of certain causes making their appearance simultaneously in the great majority of countries (such as simultaneity of business cycles) or because of a common response to common preoccupations or policy pressures. The second explanation would assert that inflation originates in one or a few countries whose weight in the world economy is important enough to cause their inflation to be transmitted to the rest of the world.⁸ The third explanation⁹ would consider world-wide inflation as being generated by some specifically international factors such as movements in world monetary reserves and money supply (especially in the light of the rapid development of the Eurocurrency markets in the last decade), the working of the exchange rate system or international market power (cartels, transnational corporations, internationalization of labour unions). The three approaches are not mutually exclusive: domestic and international factors both play a role in the inflationary process in individual countries.

47. Furthermore, it is important to keep in mind that the current world inflation is a reflection of a historical process which began to evolve in the mid-1960s. This observation carries with it certain implications with respect to the causal analysis of the world inflationary phenomenon. First, it must be recalled that the acceleration of inflation originated in certain major developed market economies, was transmitted via international channels to the rest of the world and became firmly entrenched through the synchronized upturn in major developed market economies of 1972-1973. It was further accentuated by the commodity price boom of 1973-1974 and by the dramatic increase in energy prices. For most developing economies and for some of the smaller developed market economies the analysis virtually ends there, as these countries do not have any significant impact on international prices or liquidity. However, the situation is quite different with respect to the majority of the developed market economies. Whatever the source of the original inflationary impulse in these economies, when inflation takes hold domestically it is fed into the international economy and fuels a feedback system, thereby producing a persistent international inflation which is quite different in character from the original. It follows that, to understand the current world inflationary phenomenon, it is necessary to concentrate the analysis on those features of the developed market economies and the international economic system which tend to reinforce the world inflationary spiral.

A. Domestic factors in the developed market-economy countries

48. At the domestic level the inflationary process in a national economy should be viewed as the result of complex dynamic interactions in demand and supply, of price changes coming from the external sector and of institutional market rigidities that govern the way in which price changes are transmitted through the economy. Given that these processes are much more complex in developed market-economy countries

⁸ Thus, the increase in the budget deficit of the United States in the late 1960s led to strong inflationary pressures, which were transmitted to other countries through higher export prices and through its external accounts.

⁹ See, for example, Walter S. Salant: "A Supranational Approach to the Analysis of Worldwide Inflation", *op.cit.*

and, further, that the relative weight of these economies in the world economy is such that they have a very substantial impact on the international environment, the analysis which follows in this chapter will concentrate on the problems of this group.¹⁰

49. If it is generally agreed that there cannot be persistent inflation without monetary accommodation, there is still controversy as to whether the money supply is an endogenous or exogenous variable. The monetarists would argue that the money supply is exogenously determined by the monetary authority and that the money supply, in turn, determines nominal income. Thus, for a given level of output, an increase in the money supply leads to an increase in prices. This analysis is interpreted by monetarists as indicating that inflation must be due to an excessive rate of money creation. In fact, an examination of the process of money creation in the modern financial and credit system¹¹ would suggest a less categorical view. In the first instance, expenditure decisions of the private and public¹² sectors lead to a given demand schedule for bank credit. The extent to which banks can supply credit depends on the availability of bank deposits and also on central bank control of the monetary base. Thus, the actual amount of money creation will depend upon the interaction of demand and supply. The impact of this process of money creation depends on the final uses made of credit and on possible discrepancies between the supply of bank credits and the supply of bank deposits, i.e., between the supply of and the demand for money.¹³ The first effect, resulting from the uses of credit, can in turn affect the demand for money (which depends, among other things, on income).

50. The money supply can thus be interpreted as being endogenously determined by expenditure decisions¹⁴ of economic agents. A decision by the monetary authorities to expand the monetary base need not result in any simple multiple expansion of the money supply. It follows that monetary control should be concerned with the particular causes of monetary growth and not be confined exclusively to the control of any single aggregate defining the money supply. The exclusive pursuit of a single monetary target could produce high and volatile interest rates¹⁵ (because banks have to compete among themselves and with other financial institutions to attract deposits) and could have a detrimental effect on output, by squeezing out productive uses of credit. Furthermore, a credit squeeze may induce economic agents to introduce a variety of substitutes for money or to substitute between borrowing from the domestic sector and borrowing from abroad. Thus, it is evident that the control of the money supply is not a particularly simple matter in practice. However, even if such control were undertaken successfully, there are reasons to believe that, while the restraint of monetary growth will slow the growth of nominal incomes, it will have a larger impact on real growth than on prices.

51. In particular, the extent to which a reduction in the rate of growth of nominal income is translated into a reduction in the rate of inflation depends on the

¹⁰ The case of developing countries will be examined in chapter IV.

¹¹ For a description of the role of bank credit and the behavioural forces underlying the supply of money, see Richard Coghlan: *Money, Credit and the Economy* (London: George Allen and Unwin, 1980).

¹² The contribution of the public sector spending to the money supply is limited to the part of expenditures which is not financed by non-bank holding of public debt.

¹³ The monetarists have concentrated their analysis on the second effect, that is disequilibrium reactions between demand for and supply of money. They argue that since the demand for real money balances is stable in terms of a few factors (such as real income and the interest rate), an excess supply of money would result in changes in these variables. If the economy is in a situation of full employment, then the price level would adjust to bring the demand for real money balances to its desired level.

¹⁴ These expenditure decisions may be related to the desire to buy financial assets, to purchase goods and services or even to cover an increase in costs of production.

¹⁵ For an open economy operating in a world of flexible exchange rates, volatile interest rates will induce unstable exchange rates, which can have negative repercussions on real output.

degree of sensitivity of the price level to the existence of excess supply. For example, the process of wage and price determination,¹⁶ structural changes (such as a secular decline in productivity growth) and structural rigidities of production may produce inflationary pressures, irrespective of the rate of growth of the money supply.

52. The process of wage and price determination in a developed market-economy country tends to produce a downward rigidity in prices and wages, particularly in the manufacturing sector.¹⁷ Firms set their prices through mark-ups over full costs to achieve a target rate of return. Such mark-ups are determined by long-term considerations (for example, the level of production which represents the "normal" percentage of capacity or the trend growth rate of productivity), with the result that prices are relatively insensitive to short-run fluctuations in demand. Likewise, in the labour market, wage rates are less sensitive to cyclical unemployment than to concern about preservation of the purchasing power of wages. Workers determine their wage claims for a contract period of several years, taking mainly into consideration some expected rate of inflation and also relative wages.¹⁸ This process of wage and price fixing is a feature of economies with fairly strong concentrations of power¹⁹ on both the management and labour sides. It is further exacerbated by a fight for income shares, particularly in countries where "social partnership" is weak. If the wage bargaining process were carried out explicitly in terms of the share of wages in total value added, upward pressure on the price level would be reduced.

53. To the extent that wages and prices tend to be "sticky" downwards, the burden of adjustment to a constriction of nominal demand will tend to fall on output and employment. Moreover, in an economy marked by a long history of inflation, inflationary expectations may become strongly imbedded in wage and price structures. In such cases the losses of output and employment induced by demand management policies aimed at stabilizing the price level may be even greater.

54. Another factor contributing to the persistent stagflation prevailing in the developed market-economy countries is the serious decline in the rates of growth of productivity which has emerged in the course of the 1970s. As may be seen from table 3 below, the decline in productivity has been widespread, with no major developed market economy proving immune. This phenomenon leads to increased infla-

¹⁶ The "rational expectations" hypothesis combined with the "natural rate of unemployment" hypothesis asserts that short-run fluctuations in output and employment in response to price level variations are the result of the failure of expectations to be realized. Unemployment results from voluntary choices of individuals operating on markets which are continually cleared by flexible prices. These too-stringent assumptions make this approach irrelevant in a world where wage and price adjustment is sluggish, where markets do not clear continuously and where unemployment is involuntary, resulting from redundancies.

¹⁷ In contrast, the prices of primary products are more flexible, because the markets of these products function like an auction market. See Arthur M. Okun, *Prices and Quantities: A Macroeconomic Analysis* (Oxford: Blackwell, 1981) for an exposition of differences in price formation in the markets of primary products and of manufactured goods. In addition, because the supply of primary products is relatively inelastic, their prices respond more strongly to any excess demand.

¹⁸ Workers in one sector are concerned about wages set in other, related sectors and therefore tend to resist any reduction in their relative wages. For example, increases in wages in sectors with high productivity growth may spill over into other sectors which do not have any increase in productivity, because of relative wage bargaining. It must be added that workers are also concerned about wages relative to profits, as reflected in value added relative to wage costs.

¹⁹ See the report by the UNCTAD secretariat (TD/B/AC.18/2), referred to in footnote 2 above, for a treatment of power concentration in developed market-economy countries. Cagan also found some relationship between price rigidity and industrial concentration in the United States; see Phillip Cagan, *Persistent Inflation* (New York: Columbia University Press, 1979).

tionary pressures to the extent that, in fixing their prices, firms take into account wage costs relative to labour productivity²⁰ (that is output per man hour). Since wages are fixed, a decline in productivity will lead to a rise in prices administered by firms (and a reduction of output if the number of man-hours remains unchanged). Of course, in the services sector, declines in productivity have a more direct impact on price levels.

55. Many reasons have been advanced to explain the decline in productivity. Perhaps most important are the roles played by slackening growth of capital stock and by structural changes, particularly in industrialized countries. With regard to the observed reduced rate of capital investment (see table 4), pessimistic expectations concerning medium-term demand prospects and the continuance of high interest rates undoubtedly have played a role. Structural changes in the pattern of output, demand and employment may also have contributed to the decline in productivity. For example, compliance with regulations to limit environmental pollution or improve public safety have required a diversion of resources to activities the output of which is not easily measurable. While such action does not necessarily reflect a real fall in productivity, the practice of giving government subsidies to declining sectors diverts investible resources from sectors where productivity is high, necessarily slowing the rate of growth of productivity for the economy as a whole.

56. The role of government expenditures and the government budget deficit in generating or reinforcing inflation has long been the subject of controversy. It has been argued in some quarters that an increase in government expenditures will increase the tax burden, thus discouraging private saving and investment. Furthermore, if the increased expenditure is financed by non-bank private saving, the upward pressure on interest rates will crowd out private demands for credit. It is true that government expenditures as a percentage of gross national product (GNP) have increased since 1960 in most countries belonging to the Organisation for Economic Co-operation and Development (OECD). On the other hand, the share of public consumption in GNP has not increased over the period 1960-1978. Nevertheless, while budget deficits have played a countercyclical role in some countries, these deficits have remained high even in periods of economic growth.

57. In general, the contribution of government expenditures to inflationary pressures depends on how such expenditures are distributed between consumption and investment and on how closely the resulting public services fulfil real needs. It is to be expected that the kinds of goods and services provided by the public sector are increasingly in demand as societies become wealthier. On the other hand, government provision of public goods which are not viewed by a majority as satisfying real needs may tend to be inflationary, particularly if it is at the expense of real needs. Furthermore, rapid increases in public expenditure on such items as armaments may also tend to be inflationary. If it is true that increases in government spending have to some extent induced inflationary pressures, an over-reaction against public expenditures can also be counter-productive. A drastic reduction in social programmes or in the provision of public goods and services can lead to social unrest. Moreover, a slowdown in the rate of public investment in economic and social infrastructure will adversely affect the overall productivity of the economy in the long run.

58. There would thus appear to be a substantial body of evidence which suggests that over the decade of the 1970s inflation has become largely cost-push in character. This may partly explain the upward shift in the Phillips curve typifying the phenomenon described as stagflation, i.e., high inflation associated with high unemployment (see chart 1). It also explains the fact that movements in nominal income have become much more closely associated with movements in real income than with movements in the price level (see table 5 below).

59. To summarize, inflation is not just a monetary phenomenon, but is rather a symptom of imbalances and maladjustment of the entire economic system. Severe

²⁰ Okun suggested that firms having in mind long-term considerations take account of the trend growth rate of productivity rather than the actual level of productivity. See A.M. Okun, *op. cit.*, pp. 249-250.

TABLE 3
 TRENDS IN OVERALL PRODUCTIVITY*

Country	1960-1973	1973-1976	1977	1978	1979	1980
	Average annual change, in per cent					
United States	2.1	0.0	1.9	0.1	0.5	-0.4
Japan	9.1	2.4	3.9	3.8	4.2	3.1
Germany, Fed. Rep. of	4.5	4.8	3.0	3.0	3.2	1.1
France	4.7	3.1	1.3	3.3	3.4	1.0
United Kingdom	3.0	1.0	0.7	2.0	-0.2	-0.3
Italy	5.7	0.7	0.8	2.2	3.7	2.6
Canada	2.5	0.8	0.4	0.0	-1.2	-2.6
Belgium	4.3	2.8	0.9	3.0	1.0	0.6
Netherlands	4.0	2.8	2.2	2.1	1.3	-1.0
Sweden	3.3	0.9	-2.7	1.0	2.1	1.0
Switzerland	2.9	0.6	2.6	-0.3	1.8	1.3

Source: Bank for International Settlements, *Fifty-first Annual Report* (Basle, 15 June 1981), p.34.

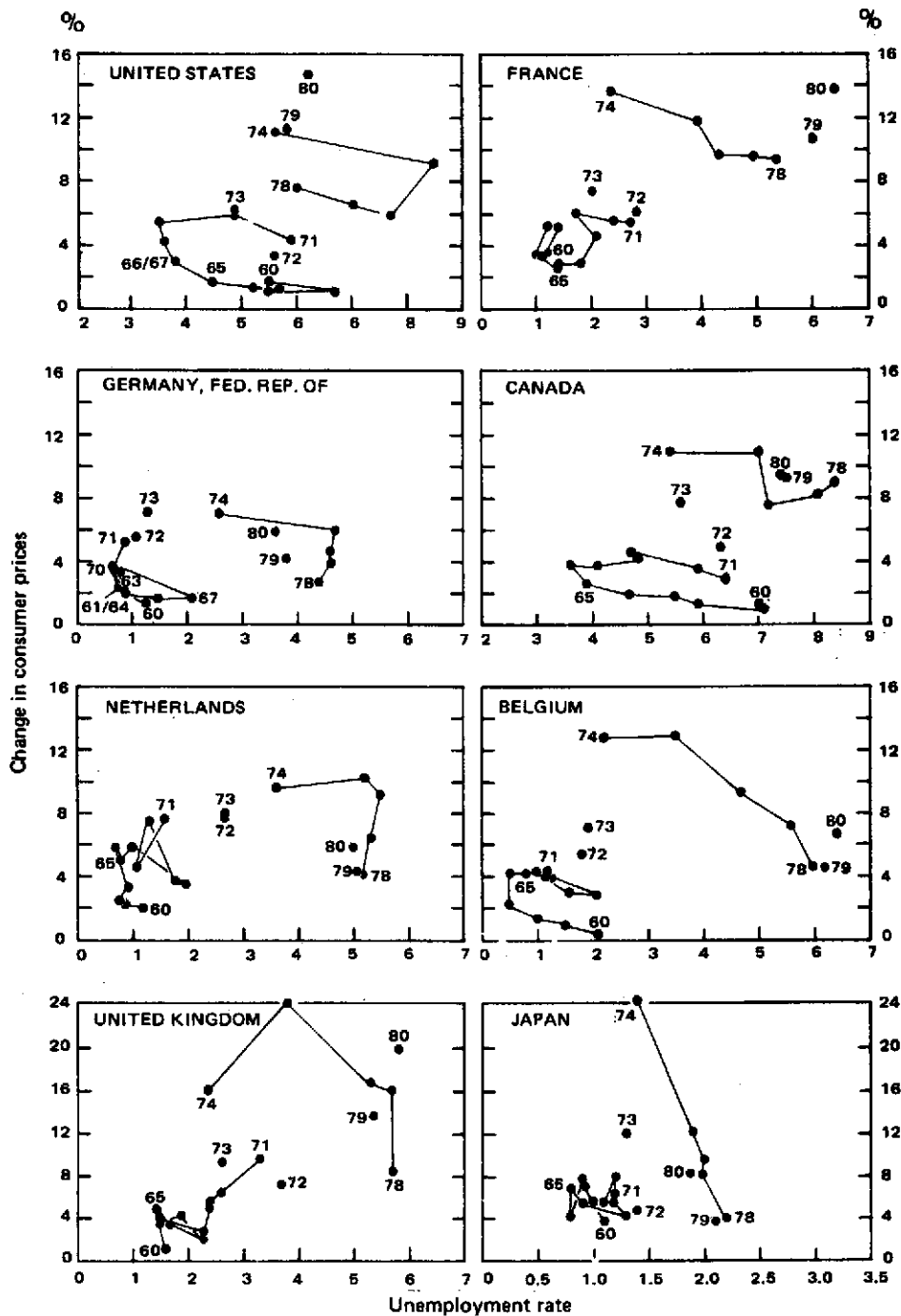
* Real gross national (or domestic) product in relation to civilian employment.

TABLE 4
 AVERAGE ANNUAL RATE OF CHANGE
 IN REAL PRIVATE NON-RESIDENTIAL FIXED INVESTMENT
 (Per cent)

Country	1960-1973	1973-1979
United States	5.4	2.1
Japan	14.0	2.2
Germany, Fed. Rep. of	4.6	2.7
France	7.5	1.1
United Kingdom	4.3	1.6
Italy	4.9	-1.6
Canada	5.8	4.5
Belgium	5.7	1.3
Netherlands	4.6	1.7
Sweden	4.9	-1.3
Switzerland	5.8	-1.8

Source: Bank for International Settlements, *Fiftieth Annual Report* (Basle, 9 June 1980), p.55.

Chart
INFLATION AND UNEMPLOYMENT
 Annual averages*



Source: Bank for International Settlements, *Fiftieth Annual Report*, (Basle, 9 June 1980), p 23.
 * The points for 1980 are based on the latest monthly data.

TABLE 5
SELECTED ECONOMIC INDICATORS FOR EIGHT OECD COUNTRIES, 1960-1980
(Per cent)

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Canada																					
Nominal GDP (rate of change)	4.1	3.4	8.3	7.1	9.4	10.1	11.7	7.4	9.3	10.0	7.4	10.2	11.4	17.4	19.4	12.1	15.5	9.3	10.0	13.3	10.7
GDP deflator (rate of change)	1.2	0.5	1.4	1.8	2.5	3.2	4.0	3.3	4.6	4.3	4.3	3.2	5.0	9.2	15.2	10.7	9.5	7.0	6.4	10.3	10.6
Real GDP (rate of change)	2.9	2.8	6.8	5.2	6.7	6.7	7.0	3.5	5.8	5.1	2.9	6.6	6.1	7.8	3.2	1.2	5.5	2.2	3.4	2.7	0.1
Government expenditure/GDP	15.5	17.6	16.1	15.5	15.7	14.6	14.7	15.8	16.1	17.9	18.7	19.5	20.3	20.0	21.5	22.7	21.6	22.4	22.2	21.7	23.3
Government budget deficit/GDP	-0.7	-2.5	-2.0	-0.5	-0.3	-0.04	-1.2	-2.0	-1.1	0.3	1.2	-0.4	-1.6	-1.4	-1.1	-3.8	-2.6	-4.4	-4.6	-4.0	-3.5
Unemployment rate	7.0	7.1	5.9	5.5	4.7	3.9	3.6	4.1	4.8	4.7	5.2	6.0	6.5	5.6	5.4	6.9	7.2	8.1	8.4	7.5	7.5
France																					
Nominal GDP (rate of change)	11.0	9.1	11.6	12.1	10.9	7.6	8.2	8.0	8.7	14.0	11.7	11.5	12.4	13.6	14.7	13.6	15.5	12.3	13.6	14.0	12.9
GDP deflator (rate of change)	3.5	3.4	4.6	6.4	4.2	2.7	2.9	3.2	4.2	6.6	5.6	5.6	6.2	7.8	11.1	13.4	9.8	9.0	9.5	10.2	11.6
Real GDP (rate of change)	7.2	5.5	6.7	5.3	6.5	4.8	5.2	4.7	4.3	7.0	5.7	5.4	5.9	5.4	3.2	0.2	5.2	3.0	3.7	3.4	1.2
Government expenditure/GDP	23.5	23.1	23.5	22.3	21.8	21.8	22.5	22.3	22.3	22.3	21.2	21.0	20.3	20.0	21.6	23.3	21.7	21.7	21.4	1.1	21.8
Government budget deficit/GDP	-1.4	-1.4	-1.7	-2.0	-0.4	0.04	-0.4	-1.1	-1.5	-0.5	0.5	-0.4	0.2	0.7	0.3	-3.0	-0.8	-0.8	-0.8	..	-0.01
Unemployment rate	..	..	..	..	..	1.5	1.8	1.9	2.6	2.3	2.4	2.6	2.7	2.6	2.8	4.1	4.4	4.7	5.2	5.9	6.3
Germany, Fed. Rep. of																					
Nominal GDP (rate of change)	20.9	9.4	8.8	6.0	9.8	9.2	6.4	1.3	8.4	11.7	13.6	11.3	9.4	11.2	7.5	4.9	8.7	6.7	7.5	8.5	6.9
GDP deflator (rate of change)	11.4	4.3	4.2	2.9	3.0	3.5	3.8	1.4	1.8	3.5	7.3	7.8	5.6	6.0	6.9	6.7	3.3	3.8	3.7	3.8	5.1
Real GDP (rate of change)	8.5	4.9	4.4	3.0	6.6	5.5	2.5	-0.1	6.5	7.9	5.9	3.5	3.6	4.9	0.4	-1.8	5.3	2.8	3.6	4.5	1.8
Government expenditure/GDP	13.6	14.2	13.9	14.2	13.8	13.8	13.8	13.2	14.0	13.5	12.8	12.9	13.3	13.5	14.0	15.9	15.3	14.9	15.3	15.2	15.2
Government budget deficit/GDP	-0.6	-1.0	-0.4	-0.8	-0.3	-0.5	-0.5	-1.7	-0.7	0.3	-0.1	-0.2	-0.4	-0.4	-1.0	-3.3	-2.7	-1.8	-2.0	-1.9	-1.9
Unemployment rate	1.2	0.8	0.7	0.8	0.7	0.6	0.7	2.1	1.5	0.9	0.7	0.8	1.1	1.2	2.6	4.7	4.6	4.5	4.3	5.8	5.8
Japan																					
Nominal GDP (rate of change)	19.8	23.5	10.9	15.4	18.1	12.9	16.2	17.2	18.5	17.7	17.9	10.1	14.6	21.8	19.1	10.4	12.0	11.3	10.0	8.2	7.5
GDP deflator (rate of change)	3.7	7.9	3.6	4.5	4.4	1.5	5.0	5.8	5.2	4.8	7.5	5.2	5.2	11.9	20.6	7.8	6.4	5.7	4.6	2.5	3.1
Real GDP (rate of change)	15.3	14.5	7.0	10.5	13.1	11.2	10.6	10.8	12.7	12.3	9.9	4.7	9.0	8.8	-1.2	2.4	5.3	5.3	5.3	5.6	4.2
Government expenditure/GDP	15.2	13.7	15.3	15.2	13.1	12.4	12.6	12.3	12.0	11.7	11.4	11.8	12.1	10.4	10.4	12.0	10.1	12.3	13.9	13.9	..
Government budget deficit/GDP	0.4	0.3	-0.3	-0.8	-1.1	-1.6	-2.2	-1.6	-1.3	-1.0	-0.4	-0.2	-1.6	-1.6	-1.3	-4.8	-2.0	-6.2	-6.6	-5.4	..
Unemployment rate	1.1	1.0	0.9	0.9	0.8	0.8	0.9	1.3	1.2	1.1	1.2	1.2	1.4	1.3	1.4	1.9	2.0	2.0	2.2	2.1	2.0
Netherlands																					
Nominal GDP (rate of change)	11.2	4.9	7.1	8.9	17.6	11.5	8.6	10.0	10.4	13.4	12.3	13.0	13.4	14.9	13.2	9.0	15.0	8.9	7.4	6.1	6.4
GDP deflator (rate of change)	..	3.5	3.2	3.0	6.3	5.0	5.8	4.2	4.2	6.4	5.5	4.4	4.5	8.5	9.2	11.2	8.9	6.5	5.2	3.7	5.7
Real GDP (rate of change)	21.8	24.1	24.3	24.1	23.6	24.6	25.4	26.6	27.0	27.1	27.0	28.5	27.8	27.6	31.6	29.1	34.1	24.2	2.4	2.1	2.0
Government expenditure/GDP	0.7	-0.2	-1.0	-0.2	-1.3	-1.6	-2.3	-2.6	-2.4	-2.3	-1.2	-1.3	-0.1	-0.5	-0.6	-3.1	-3.6	-3.1	-3.3	-4.4	-4.8
Government budget deficit/GDP	1.2	0.9	0.8	0.9	0.8	0.9	1.1	2.0	1.9	1.4	1.1	1.1	2.7	2.7	3.5	5.0	5.3	5.1	5.1	5.1	5.9
Unemployment rate	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sweden																					
Nominal GDP (rate of change)	8.9	8.9	8.5	8.3	11.5	10.2	8.8	8.1	6.2	8.4	11.2	7.1	8.4	10.5	13.6	15.5	12.3	8.5	12.0	10.7	..
GDP deflator (rate of change)	5.4	3.3	4.5	2.3	4.2	3.9	6.4	4.4	2.4	7.5	5.5	6.0	6.2	6.5	9.2	12.7	10.6	11.2	10.4	6.7	..
Real GDP (rate of change)	3.3	5.3	3.9	6.0	6.9	4.1	2.2	3.8	3.8	0.9	3.4	1.0	2.0	3.8	4.1	2.5	1.6	-2.4	1.4	3.7	..
Government expenditure/GDP	19.7	19.1	19.8	20.1	20.0	21.4	26.4	28.2	28.9	29.8	28.4	27.5	29.5	29.7	30.8	31.7	34.7	38.7	41.2	43.3	..
Government budget deficit/GDP	-1.7	-0.7	-0.7	-0.1	-0.2	0.02	1.4	0.7	1.6	0.6	-1.8	-1.3	-1.2	-1.5	-3.2	-2.6	-0.3	-1.7	-5.2	-7.6	..
Unemployment rate	1.4	1.2	1.3	1.4	1.1	1.2	1.6	2.1	2.2	1.9	1.5	2.5	2.7	2.5	2.0	1.6	1.6	1.8	2.2	2.1	2.0
United Kingdom																					
Nominal GDP (rate of change)	6.0	6.8	4.7	6.4	9.2	7.5	6.7	5.6	8.0	7.5	8.6	12.2	10.7	15.0	13.6	26.0	19.0	15.1	14.6	16.1	17.1
GDP deflator (rate of change)	1.3	3.3	3.8	2.3	3.2	4.8	4.4	2.9	4.2	6.2	6.8	9.5	8.6	7.0	15.0	28.9	14.6	13.9	10.6	14.8	18.8
Real GDP (rate of change)	4.7	3.4	0.8	4.0	5.3	2.5	2.1	2.6	3.6	1.2	1.9	2.7	1.9	7.5	-1.2	-8.7	3.8	1.0	3.6	3.1	-1.4
Government expenditure/GDP	27.5	27.5	28.0	29.2	27.1	29.0	30.5	31.7	31.0	31.0	30.5	31.8	31.8	31.7	35.6	38.1	38.4	36.8	37.0	37.0	38.6
Government budget deficit/GDP	-1.2	-0.8	-0.3	-0.5	-1.3	-1.7	-1.4	-2.9	-1.7	1.9	1.5	-1.1	-2.5	-3.2	-4.2	-8.0	-5.5	-3.1	-5.1	-5.0	-5.0
Unemployment rate	1.7	1.6	2.1	2.6	1.7	1.5	1.5	2.3	2.5	2.5	2.8	3.4	3.8	2.7	2.6	4.1	5.7	6.2	6.1	5.7	7.4
United States																					
Nominal GDP (rate of change)	3.8	3.6	7.7	5.6	6.9	8.4	9.4	5.8	9.2	8.1	5.2	8.6	10.0	11.8	8.1	8.0	10.9	11.6	12.4	12.0	8.8
GDP deflator (rate of change)	1.6	0.9	1.8	1.5	1.5	2.2	3.2	3.0	4.4	5.2	2.8	5.0	4.2	5.7	8.7	9.2	5.2	3.8	7.5	8.5	9.0
Real GDP (rate of change)	2.2	2.6	5.8	4.0	5.3	6.0	6.0	2.7	4.6	2.8	-0.2	3.4	5.7	5.8	-0.6	-1.1	3.4	5.2	4.8	3.2	-0.2
Government expenditure/GDP	17.8	18.4	18.5	18.7	18.0	17.0	19.2	20.6	20.0	20.2	20.2	20.1	19.5	19.6	19.6	21.5	21.5	21.5	21.5	21.5	21.0
Government budget deficit/GDP	0.1	-0.7	-1.3	-0.8	-0.9	-0.2	-0.5	-1.1	-1.7	0.6	-1.2	-2.3	-1.3	-0.8	-0.8	-4.9	-3.5	-2.7	-2.0	-1.2	-2.6
Unemployment rate	5.6	6.7	5.5	5.7	5.2	4.5	3.8	3.6	3.6	3.5	4.9	5.3	5.6	4.9	5.6	6.5	7.7	7.0	6.0	5.8	7.1

Source: International Monetary Fund, International Financial Statistics.

demand restraint policies can slow the upward movement of price levels, but at the cost of considerable reduction in output and increase in unemployment. Furthermore, the underlying domestic causes of inflation, including the mechanisms for wage and price determination, institutional problems, structural rigidities on the supply side and cost pressures due to stagnant levels of productivity, as well as international factors, will remain latent even if such policies achieve a measure of success and may produce a resurgence of inflation once aggregate demand recovers. It follows that exclusive reliance on demand management policies, especially monetary policy, may by-pass the true causes of inflation. In addition, the adverse effects on the growth of productivity of prolonged periods of economic stagnation may indeed worsen the inflationary potential of the economy. The conclusion would appear to be that a whole range of instruments should be adopted. These would include demand management policies (possibly policies geared to control selectively different sources of spending, in order to maintain adequate levels of productive investment); measures to improve production conditions and to reduce costs on the supply side (including incomes policies, supported by measures to create and maintain a favourable climate of social partnership, and measures to reduce oligopolistic tendencies); and measures taken at the international level to eliminate global inflationary pressures and to assure a smooth working of the world trading system.

B. The international transmission of inflation: some global aspects

60. The increased interdependence among national economies has been accompanied by, and in some measure caused by, important developments in certain key elements in the international economic system. Three such elements deserve particular attention, for they may throw light on factors which underlie the world-wide diffusion of inflation. The first element is world foreign exchange reserves and the amount of international liquidity created through the international banking system. The second element is the system of exchange rates, which links different national currencies in the world. The third element is the international integration of goods markets and their price determination mechanisms.

61. The first international development concerns the relationship between international liquidity and world inflation. Along the lines of the quantity theory of money, empirical studies²¹ have claimed that an increase in foreign exchange reserves, by expanding the monetary base and hence the money supply of individual countries (assuming a constant money multiplier), has caused prices to rise. Other studies²², however, have suggested that, at least for the recent period of floating exchange rates, causality does not run from reserves to inflation, but rather that international reserves responded to inflation. Whether the increases in world foreign exchange reserves (or international liquidity in general, which encompasses official reserves and private liquidity provided by the international banking system) lead to world inflation or vice versa depends on whether the additional reserves serve to finance excess spending or deficits resulting from increases in international prices. If non-bank private liquidity in foreign currency resulting from a current-account surplus or imports of funds from abroad is purchased by the central bank, and if the central bank cannot then sterilize this inflow of funds, the reserve base of the banking system is enlarged and an increase in bank credits may follow.²³ It is also argued that an increase in international liquidity would

²¹ See, for example, H. Genberg and A.K. Swoboda, "Worldwide Inflation Under the Dollar Standard" (Graduate Institute of International Studies, discussion paper no. 12, Geneva, 1977); H.R. Heller, "International Reserves and World-wide Inflation", *IMF Staff Papers*, Vol. XXIII, No.1, March 1976.

²² See, for example, M.S. Khan, "Inflation and International Reserves: A Time-Series Analysis", *IMF Staff Papers*, Vol. XXVI, No.4, December 1979.

²³ It is found, for example, that the Federal Republic of Germany and Japan, during the period 1967-1972 under the fixed exchange rate dollar standard system, experienced an increase in their domestic money supply because of inflows of foreign currency which swelled their foreign exchange reserves.

ease the reserve constraint and, therefore, would encourage expansionary policies, leading to inflation. On the other hand, if foreign currency liquidities arise from borrowings to finance deficits resulting from increases in international prices or if these liquidities are acquired by official authorities and redeposited abroad in order to build up foreign exchange reserves for the financing of future deficits, there will normally not be an increase in domestic money supply in consequence. This is particularly true in the case of developing countries: foreign exchange reserves are used to adjust to inflation rather than serving as a stimulus to inflation.²⁴

62. In the same vein, fears have been raised that the growth of Eurocurrency markets, by expanding international liquidity, will have inflationary consequences for the world economy. It is argued that because bank operations on the Eurocurrency markets are not subject to reserve requirements, the credit multiplier will be very high. However, it has been estimated that when all portfolio responses are taken into account, the true size of the multiplier will be very low, approaching unity.²⁵ In any case, it is clear that the Eurocurrency markets perpetuate the liquidity created by the balance-of-payments deficits of reserve currency countries. Eurocurrency credits have indeed provided liquidity to developing countries to finance their balance-of-payments deficits. However, some developing countries, especially the poorest ones, do not have access to these sources. Furthermore, the relatively high interest rates prevailing in international financial markets in recent years have made this source of financing very costly.

63. However, two aspects of international financial markets may indirectly create inflationary biases. First, the international liabilities of banks, by making it more difficult to define and interpret money aggregates, make it harder to control the domestic money supply. Secondly, Eurocurrency markets increase the mobility and volume of capital flows, as well as the substitutability of similar financial assets denominated in different currencies, resulting in an increased instability of exchange rates. The inflationary bias occurs because downward price rigidity in a country whose currency has appreciated means that the change in the exchange rate has not been fully compensated, while the relative currency depreciation in other countries is reflected in an increase in their domestic price levels. Furthermore, by inducing a country whose currency has appreciated to intervene on the exchange markets, exchange rate instability may increase its monetary base and money supply, if the inflow of reserves is not sterilized and the money multiplier does not alter.

64. The second and closely related international development to which some attention should be paid has taken place in the system of exchange rates. The breakdown of the Bretton Woods fixed exchange rate system and its replacement by varying degrees of exchange rate flexibility since 1973 has brought to the fore the question of the impact upon world inflation of fixed and flexible rates, respectively. Flexible exchange rates should theoretically protect one country from inflation transmitted by other countries. However, it has been found that in the short run exchange rates are not determined by relative inflation rates and, therefore, in the short run increases in foreign prices cannot be completely compensated by changes in exchange rates.

65. It is also argued that the fixed exchange rate system imposes a certain discipline on demand management through the reserve constraint, while the flexible exchange rate system, by insulating countries from external influences, does not embody such a constraint. However, in so far as domestic inflation will lead to devaluation, the fear of an induced major increase in prices may constitute a barrier against the application of inflationary policies.

²⁴ As will be seen in section C of chapter IV, the increase in the current-account deficit of non-oil-exporting developing countries during the period 1970-1980 was largely due to increases in import prices.

²⁵ See, for example, J. Hewson and E. Sakakibara, *The Eurocurrency Markets and Their Implications* (Lexington, Mass.: Lexington Books, 1975).

66. Finally, as has been mentioned above, downward price rigidity can make flexible exchange rates more inflation-biased, particularly in situations where exchange rates are unstable.

67. However, the present system is a system of "managed floating", as far as industrialized countries are concerned. The fact that flexible exchange rates do not provide complete insulation means that countries, particularly small countries with open economies, would face domestic price feedbacks from exchange rate changes. They are, therefore, compelled to undertake active intervention on the exchange markets. This hybrid system combines the transmission mechanisms of both fixed and flexible rates systems and may in the end reinforce inflationary price trends.

68. The third development, the growing integration of goods markets internationally, has some implications for the price determination mechanisms on these markets. For many raw materials, markets are international in character, with the result that individual countries, especially small ones, are price takers. In the case of manufactured products, transnational corporations exert a world-wide control on production and marketing and in some cases have the power to fix prices internationally.²⁶ Likewise international cartels of producers or consumers do influence the formation of international prices in particular instances. As has been pointed out earlier, the prices of products other than primary products are not very responsive to short-term fluctuations of demand; they tend rather to be "sticky" downwards. This is also true of prices which are determined on international markets. (The historical experience with respect to international prices is examined in some detail in the following section.)

69. In conclusion, it appears that the increased integration of goods and financial markets has meant that inflationary pressures are more quickly and efficiently transmitted throughout the world economy. To some extent, this may imply that the international economy has become more fragile and is more susceptible to the emergence of inflation on a wide scale. It follows that international factors shaping the global economic system contain inflationary tendencies which are difficult to counteract at the individual country level. This highlights the need for international co-operation among countries to co-ordinate their policies and to bring some reforms to the system. In particular, the creation of a truly international supply of liquidity is necessary, internationally controlled and geared to the needs of the world economy. An enhanced role for the Special Drawing Right (SDR) would be one element in such a reform. The present system of international liquidity creation still depends on the liabilities resulting from balance-of-payments deficits of reserve currency countries and on the monetary policies of these countries. The inadequacy of the system is reflected in the fact that, on the one hand, it can induce inflation in countries with balance-of-payments surplus, while, on the other hand, other countries, especially developing countries with poor access to capital markets, suffer from insufficient international liquidity to overcome balance-of-payments difficulties.

C. Price behaviour of internationally traded goods: the postwar experience

70. The behaviour of the prices of internationally traded goods is governed by complex and interrelated forces which vary substantially from commodity to commodity. Because the short-term demand for and the supply of most primary commodities are relatively price-inelastic, their 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 can be kept means that speculation also plays a role. For example, the current low level of many commodity prices reflects pessimism regarding

²⁶ As in the case of national producers analysed above, transnational corporations also set their prices after providing for mark-up over costs.

the future rate of expansion of demand, coupled with the attractiveness of buying financial instruments bearing high rates of return, and its counterpart, the high financial cost of maintaining stocks.

71. In contrast, prices for manufactured goods have become less sensitive to changes in demand and are governed increasingly by cost factors 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 against manufactures are highly sensitive to fluctuations in the over-all level of 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.

72. Notwithstanding these broad observations, prices of internationally traded goods behaved rather differently during the 1970s from the 1950s and 1960s (see table 6 below). First, the terms of trade of primary commodities against manufactures did not deteriorate markedly during the 1970s, in contrast to the earlier postwar experience,²⁷ although the terms of trade of primary commodities against machinery, in particular, continued to deteriorate. Secondly, the prices of traded goods rose at a relatively rapid rate during the 1970s. The largest increases were for petroleum which, reversing the trends of the 1950s and 1960s, rose nearly eight times as fast as unit values for exports of manufactures. The unit value index for exports of manufactures from developed market economies increased at an annual average rate of 11.1 per cent during the period 1970-1980, compared with 1.9 per cent during the period 1950-1970. Thirdly, fluctuations in international prices were more pronounced than in earlier periods. In common with past patterns, the fluctuations in food prices were larger than those in most other traded goods.

73. 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 against manufactures at an average annual rate of about 2.8 per cent between 1950 and 1960. During the 1960s, while there was a perceptible further deterioration in these terms of trade, it was not highly significant in the context 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 terms throughout the 1960s, and the terms of trade of petroleum against manufactures fell at an annual average rate of 3.4 per cent over the period 1955-1970.

74. 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, centred on 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, following 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 economies had already entered a severe recession and prices for many other commodities were falling.

75. 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 imports of manufactured goods from developed market economies increased by more than 12 per cent. Food prices rose steeply, starting in mid-1975, and those of 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

²⁷ In the early 1980s, however, the terms of trade did deteriorate markedly. See *Trade and Development Report 1982* (UNCTAD/TDR/2, to be issued as a United Nations publication), part I, chap. 1.

TABLE 6
PRICE INDICES FOR INTERNATIONALLY TRADED GOODS, 1950-1981
(1970=100)

Year	Primary commodities (excluding petroleum)					Crude petroleum	Manu- factures c/
	Total a/	Food b/	Tropical beve- rages	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

Sources: IMF, *International Financial Statistics*, various issues; and UNCTAD, *Handbook of International Trade and Development Statistics*, various issues.

a/ Including petroleum in the years 1950-1956.

b/ Including tropical beverages in the years 1950-1956.

c/ Unit value index of exports by the developed market economies of manufactured goods.

other hand, after the sharp increases of 1973 and 1974, while continuing to increase in nominal terms, rose less rapidly than prices of manufactures.

76. 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 rose strongly, peaking in early 1980. The subsequent decline has been extremely pronounced.

77. This brief historical outline indicates that primary commodity prices in general behave quite differently from those of manufactures in the short run. This conclusion is borne out by an empirical investigation, presented in table 7, 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 relation to increases in the prices of manufactures, illustrating the proposition that cost-plus pricing behaviour predominates in this sector.

78. 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.

79. In table 8 below, trend rates of growth of export unit values are given for six major commodity groups for the periods 1955-1970 and 1970-1979, and for the two periods combined.²⁸ The periods were so chosen that the second would coincide roughly with the period of slow growth and high inflation in which the world economy is currently immersed.

80. As can be seen from the table, the annual 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. It may be noted that over the period 1955-1970, the rate averaged less than 1 per cent for all commodity groups except for machinery and transport equipment (SITC 7), for which it was close to 2 per cent, and for raw materials, fuels and chemicals, for which it was negative. Over the period 1970-1979, the annual growth rate accelerated to around 11 per cent for all major commodity groups, with the exception of fuels, for which it exceeded 25 per cent.

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

²⁸ Trend rates of growth are used here in an attempt to minimize the influence of year-to-year fluctuations.

TABLE 7

THE SENSITIVITY OF TRADED GOODS PRICES TO CHANGES IN AGGREGATE DEMAND:
REGRESSION ANALYSIS

Commodity group	Coefficients			
	Constant term	Exchange rate	Aggregate demand	Inflation rate
Primary commodities <i>a/</i>	-0.57 (-4.2)	-0.30 (-0.6)	8.05 (4.1)	3.49 (4.4)
Food	-0.33 (-1.3)	-1.27 (-1.0)	3.70 (2.1)	3.04 (2.1)
Beverages	-0.65 (-3.1)	2.74 (3.6)	9.73 (3.3)	3.90 (3.2)
Metals	-0.50 (-3.4)	-0.24 (-0.4)	7.77 (3.7)	2.79 (3.2)
Agricultural raw materials	-0.83 (-4.9)	-1.11 (-1.8)	12.46 (5.1)	4.32 (4.4)
Petroleum	0.10 (0.2)	1.30 (0.5)	-8.11 (-0.9)	5.34 (1.4)
Manufactures	-0.03 (-0.7)	-0.61 (-3.7)	-0.25 (-0.4)	1.33 (5.0)

Source: UNCTAD secretariat calculations, based on international sources.

Note: Coefficients of regression of the rate of growth of the variable indicated on the rate of growth of each price index. Figures in parentheses are t-values. The exchange rate is the GDP-weighted index of the United States 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.

TABLE 8

TRENDS *a/* IN EXPORT UNIT VALUES IN
 MARKET-ECONOMY COUNTRIES, BY COMMODITY GROUP, 1955-1979
 (Per cent trend rate of increase)

Commodity group	Export unit values		Terms of trade <i>b/</i>	
	1955-1970	1970-1979	1955-1970	1970-1979
Food and beverages (SITC 0+1)	0.4	11.2	-1.4	-0.6
Raw materials (SITC 2 + 4)	-0.2	11.0	-2.0	-0.8
Fuels (SITC 3)	-1.0	25.7	-2.8	13.9
Chemicals (SITC 5)	-1.6	11.7	-3.4	-0.1
Machinery and transport equipment (SITC 7)	1.8	11.8	..	..
Other manu- factured goods (SITC 6 + 8)	0.9	10.5	-0.9	-1.3
Total	0.5	13.0	..	..

Source: United Nations, *Statistical Yearbook*, various issues.

a/ Calculated by means of a log-linear regression.

b/ For the commodity group in question, with respect to exports of machinery and transport equipment.

CHAPTER IV

CONSEQUENCES OF WORLD INFLATION FOR DEVELOPING COUNTRIES

A. Modes of transmission of inflation to developing countries

82. In general, developing countries are more affected by external factors than developed countries, given their limited capacity to adjust. Depending on the openness and the adjustment capacity of the economy, imported inflation may predominate over domestic causes, as countries have to accommodate increases in foreign prices. However, in some countries inflation rates are much higher than the world average and largely of domestic origin; nevertheless, imported inflation may further exacerbate domestic inflation through domestic accommodation policies aimed at avoiding severe reductions in output.

83. The impact of international inflation on the domestic economy depends to some extent on the interaction between external factors and domestic structural characteristics of the economy and, in general, three channels of transmission can be distinguished:

- a. Changes in the demand for exports from developing countries arising from changes in the income levels of their trading partners;
- b. Direct effects of the prices of traded goods, which might differ according to whether import prices or export prices are affected;
- c. Monetary effects of external liquidity.

84. Increases in aggregate demand in developed countries lead to a corresponding increase in demand for exports of primary products from developing countries. This gives rise to higher earnings and expenditure in the domestic economy of the exporting country, which, given supply rigidities, can result in increases in domestic price levels.

85. Secondly, inflation may also be generated directly via the impact of a rise in either import or export prices or both. Prices for internationally-traded goods are to a large extent determined exogenously for most developing countries and not related to fluctuations in demand within these countries. This is the most significant channel of transmission for developing countries and may be the determinant factor in those for which international trade is large.

86. Price increases for imported final goods affect the consumer price index directly, whereas those of imported inputs lead to an increase in domestic production costs which affects the price level after a certain time lag. If price increases give rise to a larger payments deficit and a country is subsequently forced to depreciate its currency, the domestic price increase for imports will be even higher than the original increase in import prices expressed in foreign currency. Increases in export prices may have effects similar to increases in import prices if exportables are used in the production of home goods. However, increases in purchasing power as a result of increases in export prices relative to import prices may also result in an increase in demand for domestically produced goods. If the supply elasticities of these goods are low, significant inflation can result. This appears to have been the case in a number of oil-exporting developing countries.

87. Changes in consumption patterns occasioned by price changes may alter the final effect on the overall price level. Increases in the prices of imported goods for which the price elasticity of demand is low, such as food and petroleum, may lead to a shift in aggregate demand away from domestically-produced goods and services. Because of the adverse consequences for production and employment of such a demand shift, governments frequently take measures to expand aggregate demand, which often causes inflation to spread to other economic sectors. In the special case where accommodation to imported inflation does not take place, the demand shifts themselves would mitigate domestic inflationary pressures, lowering somewhat the total inflationary impact of import price increases.²⁹ Another possible way in which changes in consumption patterns may arise is when imported goods compete directly with domestically-produced goods. In this case, prices for domestic substitutes would tend to rise as well as those of imports, not only as a result of demand shifts but also because domestic suppliers get more scope for increasing their prices.

88. The impact of the direct international price connection on inflation in individual countries is likely to be related to their degree of openness to international trade as well as to their patterns of trade. It also depends on the exchange rate system that the country has adopted. Within the present hybrid system of exchange rates, the majority of developing countries have adopted arrangements whereby their currencies are pegged to the United States dollar or to the currencies of their major trading partners. Others have pegged their currencies to the SDR or to a basket of currencies. Most developing countries are thus affected by changes in the exchange rate between the currency or currencies to which their own currency is pegged and other major currencies, in addition to being affected by the changes in prices transmitted from the country to whose currency their own currency has been pegged.

89. Finally, the monetary channel of transmission operates via the impact that external liquidity has on the economy. A rise in a country's foreign exchange reserves will lead to an increase in the domestic monetary base (in the absence of government sterilization measures) or, by relaxing the foreign exchange constraint on governments, it could encourage them to embark on more expansionary policies. Although these mechanisms may have played some role in transmitting inflation in the case of countries with inadequate means of controlling the monetary base, they would appear generally to have been the least important of the three channels.

90. As mentioned earlier, the extent to which external factors affect the economy depends to a certain degree on their interaction with domestic structural factors. The latter are part of a dynamic socio-economic structure which, in the process of development, incorporates tensions between sectors of the economy and between social groups, tensions which can be sources of inflation.

91. In an effort to explain inflation of domestic origin in developing countries conventional theory has stressed the role of money creation, irrespective of whether the inflationary pressure is considered to be of the demand-pull or cost-push variety. Thus for example, monetarists argue that inflation is due to an excess supply of money created, at least in part, to finance a government budget deficit. In some cases, it is argued, inflation tends to be of a self-generating nature, because the government budget deficit itself is a function of the rate of inflation,³⁰ in so far as government expenditures rise with inflation, while government revenues tend to lag behind due to delays in tax collection. It must be added here that the weakness of the fiscal system and the underdevelopment of domestic capital markets in these countries often underly the direct financing of the government budget deficit by the central bank.

92. Proponents of the structural theory of inflation have argued that the above-mentioned approach fails to take into account the nature of structural change

²⁹ For a more detailed discussion of the domestic effects of imported inflation, see the following section.

³⁰ Bijan B. Aghevli and Mohsin S. Khan, "Government deficits and the inflationary process in developing countries", *IMF Staff Papers*, vol. 25, No. 3, September 1978.

inherent in the development process. For example, efforts to accelerate development may encounter rigidity with respect to food output and the inadequacy and instability of the purchasing power of exports. It is then argued that the process of industrialization implies a shift of resources from the agricultural to the industrial sector. The increase in the demand for agricultural products in urban sectors cannot be satisfied at constant prices because of the rigidity of domestic supply and the inadequate purchasing power of exports (which does not permit sufficient food imports). Increases in agricultural prices are not compensated by decreases in the prices of manufactured goods. The result is an increase in the general price level, which is then accommodated by the monetary authorities. This is, however, only a transitional phase. As development proceeds, investment is channelled into the "bottleneck sectors" and the inflationary pressures subside. Similarly, efforts to stimulate development by increased public sector investment may encounter rigidity with respect to increases in government revenues. If the resultant budget deficit is financed by borrowing from the central bank, it might lead to an increase in the price level in the short run, but since tax revenue will eventually increase as output expands, this effect is also considered to be transitory.

93. Whatever the causes of domestic inflation, both conventional and structural theories lead to a common conclusion, namely, that domestic causes of inflation are imbedded in the weaknesses of economic structures and in the development process of developing countries. If the causes are known, the cure, on the other hand, may be difficult, because it requires a long-run process of structural change in the economies of these countries. In some cases, it may not be possible to devise anti-inflationary policies that are consistent with maintaining development, and a degree of inflation may have to be tolerated if the development goal is to be seriously pursued.

94. Interactions between external and domestic factors manifest themselves in many ways. For example, inflation of import prices may have a more severe effect than otherwise if the agricultural producers import inputs. Profitability may decline as a result, leading to a reduction in agricultural output as small-holders at the margin shift to other activities. Other things being equal, the increased costs implied by the increased import prices will also tend to reduce use of those inputs, e.g., fertilizers, resulting in a fall in the productivity of the agricultural sector. As another example, the impact of rising export (or import) prices will be moderated to the extent that they increase the tax revenue from trade, causing government revenues to increase faster than inflation-induced government spending and thereby reducing a structural budget deficit.

B. The impact of rising domestic price levels in developing countries

95. This section will highlight problems for developing countries and in particular for the management of their economies caused by rising domestic price levels. Although some of the same domestic consequences can also be found in developed countries, the impact of inflation in developing countries appears to be much more serious, as a result of specific social, economic and institutional conditions.

1. Impact on income distribution

96. In general, any inflationary process brings with it real losses for those groups whose nominal incomes do not rise in step with changes in the price level. In many developing countries these include non-unionized urban labour, agricultural labourers, independent small-scale producers in agriculture and services, who cannot easily raise their prices, recipients of social benefits and to a lesser extent certain salaried workers such as civil servants. In developed countries various methods of indexation or discretionary adjustments exist to avoid these

effects, at least in the medium term. Several of these methods have also been adopted in a number of developing countries, mainly those in which inflation is not a new phenomenon and the economy is monetized to a large extent. However, institutions are often too weak to counteract undesired effects of inflation. Furthermore, a generally low degree of organization of the labour force and other groups susceptible to real losses from price increases prevails in a majority of developing countries.

97. The impact of imported inflation on the distribution of income differs, depending on whether inflation has been transmitted through export prices or import prices and whether capital goods are affected more than wage goods. Where export prices affect directly the prices realized by producers, the direct effect of increasing export values is generally an increase in real profits in the export sector. When the increase of export values is solely the result of higher prices, with no increase in volume, employment and the total wage income remain unchanged. If export volumes increase as well, additional labour may be employed in the export sector. This effect could mitigate somewhat the increase of profits relative to labour income. If, as a result of imported inflation, the prices of capital goods rise more than those of wage goods, some factor substitution toward increased employment of labour may result; depending on the elasticity of supply in labour markets, real wages may tend to increase as well.

98. When inflation in agricultural and industrial inputs is transmitted through import prices, the final effect on income distribution depends on the price elasticities of consumer demand for various categories of imported final goods, and for domestic goods with a high import content. As price elasticities for many essential imports of developing countries are low, importers in most cases can pass on higher import prices to the final consumer and conserve their profits. Real wages, on the other hand, would fall for broad segments of the population.

99. When imports are competing directly with domestically-produced goods and services, importers find themselves in a weaker position to add the increase in import prices to final prices. On the other hand, domestic suppliers of these products are enabled to raise their prices, so that the total effect would be similar to what has been said above. However, two differences have to be considered. First, a decrease in the profits of importers would be accompanied by increased profits for domestic suppliers. Second, employment and output in the domestic sectors competing directly with imports would tend to rise. The latter effect, however, would be very limited in view of the rigidities in supply and reallocation of resources that confront most developing economies.

100. In spite of the variety of effects which imported inflation can have on the domestic distribution of income, some general conclusions can be drawn from the foregoing considerations: (i) When exports increase in value more than imports as a result of price increases, the real gain of the net improvement in the trade balance accrues to a major extent to profit incomes in the export sector; (ii) When imports increase in value more than exports, the real loss of the net deterioration in the trade balance is incurred to a major extent at the expense of real wage incomes; (iii) Thus, even when the values of a country's exports and imports rise at the same rate, volumes remaining unchanged, income distribution will be affected to the detriment of the share of non-profit incomes; (iv) Whatever the precise channel for the import of inflation may be, it tends to reinforce inequalities in the income distribution of developing countries, as income differentials widen between profit and non-profit earners, between the tradeables sector and the rest of the economy and between the richer and the poorer.

101. It is the poorest part of the population, particularly in urban areas, that suffers most from higher prices for imports which meet their basic needs, such as food and energy.

2. Government budget

102. The costs to the public sector of providing goods and services tend to increase at the same rate as the price level, while the corresponding growth of tax revenue depends on the elasticity of the tax system with respect to changes in nominal income, which differs widely, but seems to be low in most developing countries.³¹ Moreover, tax revenues follow changes in taxable incomes and prices with relatively long lags. Thus, government deficits tend to increase in periods of rapid inflation. Additional government borrowing, in turn, adds to the domestic consequences of inflation. Either it leads to a shrinkage of domestic financial resources available for private investment, thus exacerbating the above-mentioned problems which arise from changes in the production structure as a reaction to inflation, or the domestic money supply is increased, lending further countenance to domestic inflation. In order to avoid such adverse effects, governments would have to make effective discretionary or structural changes in the tax system. In most developing countries, however, little flexibility appears to exist for such changes and the authorities often find themselves in a position where they have to decide between adopting measures which are likely to push inflation forward or cutting back their budgets in real terms.

3. Growth and development

103. It is often argued that inflation in developing countries can have positive effects on the rate of growth of real GDP because of the shifts in income distribution and the rise in the savings ratio associated with it.³² However, shifts in the distribution of income via upward changes in the price level, and hence increases in the savings ratio, are as likely to be a result of increased investment during the process of industrialization as to be a causal factor. Moderate rates of inflation may, on the other hand, facilitate structural change towards industrialization in so far as they allow for a better working of the relative price mechanism when prices are hardly flexible downwards in nominal terms.

104. Possible positive effects on investments in the export sector and on import substitution are limited. Higher profits in the export sector may enhance the attractiveness of investment, but in the presence of wide fluctuations in world market prices for the main exports of developing countries, the current and potential profitability of such investments may appear uncertain. Moreover, if higher export earnings are mainly due to an increase in price, rather than volume, uncertainty will remain about the degree of utilization of the additional production capacity which will result. These uncertainties keep potential investors from expanding their activities on a large scale. Another important consideration in this context is the absence of efficient capital markets in most developing countries, which makes it hard for savings to be channelled easily to productive uses. The higher the rate of inflation and the wider the fluctuations in export prices, the larger will be the propensity to invest additional savings abroad, where there is less uncertainty about yields from financial investments.

³¹ See some recent studies carried out by IMF staff, for example, P.S. Heller, "Impact of Inflation on Fiscal Policy in Developing Countries", *IMF Staff Papers*, Vol. 27, No. 4, December 1980, B.B. Aghevli and M.S. Khan, *op. cit.*, V. Tanzi, "Inflation, Lags in Collection and the Real Value of Tax Revenue", *IMF Staff Papers*, Vol. 24, No. 1, March 1977.

³² See, for example, A.P. Thirlwall, *Inflation, Saving and Growth in Developing Economies* (Macmillan: London and Basingstoke, 1974).

105. The effect of higher import prices on aggregate investment and growth is very limited, too. In principle, they encourage import substitution, since domestic production of previously imported goods becomes more profitable. At the same time, however, resources for financing such investment tend to decline, in particular when the rise in import prices is associated with a deterioration in the current account and when capital goods for creating additional capacity in the tradeables sector have to be imported too.

106. Since government budgets are under strain when inflation accelerates, public expenditure for investment and development programmes tends to decline, investment in infrastructure being one of the more flexible items in the budget. This tendency is reinforced by the general tendency of governments in many developing countries to combat inflation by reducing expenditures. Capital investment in social overheads is of major importance to improve social and economic conditions in developing countries. Consequently, not only will the supply of public goods be severely hit immediately, but growth and development will also suffer in the medium and long term.

C. The impact of world inflation on the balance of payments of developing countries

107. World inflation and the policies followed by developed countries generally in seeking to combat it have adverse effects on the current account of developing countries, through an increase in the prices of their imports not completely compensated by a comparable increase in export prices, through a decrease in the volume of exports, and recently through a substantial increase in interest payments due to the rise in world interest rates.

108. During the period 1971-1980 the overall current account of the developing countries as a group did not show any uniform tendency towards surplus or deficit. However, the experience of the major oil exporters differed significantly from that of other developing countries, which, as a group, ran current-account deficits whose magnitude increased almost continuously over the period (see table 9).

Table 9
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 (Millions of United States dollars)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Major oil exporters a/										
Current account balance	1282.0	2166.0	5271.0	63852.0	31873.0	33860.0	28246.0	4429.0	56346.0	102358.0
Change in value of imports	1898.0	3207.0	7754.0	16867.0	18828.0	12234.0	20672.0	10434.0	14163.0	42819.0
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	5192.0	4448.0	15832.0	87777.0	-12551.0	24990.0	14904.0	-4626.0	77730.0	96369.0
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	1249.3	2017.2	2172.8
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	-12490.0	-9896.0	-9260.0	-27165.0	-34227.0	-22858.0	-22859.0	-30542.0	-45108.0	-66865.0
Change in value of imports	2946.0	1933.0	13239.0	33283.0	6066.0	1582.0	14602.0	18887.0	28076.0	38728.0
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	4464.0	13974.0	18997.0	-1433.0	10972.0	14008.0	9628.0	23563.0	23619.0
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	1014.4	1977.4	2371.5	3872.1
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.82.11.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:

$$V(1) - V(0) = V(0) \left[\frac{P(1) - P(0)}{P(0)} + \frac{Q(1) - Q(0)}{Q(0)} \right] + V(0) \left[\frac{P(1) - P(0)}{P(0)} \right] \left[\frac{Q(1) - Q(0)}{Q(0)} \right]$$
The value of the price effect is $V(0) \left[\frac{P(1) - P(0)}{P(0)} \right]$ and that of the volume effect is $V(0) \left[\frac{Q(1) - Q(0)}{Q(0)} \right]$. The residual term $V(1) - V(0) - \left[\frac{P(1) - P(0)}{P(0)} \right] V(0) - \left[\frac{Q(1) - Q(0)}{Q(0)} \right] V(0)$ 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 $I(0) \left[\frac{i(1) - i(0)}{i(0)} \right]$.
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).

109. The current account of the group of major oil-exporting developing countries was in surplus during the whole period 1971-1980. Substantial increases in export prices occurred in 1974 and 1980, which resulted in particularly large current-account surpluses. In 1978, an increase in their import prices, together with a reduction in their export volume, considerably reduced their surplus. It may also be noted that the volume of exports from this group of countries has moved in parallel with the level of economic activity in industrialized countries, to an even more marked extent than in the case of the other developing countries. Thus, for instance, in addition to the changes in export volumes associated with changes in the business cycles in industrialized countries which have been noted above, the slow-down in industrial activity in 1978 in industrialized countries was accompanied by a sharp reduction in the volume of exports from major oil exporters (while the export volume of other developing countries increased in that year).

110. The terms of trade of non-oil-exporting developing countries continuously deteriorated during the period 1975-1980, except in the year 1977. Taking 1975=100, the index of the terms of trade of this group of countries decreased to 80 in 1980 after having increased to 107 from 98 in the preceding year. The increase in the prices of imports has thus been greater than the increase in the prices of their exports. It is also interesting to note that the price effect of changes in the value of imports was quite substantial and outweighed the volume effect during the whole period 1971-1980, with the sole exception of 1978. In other words, for the period under consideration, the increases in import values were mainly the result of increases in import prices, accompanied in some years by a net reduction in import volumes which must have had adverse effects on economic growth. Movements in export volume follow closely the business cycles in developed market-economy countries and the same holds with regard to comparable movements in business cycles in industrialized countries. In conclusion, it should be noted that the year 1980 witnessed a substantial increase in interest payments, which was mainly due to an increase in the average interest rate³³ and aggravated the current-account deficit. On the whole, it can be seen that the group of non-oil-exporting developing countries has been severely affected by world inflation, directly through an increase in the prices of imports and indirectly through a reduction in export volume and, at least for the most recent period, because of increases in interest payments.

111. As regards loan financing, it is sometimes argued that inflation erodes the value of external debt and therefore represents a windfall gain for the debtors.³⁴ This argument may hold when the creditors do not fully anticipate inflation in fixing interest rates. However, with the growing practice of granting roll-over credits which provide frequent opportunities to adjust interest rates, creditors are rapidly adjusting interest rates to changes in inflation rates. In fact, real interest rates (that is, nominal interest rates adjusted for inflation) have recently substantially increased in OECD countries. As has been seen, this caused a considerable increase in interest payments by developing countries. The creditors are thus compensated for any decline in the real value of outstanding loans by correspondingly higher interest payments. Furthermore, the tremendous rise in interest rates discouraged long-term borrowing, with the result that the average maturity of debt was shortened, thereby increasing the burden of debt servicing. In fact, the ratio of interest payments and amortization by developing countries as a whole to debt outstanding increased from 11 per cent in 1970 to 16.8 per cent in 1979, and the ratio of debt service to exports of goods and services by those countries increased from 12 per cent in 1970 to 19.5 per cent in 1979.

³³ It should be noted that the calculations in table 9 of the effect of changes in interest rates are based on medium- and long-term public debt, which may somewhat understate the full effect when account is taken of short-term and private debt also.

³⁴ For a discussion of this issue, see *Trade and Development Report 1982, op. cit.*