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**Trade among Developing Countries:
Theory, Policy Issues, and Principal Trends**

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August 1981

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TRADE AMONG DEVELOPING COUNTRIES:
THEORY, POLICY ISSUES, AND PRINCIPAL TRENDS

A Background Study for World Development Report 1981

The paper presents the early results of empirical work on trade among developing countries. The results, which are preliminary and will be further expanded, are based on data derived from a sample of thirty-three developing countries that account for about 60 percent of developing countries' exports to one another. Such evidence as we have been able to put together indicates that the sample is fairly representative of overall trends in trade among developing countries.

The main conclusion is that non-fuel trade among developing countries, excluding capital-surplus oil exporters, accounted for a remarkably stable share of their total trade between 1963 and 1977. This constancy, however, conceals two interesting opposing trends: the share of manufactures exported to developing countries has been falling sharply while that of non-fuel primary commodities has been rising, the latter largely because of the demands of the newly industrializing countries (NICs). Nevertheless, the dynamism of manufactures has meant that they make up an increasing share of trade among developing countries. Four particular points emerge from the evidence: (a) there is no obvious sign of a bias against trade among developing countries, except by whatever effect their own commercial policies may have; (b) the more inward-looking countries tend to send a higher proportion of their exports to other developing countries, and regional integration strengthens this effect; (c) exports of manufactures to developing countries are much more capital intensive than those to industrialized countries; and (d) exports to developing country markets may not be the vital first stage for capital goods exports that is sometimes supposed.

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CONTENTS

	<u>Page</u>
I. INTRODUCTION.....	1
A. The Main Issues in Trade among Developing Countries.....	1
B. The Program of Work and the Organization of the Paper.....	3
II. THE THEORY OF TRADE AMONG DEVELOPING COUNTRIES.....	5
A. Trade Theory and the Direction of Developing Countries' Trade.....	5
1. The Underlying Determinants.....	5
2. Barriers to Trade and Implications for Its Direction...	13
3. Market Size and Growth as Determinants of Trade.....	18
4. Conclusion on the Determinants of the Direction of Trade Flows.....	20
B. The Benefits of Trade among Developing Countries.....	22
C. Policy Options for Trade among Developing Countries.....	28
1. Externalities, Factor Market Distortions, and "Natural" Barriers.....	28
2. Barriers Created by Trade Policy.....	31
3. Assessment of Policy Options.....	32
D. Conclusion.....	33
III. TRENDS IN TRADE AMONG DEVELOPING COUNTRIES.....	34
A. The Destination of Developing Countries' Exports.....	37
1. Trend in the Share of Trade among Developing Countries	38
2. Market Size and Growth and "Bias" in Trade among Developing Countries.....	48
B. Salient Features of Trade among Developing Countries.....	54
1. Commodity Composition and Principal Flows.....	55
2. Trade among Developing Countries and the NICs.....	66

3.	Capital-Labor Ratios in Exports of Developing Countries.....	74
4.	Capital Goods Trade among Developing Countries.....	75
IV.	SUMMARY OF MAIN FINDINGS.....	81
A.	The Main Trends in the Destination of Developing Countries' Trade.....	81
B.	Principal Hypotheses on Trade among Developing Countries....	84
1.	The Myth of a Bias against Trade among Developing Countries.....	84
2.	Developing Countries' Commercial Policies and the Direction of Their Exports.....	85
3.	The Capital Intensity of Trade.....	86
4.	Capital Goods Exports and Developing Country Markets... 86	
	APPENDICES.....	87
	REFERENCES.....	110

TEXT TABLES

		<u>Page</u>
1	Trade among Developing Countries as Share of Their Total Exports	42
2	Share of Trade among Developing Countries in Total Trade by Region, 1963-1977 Selected Years.....	46
3	Shares of Exports to Developing Countries in Total Exports.....	47
4	Shares of Exports of Manufactures to Developing Countries in Total Exports and Shares of World Income.....	50
5	Share of Major Markets in Developing Country Exports by Main Commodity Group, Selected Years.....	52
6	Share of Capital-Surplus Markets for Developing Country Exports by Region and Selected Developing Countries, 1973 and 1977....	53
7	Commodity Composition of Developing Country Exports to Different Markets.....	56
8	Commodity Composition of Exports from Developing Countries in Selected Years.....	58

9	Weight of Manufactures in Exports of the Total Sample and of the Regions.....	59
10	Commodity Composition of Exports from Developing and Industrialized Countries to Developing Countries, 1977.....	60
11	Principal Products in Trade among Developing Countries.....	62
12	Shares of Ten Top Exporters in Trade among Developing Countries for Major Commodity Groups, 1963 and 1977.....	64
13	Major Bilateral Commodity Flows, 1977.....	67
14	The Role of NIC Markets in Trade among Developing Countries, 1963 and 1977.....	70
15	Percentage Distribution of NIC Imports by Origin, 1963 and 1977..	72
16	Percentage Distribution of NIC Exports by Destination, 1963 and 1977.....	73
17	Direct Factor Content of NIC Manufactured Exports, 1977.....	75
18	Selected Indicators of Trends in Trade in Capital Goods among Developing Countries.....	77
19	Changes in Direction of Exports of Capital Goods from Major Exporters, 1963-77.....	79

TEXT FIGURES

1	Percentage Share of Developing Country Exports Going to Developing Countries.....	39
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ACRONYMS AND ABBREVIATIONSIn text

BEC	(U.N.) Broad Economic Categories
EPD	Economic Analysis and Projections Department of the World Bank
GATT	General Agreement on Tariffs and Trade
IMF	International Monetary Fund
MFN	Most favored nation
NBER	National Bureau of Economic Research
NICs	Newly industrializing countries
NTBs	Non-tariff barriers to trade
OPEC	Organization of Oil-Exporting Countries
SITC	Standard International Trade Classification
UNCTAD	U.N. Conference on Trade and Development

In tables

CPEs	Centrally planned economies
CSCs	Capital-surplus oil-exporting countries
OILX	Oil-exporting countries
DCs	Industrialized countries
LDCs	Developing countries

I. INTRODUCTION

Why should the direction of trade, in general, and trade among developing countries, in particular, be worth studying? The subject is significant to the extent it is likely to enhance understanding of the relationship between trade and welfare (including growth) or - still better - to aid in formulating clear policy advice. A number of influential advisers have suggested that there are indeed important implications. Therefore, it is as important to sift sense from nonsense in these pronouncements as to reach the final conclusion that the direction of developing countries' trade is indeed a matter of great consequence.

A. The Main Issues in Trade among Developing Countries

What are the main arguments that the direction of developing country trade matters? One is that developing countries are victims of the chronic disease of "dependencia," which can be cured by collective self-sufficiency, the earlier nostrum of simple self-sufficiency having proved frequently fatal (especially to smaller patients). A related view is that of (Stewart 1976), who suggests that colonial trade patterns imposed a straightjacket on developing countries, leading to a bias away from potentially more lucrative trade with one another because of transport, financial, and marketing constraints. Trade between developing countries is thought to be better than trade with industrialized countries because of opportunities for learning by doing, the shared technological requirements of the South, and the advantages of the appropriate technology supposedly embodied in capital goods produced by developing countries. Sir Arthur Lewis (1980) in a return to the "engine of

growth" perspective argues that the world is probably entering a period of chronic slow growth whose effects on developing countries can be mitigated, if not escaped altogether, only if they increase trade with one another. The strength of this recommendation is increased, he argues, if the developed countries retreat behind protectionist walls. There are those who argue that in the 1970s booming trade among developing countries had already performed just the role that Lewis recommends.

Most of the debate is implicitly concerned with manufactured goods. An important topic that is, therefore, infrequently mentioned is trade in primary commodities, which seems to offer a valuable opportunity for expanded trade among developing countries. A relevant concept here is that of triangular trade among industrial, developing, and newly industrializing countries (NICs). Thus, it is suggested that rapid growth and structural change in the NICs lead to increases in their demand for the primary goods exported by other developing countries.

Another debate centers around the benefits of trade, especially in manufactures, between developing and developed countries on the one hand and among developing countries on the other. Krueger (1978) argues that it is the former that is more valuable for developing countries since, being more labor-intensive, it leads to more employment per unit of exports. Meanwhile, Hughes (1980) suggests that the latter - at least in the future - is of great value, pointing to those benefits of trade among developing countries in similar goods that result from the rigors of competition and opportunities to learn by doing and to exploit economies of scale.

Policy recommendations do not in all cases follow directly from views about the benefit of one or other component of trade but are, of course, quite closely related to them. Those who believe that trade among developing

countries is particularly valuable tend to recommend discriminatory trade liberalization via customs unions or free trade areas (UNCTAD 1979). Those who think that trade among developing countries is discriminated against cite liner conferences for shipping that are dominated by industrialized countries, firms, lack of credit, or problems with currency convertibility and then focus upon policy reform in these areas. Even those who are wary of the economic costs of discriminatory trading arrangements and are well aware that they have been collapsing like ninepins (Vaitsos 1978, Hughes 1980) sometimes still argue that discriminatory policies are the best available vehicles for wider liberalization by developing countries, but that care must be taken to avoid costly trade-diverting plans and to look instead for opportunities for trade creation. The most likely focus for such arrangements is said to be the NICs. Many others would argue, however, that there are no reasons for concentrating policy on any particular trade channel, such as that among developing countries, but rather that what is needed is a general reduction in barriers to trade. (Balassa 1979a, Frank 1978).

B. The Program of Work and the Organization of the Paper

This paper is the first step in a program of work designed not only to illuminate the fundamental issues but to bring some order into a fevered and sometimes contradictory debate. Its immediate purpose is quite limited, namely to clear the ground for subsequent, more ambitious construction. This process involves two activities. The first is to provide an analytical framework within which this paper itself and - more important - a subsequent work program can be placed. The second is to develop a picture of overall trends and patterns in trade among developing countries. It should be stressed that neither is an end in itself but merely a stage in "work in

progress," and this is, therefore, the characteristic of the paper itself.

If the first purpose is considered more closely, it will be noted that, even though a major reason for study of the direction of developing country trade is the already cited views of others about its importance and policy implications, those views themselves are too inchoate to form a framework for coherent analysis. The procedure followed in Chapter II is instead to establish our own organization of the theoretical issues and to place the views of others in that context.

The picture of overall trends that appears in Chapter III has several purposes. In the first place, a number of commonly held views are called into doubt. For example, the "bias" against trade among developing countries is not readily identifiable and needs more careful definition. Again, the argument that developing countries must export capital goods to one another before being able to break into developed country markets for these products also appears dubious. More controversial still, high propensities to trade with other developing countries seem to be a symptom of the more inward-looking trade regimes. The second principal purpose of Chapter III is to suggest new hypotheses about the determinants, role, and consequences of trade among developing countries, not least because of the failure of so many expectations. Finally, these observations allow more informed judgement about how trade at least, and to some extent development itself, may proceed in different global environments. Although extrapolation from the past is not legitimate, some understanding of what has happened allows intelligent consideration of the prospects.

Chapter IV iterates the highlights of the empirical analysis presented in Chapter III in relation to the issues noted here and discussed further in Chapter II.

II. THE THEORY OF TRADE AMONG DEVELOPING COUNTRIES

This chapter has two main purposes: the first is to develop systematically, but briefly, the implications of the theory of trade among developing countries; the second is to place the main issues that have concerned other writers in the context of that theoretical discussion. The theoretical analysis is divided into three areas: the determinants of the size, direction, and composition of trade flows; their welfare (including growth) effects; and the selection of optimal policy instruments.

A. Trade Theory and the Direction of Developing Countries' Trade

1. The Underlying Determinants of the Direction and Commodity Characteristics of Trade

The most widely used predictive theory of trade is, of course, Heckscher-Ohlin. From our point of view its most important differences from other theories lie in three assumptions: constant returns to scale, a common worldwide stock of knowledge, and no country-specific resources or factors of production. In its customary two-country form the theory does not, of course, deal with the issue of the direction of trade. In a multi-country world, in which countries' relative endowments of capital and labor are on a continuum, the theory has been extended by Krueger (1977) and Baldwin (1979) to predict that a country will trade in both directions, selling more labor-intensive goods to countries more generously endowed with capital and vice versa. Such differences had been found earlier for Japan by Tatemoto and Ichimura (1959) in tests of the Leontief paradox and recently have been found for several developing countries in the National Bureau of Economic Research (NBER) studies on trade and employment, which are summarized in Krueger (1978). Adding more factors, such as labor with different skills, further increases

the opportunities for trade between any two developing countries with some differences in factor endowment, even if this difference is far smaller than the difference between either of them and a developed country. As the Krueger (1977) paper makes clear, the extension of Heckscher-Ohlin theory provides only qualitative predictions of how much trade will take place between whom and in what. The outcome, in practice, will depend on transport costs in different directions and commercial policy in particular. In general, a country in the middle range of factor endowments will produce for domestic consumption goods requiring factor ratios close to its overall endowment and will export more labor-intensive goods to countries with higher overall capital endowments and more capital-intensive goods to countries with lower overall capital endowments (and vice versa for imports). ^{1/}

A dynamic version of this theory is Balassa's (1979) "Stages of Comparative Advantage," which results in much the same set of empirically testable hypotheses but concentrates on the overall pattern of comparative advantage as a country changes its relative factor endowment over time. Thus,

^{1/} From Krueger (1977) one can infer the following relationships, which are also derived by Jungho Yoo in an Appendix to Baldwin (1979). If K = capital-labor ratio; p, x , and m are production, exports, and imports, respectively; a, b , and c are the countries ordered with decreasing capital endowment ratios; then for the middle country b (with country destinations for exports and origins for imports denoted by a, b and c):

- (1) $K_{xc} > K_{pb}$; (2) $K_{mc} < K_{pb}$;
 (3) $K_{xa} < K_{pb}$; and (4) $K_{ma} > K_{pb}$.

Overall, we know only that:

$$(5) \begin{array}{l} K_{ma} \\ K_{xc} \end{array} > K_{pb} = K \text{ endowment of } b > \begin{array}{l} K_{xa} \\ K_{mc} \end{array}$$

Hence, testable propositions can be stated only in comparison to domestic production, or gross baskets to a destination (x_a vs m_a , x_c vs m_c), or similar flows with different partners (x_c vs x_a , m_c vs m_a), but never for net exports either in total or even to a given destination.

rapidly growing countries gain advantage overall in more skill and capital intensive activities while losing advantage to slower growing countries in simpler labor-intensive manufactures. The implications for trade among developing countries at any moment are the same as those of the modified Heckscher-Ohlin theory discussed above. Over time rapidly growing developing countries will increase the capital and skill intensity of their exports in both directions while maintaining the separation between the characteristics of goods traded in each direction.

The evidence in the work cited above, as well as our own results (see Chapter III below), provide support for some of the hypotheses implicit in this modified Heckscher-Ohlin theory. Thus, we note, in particular, that developing countries' manufactured exports to developed countries are, on balance, more labor-intensive than those to other developing countries. This evidence does not, however, either confirm or deny the predictions about trade between any pair of countries, on which much more work needs to be done.

One important modification to the underlying assumptions of the Heckscher-Ohlin model discussed above concerns differences in natural resource endowments across countries.^{2/} The goods that are then traded, which have been labelled "Ricardian" by Hirsch (1974), include minerals, food and non-food raw materials such as cotton, rubber, or timber. Since in the global contexts differences among developing countries in natural resource endowments are likely to be large in relation to differences in capital availability, and

^{2/} Strictly speaking two different kinds of natural resource based trade should be distinguished. The first is the consequence of relative land availability, in general, whereas the second is the result of highly specific resources such as oil, copper, or an equatorial climate. The former fits into the Heckscher-Ohlin framework with multiple factors, whereas the latter is clearly different. Since both form the basis of primary goods trade, however, they are treated together in this discussion.

these differences can be quite as large with one another as with developed countries, one might expect "Ricardo goods" to be an important part of trade among developing countries. Furthermore, developing countries have been industrializing rapidly, and this is particularly true of a number of countries poor in natural resources. This itself should tend to increase demand for industrial imports, for the production of which some developing countries are ill suited or even, as applies particularly to minerals, completely unequipped. Finally, many developing countries have found it difficult to sustain agricultural production growth in line with that of demand, which is fuelled by burgeoning population, whereas others have, through productivity gains and specialization, become surplus producers of some products. For all these reasons one might expect trade in "Ricardo goods" to be an increasingly important component of trade among developing countries.

Evidence developed further in the succeeding chapter bears out this hypothesis. It is true that, in line with the overall dynamism of manufactured exports, exports of manufactures have a rising weight in overall non-fuel trade among developing countries. For our sample of 33 developing countries, that share rose from 41 to 54 percent between 1963 and 1977. This rise was, however, much less than in their trade with developed countries, where the weight rose from 17 to 50 percent in this period. In fact, the share of the 33 countries' manufactured exports going to developing countries fell from 40 percent in 1963 to 25 percent in 1977. This change seems to indicate an increasing ability to exploit the large potential for Heckscher-Ohlin-based trade in manufactures with the developed countries whose relevant resource endowments are so different. Meanwhile in non-fuel primary commodities the share of developing country markets in developing countries' exports rose from 16 to 23 percent over the same period. It is, therefore, a

great error to ignore the potential for trade among developing countries in "Ricardo goods," even though there is some reason to fear the "staple traps" that can result from excessive specialization in primary commodities and to expect that many of the dynamic gains from trade will come from manufactured exports.

Product-cycle theory, which is focused on manufactures, stresses country-specific knowledge, with that knowledge being slowly diffused over the world. This approach may be seen either as an extension of the Heckscher-Olin theory, the idea being that the development of new products and processes is skill-intensive in itself, or as distinct from it, emphasis then being on the notion that knowledge is unevenly distributed over the world. In any case, this diffusion of products provides a rationale for trade among developing countries. For a given product advanced developing countries first pick up production from developed countries and export in both directions. Later the product shifts to less advanced developing countries. In the meantime the advanced developing countries have picked up a new product. Hence at any given time one would observe trade among developing countries in manufactured goods of differing degrees of sophistication. This theory could have different implications, both from the modified Heckscher-Ohlin theory discussed above and from the explanations for intra-industry trade. Thus, a developing country might trade goods of a given level of sophistication in all directions and would seem somewhat unlikely to trade with similar countries. Unfortunately, in practice it is almost impossible to test versions of product cycle and Heckscher-Ohlin theories against each other effectively [as attempted by Hufbauer (1970)], even when they can be distinguished.

Intra-industry trade is less a theory than an observation, though recent efforts have been made by Lancaster (1980) to provide a theoretical

basis. It is, in any event, an observation that challenges the Heckscher-Ohlin paradigm, at least to the extent that what is observed is not a statistical artifact but indicates trade in both directions in commodities with similar factor intensity rankings in the trading partners (at least as far as use of the general factors of production are concerned). In this case, just as in that of Ricardo goods, some assumptions of the Heckscher-Ohlin theory need to be relaxed, such as constant returns to scale or that knowledge is common to all countries and firms. Intra-industry trade has been observed to be important among developed countries, and Balassa (1979a) found that Latin American integration had resulted in an increase in such trade. Meanwhile, Hughes (1980) stresses that this is an important element in the prospects for trade among developing countries. Clearly, the existence of economies of scale, firm-specific knowledge, and so forth provides a rationale for trade in manufactures among developing countries, as has been investigated at the micro-economic level by Rhee and Westphal (1980).

On a closely related topic Amsden (1976), in one of a handful of journal articles specifically analyzing trade among developing countries, attempts to test whether this trade is "competitive" (intra-industry) or "complementary" (inter-industry) and concludes that it is complementary. The test consists of a finding that for eight NICs, manufactured exports are greater the higher the degree of industrialization in the destination. This result suggests, however, that trade tends to be highest among the NICs and hence may be interpreted as confirming the existence of intra-industry or competitive trade, for it is surely among the NICs that one finds the greatest opportunities for such trade.

Linder (1961) states explicitly that the level of trade among developing countries should be high. Linder's argument, which is restricted

to manufactures, considers international trade to be like domestic exchange. Trade flows will radiate outwards towards proximate and similar markets. The greater the similarity between the patterns of domestic demand, the higher the trade between two countries. Since developing countries are more similar to one another than to industrialized countries, and the latter are similar to one another, the implication is a large trade, all things being equal, among developed countries and a large trade among developing countries, with relatively little trade between developed and developing countries. This hypothesis is borne out in a certain sense. Thus, taking countries' shares in world GNP as an indicator of their potential as markets, we observe in Chapter III that developing countries export more manufactures to one another than might be expected. This bias is perhaps particularly surprising when the pull of comparative advantage might be expected rather to lead developing countries towards trade with developed countries.

Why might the Linder approach, which seems theoretically empty, give valid predictions? One reason might be the intra-industry trade discussed above. If such trade develops because of the possibilities for exploiting economies of scale in the production of goods that were initially developed for the domestic market, the natural outlet will be countries with potential demand for the sorts of products acceptable domestically, or, in other words, broadly similar countries. Intra-industry specialization as a basis for Linder-style trade is likely to occur when the countries involved also enjoy liberal trade policies with respect to one another and thus permit specialization. Another reason for Linder trade might be the importance of transport costs and geographical proximity. Quite a different basis for trade with similar countries is inward-looking industrialization in the exporting country. Thus, with such an industrialization pattern (whether because of a

country's size or its protectionism), the structure and characteristics of production will be determined by those of demand. Exports, being limited in product characteristics, are likely to go to countries with broadly similar demand patterns, who are either not yet able to produce the same goods or who follow relatively liberal trade policies with respect to the exporter (for example in regional integration arrangements).

The evidence presented below indicates that Linder-style trade, although surprisingly important, is becoming less so over time. Thus, the share of developing country markets in their exports of manufactures has been steadily declining (see Figure 1 and Table 4). At the same time, the more inward-looking countries have relatively high and in some cases increasing biases towards trade with developing countries (compare Argentina, Brazil, Colombia, and Mexico with Hong Kong, Korea, Malaysia, and Singapore in Appendix Figure A.1). The implications seem to be that for developing countries as a whole forces for specialization vis-a-vis industrialized countries have become increasingly powerful over time, whereas countries that have continued to follow inward-looking policies (or are large) have tended to show a continued and dominant Linder-style trade pattern in this sector.

The implication of the evidence presented above is apparently that Linder-style trade among developing countries has become decreasingly important and perhaps decreasingly efficient. Stewart (1976), however, argues that the hypothesis has normative validity but that trade among developing countries is biased downward by colonial experience. The implication of this view is that there is plenty of room for more efficient intra-industry specialization among developing countries. The existence of the current bias towards trade with developing countries, as well as the tendency of the most efficient exporters to trade decreasingly with developing countries, casts

some doubt on this hypothesis. Against this, however, the trade barriers of developing countries themselves provide some reason for believing that there is potential for more trade among them, as is discussed further below.

2. Barriers to Trade and the Implications for Its Direction

The ultimate trade flows will be determined not only by the underlying factors discussed above but by natural and policy barriers. Obviously a general view of these different barriers is needed.

The cost of transport and communications, which we may think of as including financial networks and currency clearing arrangements, is said to be particularly high for South-South trade. With the possible exception of oligopoly pricing by shipping conferences (see Yeats 1977 and Laing 1977), however, the problem is a circular one, since better connections, lower transport costs, and improved financial facilities are as much dependent on increased trade as vice versa. It should be noted that, since developing countries are usually closer to some other developing countries than to developed countries not merely physically but also culturally, there should be a natural offsetting tendency towards trade with one another. It is not clear, therefore, whether these barriers should lead one to expect more or less trade among developing countries than their importance as markets would suggest, with other determinants (e.g., factor endowments) held constant.

An important barrier is that of marketing channels. The marketing barrier to trade among developing countries is in part the consequence of the absence in the importing developing country of such key institutions as large retailers, specialized importers, and wholesalers. Such institutions grow only as per capita income rises and even then only if governments let them. The absence of these channels makes it particularly difficult for developing

countries to sell to other developing countries what they have shown themselves particularly adept at, namely manufactured consumer goods. This constraint can affect even exports to developed countries with relatively undeveloped distribution systems - Italy is one important example. An indication of how important this barrier to exports to developing countries could be is that in India the larger domestic producers of clothing find it necessary to sell almost all their output to developed or centrally planned economies.

One barrier of obvious importance is the commercial policies of both developed and developing countries and the relationship between the two. As far as the developing countries are concerned, Hughes (1980) suggests that "the principal constraint to more South-South trade lies in the developing countries' high level of protection" (p. 30). The literature on trade among developing countries is replete with suggestions that lowering these barriers would provide a valuable impetus to more South-South trade. It is important to remember that developing country protection has certainly not fallen over the past 35 years - more probably the reverse. Furthermore, protection is concentrated on items that a developing country is in a position to produce, which are also likely to be those most suitable for other developing countries to export. In the process intra-industry trade between countries at similar levels of development and Heckscher-Ohlin-based trade in goods that both countries have some capacity to produce, however inefficiently, are likely to be particularly severely restricted. This may be a part of the explanation why, relative to the pattern of developing country trade as a whole, trade among developing countries is increasingly concentrated in "Ricardo goods."

An offset to the general story of commercial policy barriers in developing countries is the repeated attempt to create such integration

arrangements as free trade areas or customs unions. Although there is doubt about the benefits and viability of these policies (see the survey by Vaitsos 1978 and Balassa and Stoutjesdijk 1975), it is perfectly possible that they have increased the volume of trade among developing country members, whether through trade creation, diversion or both. Moreover, not only the volume of trade but also its characteristics should be affected, as appears to have been the case in Latin America. This finding for Latin America is made by us below and also by Gregoire (1980). Balassa (1979a) finds more specifically that intra-industry trade has increased in Latin American trade groupings and concludes that integration therefore has had some effect in offsetting the normal barriers to such trade among developing countries.

Turning from barriers imposed by developing countries to those of developed countries, the story is very different. Overall levels of protection have declined steadily in developed countries since the Second World War and have by now reached almost negligible levels, at least as far as tariffs are concerned. In such an environment one would expect to see what one does in fact see: a shift in the direction of developing countries' exports of the goods for which tariffs have fallen, namely manufactures, towards developed country markets. Since the 1980s will see further tariff reductions, following the Tokyo Round, the effect might be expected to continue. This view is, however, much more controversial, as the reductions may be offset by the bias against developing countries in tariff reductions, erosion of the preference margins of the Generalized System of Preferences, and the rise of a new protectionism in the form of non-tariff barriers to trade (NTBs).

It has been argued that the tariff reductions negotiated among developed countries are largely irrelevant to the developing, since they do not apply to "developing country goods." The existence of such a bias is very

probable (Olechowski and Sampson 1980, Corbo and Havrylyshyn 1980), but the proposition that, in consequence, tariff liberalization is irrelevant for developing countries takes much too static a view. In the first place, developing countries have not only been able to take advantage of tariff cuts (Finger 1976) but have also diversified and upgraded their exports to exploit the opportunities created in products not previously thought of as of export interest to them (Finger and Kreinin 1978). It is worth remembering that not a few of the NICs had not merely negligible industrial exports but negligible industrial sectors as little as 20 years ago. In the second place, as the NICs upgrade their exports, opportunities are created for those behind, even if the direct benefit for the latter of developed country tariff liberalization is modest in the short run. In the third place, there is an important effect on all developing country exports (including raw materials) if outward-looking liberalization succeeds in accelerating the growth of developed countries. Finally, the importance of erosion of preferences is not likely to be substantial, as the restrictions on preferences have in any event reduced their benefits considerably in comparison to the benefits of general tariff cuts (Baldwin and Murray 1976).

NTBs are, of course, an important part of the commercial policies of both developed and developing countries. Indeed, one might well argue that, with the decline in tariff rates in the former and the extreme popularity of NTBs in the latter, these measures are by now much the most important component of commercial policy. As with tariffs, prior to 1973 the trend in developed countries was towards greater liberalization, whereas in developing countries it was, if anything, the reverse. These different trends certainly helped to pull developing countries exports, at least in manufactures, towards developed country markets. (Agriculture was much more thoroughly protected in

developed countries, especially in the European Economic Community.) Even the system of protection in textiles and clothing had no major effect on developing countries' exports prior to the latter 1970s (Keesing and Wolf 1980).

Since 1973 there has undoubtedly been an increased resort to various devices to "manage" world trade. Page (1979) estimates that between 1974 and the end of the decade the proportion of trade in manufactures that is "managed" had risen from 13 to 21 percent (Ibid., p. 11). It is far from certain that the use of NTBs prior, or subsequent, to 1974 has been biased against developing countries, although it is clear that not only textiles and clothing but also footwear, all of which are of particular interest to developing countries, have been increasingly severely restricted (Olechowski and Sampson 1980 and Keesing and Wolf 1980). Nonetheless, many actions, for example the trigger price systems in steel and "less than fair value" actions in the United States (Finger 1980) have certainly not been concentrated on developing countries. On balance, the increased use of NTBs by developed countries in the 1970s has made the task of exporting to them more difficult. Nevertheless, the effect has certainly not been to prevent continued striking success in exploiting opportunities in this direction (Balassa 1980, Gard and Riedel 1980).

As has been mentioned in trying to explain the importance of Linder trade, another policy influence may be the nature of an exporter's trade regime. More outward-looking economies appear to export a lower share of their manufactured goods - including capital goods - to other developing countries than do those that are more inward-looking.

3. Market Size and Growth as Determinants of the Direction of Trade

Developed countries account for 65 percent of world GNP, 67 percent of world imports, and 64 percent of world imports of manufactures.^{3/} Between 1960 and 1973 imports into developed countries grew at an average rate of 9 percent a year in real terms, considerably faster than the 6 percent a year of imports into developing countries. Given these facts and the growing liberalization of developed countries' import regimes, it is not surprising that developing countries' exports, especially of manufactures, were pulled increasingly into these markets.

Given the underlying determinants of and barriers to trade, differences in market size and growth are bound to play a decisive role in determining the direction of trade. In the 1960s and early 1970s developed countries were particularly dynamic markets. In the middle 1970s oil-exporting developing countries enjoyed a rapid rise in purchasing power, and after 1973 developing countries grew faster in relation to the developed than they had before. These changes in trends were likely to play an important role in determining the direction of trade flows, and this is, in fact, amply borne out by the data presented in Chapter III.

From the point of view of exporters it is not merely the growth in aggregate market size but its commodity composition that matters. It is only if the pattern of demand matches the actual or potential comparative advantage of the exporter that the aggregate growth creates important opportunities. Indeed, the export pessimism of the 1950s depended as much on the presumed

^{3/} These data are from UNCTAD, Handbook of International Trade and Development Statistics, 1979. The definitions of developed and developing countries are those of the UN. Manufactures are SITC 5-8 less 68.

inability of developing countries to diversify away from primary commodities with poor growth prospects, even in a rapidly growing world, as on doubt about the aggregate growth potential of developed countries.

Both for analysis of the past and consideration of the future, variations in GNP growth over time and across markets have three sorts of implications: in the first place, they will influence the aggregate growth of all the markets to which an exporter is trying to sell; in the second place, they will influence the direction of exports; and, finally, they will influence the commodity composition of demand. Given the nature of the shifts, the various exporting countries and producers will find their particular opportunities improved or, perhaps, sharply worsened.

It is these sorts of considerations that underlie the analysis of developing countries' problems recently presented by Sir Arthur Lewis (1980). Leaving aside for the moment the implication of his arguments both for policy and for the benefits of trade, let us focus only on the consequences for trade flows themselves. He argues that, if slow developed country growth continues, then sustained growth at 6 percent a year for developing countries' GNP is unattainable without greatly increased trade among developing countries. The argument is that slow developed country growth will, all other things being equal, lead to slower aggregate growth for developing countries' exports and to a shift in their direction (the latter needing policy encouragement in his view). In addition, one might project a change in the aggregate commodity characteristics of developing country exports. This combination of circumstances should lead not only to somewhat worse opportunities for most developing countries' exports but also to differences in the degree of damage among them. These various presumed effects of changes in developed country growth on the level and direction of

exports need further analysis. The evidence suggests, surprisingly, that developing countries' exports of manufactures have grown almost unabated throughout the 1970s, even to developed country markets, despite recession and slower growth in the latter.

4. Conclusion on the Determinants of the Direction of Trade Flows

The analysis of the underlying theoretical determinants of trade, of barriers to trade, and of market size and growth leads to a number of quite interesting hypotheses about the trade pattern to be expected of the developing countries.

In the first place, only a small part of the trade of any developing country is likely to be with countries at similar income levels and with similar resource endowments. Heckscher-Ohlin and product cycle considerations, the relatively greater protectionism of developing than of industrialized countries, and the overwhelming relative size of developed country markets tend to reinforce one another in bringing about this result. The offsetting factor could be the potential for intra-industry specialization among those developing countries with industrial sectors sufficiently advanced to permit production of goods amenable to product differentiation. The obvious potential is among the NICs, but with few exceptions - Hong Kong and Singapore because of general trade policy and, to some extent, Latin American countries because of regional trade liberalization - their commercial policy is likely largely to preclude this development. The experience of more liberal countries is that the potential for intra-industry trade does not offset the general pressures away from trade with similar countries.

In the second place, there will have been a strong pull over time towards trade with developed countries in particular, especially as some

developing countries began to develop a Heckscher-Ohlin (and product-cycle) based comparative advantage in the more standardized and labor-intensive manufactured goods. At least until 1973 both market growth and commercial policy tended to reinforce the effect of this development.

In the third place, some of the larger and more inward-looking developing countries will tend to trade relatively strongly with other developing countries, because the characteristics of their available exports are largely determined by domestic demand and are particularly suitable, therefore, for other developing countries.

In the fourth place, although trade in manufactures can be expected to be dominated by Heckscher-Ohlin and product cycle differences that are widest between developed and developing countries, this is not so true of primary commodities, for which resource endowment differences among developing countries are large. Thus, when trade growth in manufactures and primary commodities are compared it may be expected that the former will show the greater pull towards the developed countries. This will be true even if, in fact, manufactures become a larger part of trade among developing countries because the growth of manufactured output and demand has been universally larger than for primary commodities.

Finally, a particularly dynamic component of trade among developing countries should be exchange among countries with different resource endowments and income levels and especially exchange of manufactures for primary commodities for both domestic use and further processing between rapidly growing, resource-poor NICs and other countries. Indeed, this might be expected to be the main direct implication of the NICs' growth for other developing countries. In turn, developing countries might provide a useful market for the exports of the most capital- and skill-intensive and most technologically sophisticated manufactured exports of the NICs.

B. The Benefits of Trade among Developing Countries

In the absence of divergences between social and private costs and benefits or policy-induced distortions, there is no reason to suppose that trade in any one direction is likely to be more beneficial than in any other. The argument that some kinds of trade are better than others depends, therefore, on an appeal to particular divergences or distortions.

Krueger (1980) argues that trade with developed countries - at least in manufactures - is more beneficial to the developing countries than that with developing countries. The basis of the argument is simply that developing countries generally suffer from unemployment, the shadow wage being, therefore, generally below the market wage. At market prices the more capital-intensive techniques and industries will appear relatively more profitable than they should. Moreover, in the case of trade, exports to developed countries are less capital-intensive than those to developing countries. Thus, because of the labor market distortion, trade with developed countries is relatively too small and that with developing countries too large. This is, of course, equivalent to saying that, at the margin, social returns on exports to developed countries are higher than those on exports to developing countries. Hughes (1980) suggests that the importance of exports to overall absorption of labor is not large. More critical than this shortcoming, however, are the assumptions that labor is in surplus and that the demand for exports of developing countries is elastic. Some uncertainty about the protectionist environment of the future may weaken the plausibility of the latter assumption. As to surplus labor, the assumption is not true of several newly industrializing economies (Singapore, Korea, Taiwan), where evidence of upward wage pressures suggests a proximity to full employment. Even where a surplus of unskilled labor exists, skill shortages or other

constraining factors may determine the production possibility frontier at a position short of full employment of all resources.

Krueger's argument is, of course, a counter to the view that the distortions run in opposite directions. One argument is that there are external benefits from competitive trade among developing countries. Thus, Hughes (1980) stresses the potential benefits for x-efficiency, innovation, and exploitation of economies of scale that should result from trade in manufactures among developing countries. Balassa (1979) and Keesing (1978) make similar claims, and Rhee and Westphal (1980) provide some limited evidence for the scale and specialization benefits. A related proposition is based on the infant industry argument. In a world where developing countries trade only with the developed countries, more sophisticated and capital-intensive goods can initially be produced only for the home market. If the latter is small, subsidization may be required if anyone is to be interested in producing the products at all. The most common means of subsidizing the industry is, of course, protection, which imposes significant costs. The existence of other and poorer countries, however, it is suggested, creates a natural comparative advantage in export from the country's "next generation" of industries. In this way costs of infant industry promotion are lowered and, in the process, overall growth should be somewhat accelerated. As Keesing (1978, p. 15) puts it, one should consider "the dynamic, learning, x-efficiency and long-run advantages of trying to create exports based on future rather than past comparative advantage." Trade with other developing countries is, it is argued, a relatively cheap way of accelerating this process. Thus, the existence of the wider array of potential trading partners reduces the gulf between the private and social net benefits of infant industry promotion.

An argument can be made that links those who emphasize the dynamic benefits of trade among developing countries and the "dependency" theorists. Thus, one of the results of more diversification in the direction of trade is more diversification in the products traded (for reasons developed above in the discussion of the determinants of trade flows). The latter, in turn, entails more diversified domestic production than if there were to be free trade and only developed countries as markets. From a social point of view diversification may be beneficial simply as insurance against adverse developments in major products. Diversification may also provide social benefits because it ensures a wider range of skills and knowledge (with benefits for adaptability similar to those of genetic variability in a species) and reduces the potential for coercion by any one trading partner.

A terms-of-trade argument can also be made for the benefits of export diversification to developing countries as a whole. For most individual developing countries prices can be taken as given when trading with developed countries. For all of them together, however, there are likely to be substantial divergences between marginal and average revenues for many products. Thus the expansion of any one country's exports to developed countries will occur, to some extent, at the expense of other developing countries - an externality that the exporter will ignore. If potential for trade with one another increases and this trade is at least to some extent a substitute for trade with developed countries, the effect will be an upward shift in export supply curves to the latter. This will, in turn, reduce export volume and improve the overall terms of trade vis-a-vis developed countries, just as would the joint imposition of an optimal export tax.

Those working in the "dependency" tradition (Stewart 1976, for example) argue that colonial and neo-colonial coercion has forced developing

countries to trade more with developed countries and less with one another than they should. The consequences are excessive specialization and consequent vulnerability, on the one hand, and loss of the dynamic benefits of trade with one another, on the other hand. Trade among developing countries is, therefore, the best avenue of escape from the staple trap with its attendant stagnation. These analysts thus believe that there are substantial divergences between the private and social net benefits of trade flows in various directions, in general, and of removing bottlenecks on trade with developing countries, in particular.

Although some of the elements discussed above appear in the arguments of export pessimists - a view popular in the 1950s and now returning (see Lewis 1980) - the structure of that argument is a little different. In the first place, the issue is set in a dynamic context in which the goal is a certain rate of growth for developing countries and the constraint is the rate of growth and pattern of demand consequent upon growth in the world as a whole. In the second place, it is not necessary to the argument that some distortion makes trade among developing countries superior at the margin to that with developed countries. The view is rather that for almost all developing countries a certain rate of growth of trade is virtually essential for any target growth rate of income. If developed countries grow slowly, there is a limit to the rate of growth of primary exports from developing countries to the developed, without major relative price declines, and of manufactured exports, largely because of protectionism. The required overall growth of trade can then be achieved only by accelerated trade among developing countries. It is probably appropriate to view the argument as stating that, although all trade is equally beneficial, the value of any one opportunity increases as other opportunities decline. The argument can be

inverted in a way that makes it more relevant to policy by stating that in this global environment the costs of barriers to trade among developing countries are higher than when the developed countries are more dynamic.

There is some evidence on the occasionally contradictory and sometimes mutually reinforcing views outlined above. In the first place, Krueger is clearly correct in arguing that trade in manufactures with developed countries is indeed more labor-intensive than that with developing countries. Secondly, the various dynamic arguments have been no more than partially tested, for example with the evidence on intra-industry trade in Latin America with its presumed competitive benefits. There is certainly evidence that casts doubt on the infant industry argument that developing countries are important as first markets for more sophisticated goods, namely the fact that exports of capital goods from developing countries have been going increasingly to developed countries. Thus, although capital goods are a larger share of exports to developing countries than to developed countries and the share of these goods in exports to developing countries has been rising, the share of developing countries markets in exports of capital goods has declined from 63 to 43 percent between 1963 and 1977 for our sample of 33 countries. Finally, although it is probably true that the existence of trade with developing countries leads to export diversification, the benefits of this are uncertain. In the case of manufactured exports, at least, it appears that the countries that specialized increasingly in trade with developed countries have shown themselves more flexible than the others in meeting changing opportunities.

The export pessimism of Lewis (1980) is also somewhat doubtful. The link between growth of developed countries and developing country exports of primary commodities is itself weak for many commodities, since the developed

countries are dominant exporters of many primary products other than fuel and tropical tree crops. Furthermore, the evidence suggests that the link with manufactured exports is still weaker, and the latter are now about as important in aggregate as non-fuel primary exports. Thus, although more trade opportunities can hardly hurt, it is far from clear that trade among developing countries is essential for developing country income growth when there is a slowdown in developed countries.

One case for which the Lewis argument seems relatively strong is that of exporters of primary commodities. This allows one general observation on the statements about the presumed benefits of greater trade among developing countries that have been discussed above, namely that they are almost exclusively concerned with manufactured goods. Indeed, in the case of those concerned with staple traps, it is just this presumed feature of trade among developing countries - the expansion of manufactured exports - that is most attractive, and their view has, in turn, frequently motivated policy. Nonetheless, as has been suggested above, both theory and experience suggest that it is for primary rather than manufactured goods that trade among developing countries has been particularly valuable. This finding indicates that a different view of trade among developing countries may be appropriate -- one which stresses the benefits of the resulting increased opportunities for exports by countries with a comparative advantage in primary commodities, that points to complementarities between more and less industrialized developing countries in export and further processing of primary products or exchange of food and raw materials for capital goods, and that highlights the consequent potential for increased employment. Thus, since agriculture is frequently more labor-intensive than manufacturing in developing countries, a strong tendency to increased trade in primary commodities among developing countries

turns Krueger's argument on its head. It is certainly true that primary commodities should not be ignored in considering the effects of trade among developing countries.

C. Policy Options for Trade among Developing Countries

The arguments and evidence discussed above certainly do not seem to come out decisively in favor of, or against, trade in any particular direction. Be that as it may, whatever the benefits of trade flows in particular directions, trade theory suggests that intervention in trade is unlikely to be the best course. This argument needs clarification in relation to the discussion above of barriers to trade among developing countries and of the effects of trade in particular directions. For this purpose it is convenient to divide the problems, to which policy is to be addressed, into those that are not themselves caused by other trade policy actions and those that are.

1. Externalities, Factor Market Distortions, and "Natural" Barriers to Trade among Developing Countries

The divergences between private and social net benefits of trade in particular directions, that are not themselves the consequence of trade policy, fall into three broad areas: (a) the results of labor market distortions, "dynamic" externalities (e.g., learning by doing, exploitation of economies of scale, and so forth), (b) benefits of product and destination diversification for individual developing countries and all developing countries together, and (c) problems associated with transport, finance, and market barriers (e.g., oligopolistic shipping markets, inadequate trade credit or currency convertibility, lack of market knowledge or of marketing institutions, and so forth). As far as the first is concerned, the best

policy is to deal with the labor market distortion, the second best is to subsidize labor-intensive output, and the third best is to subsidize labor-intensive exports. A policy to promote trade with developed countries in particular (which might be an implication of Krueger's argument) is a poor option indeed. For any individual country dynamic externalities putatively associated with particular exports are best exploited through direct subsidization of the source of the externality, of the output, or of the exports, in that order. A policy to promote trade among developing countries specifically is unlikely to be the best means of capturing the externality. Even diversification can probably be best achieved through a policy to promote more varied output and thus trade, although some promotion of exports in new directions (whether developing or developed countries) may be appropriate.

The implications of transportation, financial, and marketing barriers are complex. As far as the first is concerned, port or airport development generally has little to do with trade in any particular direction. Shipping or air freight could be biased against trade among developing countries because of domination by developed country firms. The best way to deal with this problem is to develop alternative transportation systems, which might have implications for trade among developing countries even if not directed at that objective. These involve investments in fairly capital-intensive sectors and need careful justification. Again, financial constraints can be dealt with by establishing credit institutions, and so forth, without having any specific trade destination in mind, although it is likely that trade with developing countries will benefit the most. Similar arguments apply to the problem of marketing barriers, but here there is an interesting additional issue. As has been mentioned, the marketing barrier to trade among developing countries is in part the consequence of the absence of

certain institutions - large retailers, specialized importers, and wholesalers. There is very little that can be done about this constraint in the short run, although it is interesting that for some commodities, developed country institutions such as the Japanese trading houses are playing a role in trade among developing countries.

An interesting aspect of the constraints on transportation, finance, and marketing in trade among developing countries is the presumption that these will diminish as trade grows or, in other words, that there is potential for a virtuous circle. This externality can, of course, follow from growth in trade between any pair of countries and is best seen as another variant of the infant export argument. The difficulty with applying this plausible idea to policy is that at any point the returns to expanding trade along habitual channels are likely to be higher, since the initial investment has already been made. Furthermore, quantification of the externality is virtually impossible. Nevertheless, since there may be some external benefit and, in addition, there is a case for diversification, some promotion of trade to new destinations may be justified.

The arguments discussed here do not seem to justify a policy specifically aimed at promoting trade among developing countries. There does, however, seem to be some case for promoting exports to new destinations, although working out the details of policy would be difficult. It also makes sense to examine whether there are profitable opportunities to improve transportation, finance, and marketing systems. It must be accepted, however, that in the last category there are constraints that only development itself is likely to cure. It is easier to sell shirts and toys through Sears Roebuck than through the fragmented distribution systems of most developing (and some developed) countries.

2. Barriers Created by Trade Policy

There are two respects in which the arguments about optimal policy for a single country need modification: first, the starting point is one in which extensive trade-policy-created barriers to trade exist, whereas dismantling them is far from easy; second, policy collusion among a number of countries is possible, which violates the standard small country assumption. How do these factors affect policy choices?

A simple argument for preferential liberalization of trade among developing countries is that this may be the only politically practical way of dealing with domestic protectionist lobbies. As experience among developed countries has shown, reciprocal liberalization is the most effective way of defusing opposition. In the case of developed countries, however, their size in world trade makes it politically easy to liberalize on a most favored nation (MFN) basis, while ignoring free riders. For developing countries this is not practical. Thus, for political, if not economic, reasons it should be much easier to liberalize on a discriminatory basis, in an attempt to restrict benefits to participants in the liberalization process.

In addition to political practicality, there are also economic reasons for reciprocal discriminatory liberalization. In the first place, it is possible that the liberalization by trade partners creates new opportunities for valuable trade that actually make this option superior to unilateral non-discriminatory liberalization (although in the case of developing countries this is perhaps unlikely). This sort of reasoning underlies the recommendations of those interested in promoting integration in order to exploit economies of scale (see Cooper and Massell 1965). In the second place, unilateral liberalization being impossible politically, discriminatory reciprocal liberalization may be the best available policy from an economic point of view.

These sorts of arguments for discriminatory liberalization to deal with existing barriers (see Hughes 1980) run in the face of experience (see Vaitos 1978). Most such schemes collapse for two central reasons: first, any program of trade liberalization entails loss of control over resource allocation by nationally oriented planning; second, substantial trade diversion usually follows because of high external barriers and high internal costs of production, and this diversion, in turn, usually benefits the more advanced countries at the expense of the poorer, since liberalization tends to focus upon manufactured goods. For this reason discriminatory liberalization can be politically feasible only if the countries concerned accept the role of trade in allocating resources and have generally outward-looking and liberal trade policies. It is useful, therefore, to distinguish between outward and inward-looking trade liberalization agreements, with the former more viable (if also less necessary) than the latter. ^{4/}

3. Assessment of Policy Options in the Light of the Determinants and Effects of the Destination of Trade

Discussion of policy deals with virtually all the reasons for believing that trade with developing countries needs special action. The general conclusion is that, where policy is needed, it should either not be addressed to trade at all or at least not exclusively to trade among developing countries. This is true even where extensive barriers to trade exist already, either because nothing can be done about them directly or because, where created by policy, discriminatory action is likely to be economically inefficient and politically destabilizing.

^{4/} We are indebted to Helen Hughes for this important distinction.

It is important to see how these conclusions fit into the argument that trade among developing countries must serve as a source of growth in the future. Our conclusion is that this argument comes down to a simple proposition: in an environment where developed countries are poor markets, the costs to developing countries of their own barriers to trade with one another rise. Therefore, action to deal with the "natural" and policy-created barriers is more important and the economic return to developing countries as a whole is higher. The policy recommendations themselves do not change. It is not the case, for example, that high-cost discriminatory trade liberalization arrangements become acceptable - on the contrary, inefficiency is likely to be more costly than in a forgiving environment. Whether such policy improvement can fully offset the effects of a deteriorating world environment on growth is another, and open, question.

D. Conclusion

The discussion of the theoretical issues brings out a number of interesting hypotheses about the determinants and characteristics of trade flows to different destinations, the effects of trade, and policy options. An important conclusion is that these issues have to be examined separately. Furthermore, however valuable trade among developing countries may be and however important the barriers to it, it is not likely that policy should be directed exclusively towards it. A major purpose of this discussion was to reveal this as a crucial non sequitur.

III. TRENDS IN TRADE AMONG DEVELOPING COUNTRIES

There is no ideal format for presenting evidence on a large topic encompassing many distinct hypotheses and policy issues. It turns out not to be convenient to follow the organization of Chapter II, which is why some of the implications of our findings have already been presented in that chapter. Here we present data on the destination of developing countries' exports over time and on some key features of trade among developing countries, in particular, bringing out the consequences for some of the theoretical issues discussed in Chapter II.

Before presenting the results of our empirical analysis, we outline the data sources, assumptions made, and definitions used. The empirical basis for the study is the UN trade data accessed by the so-called "GATT (General Agreement on Tariffs and Trade) System" program. Because of gaps and in order to observe individual countries while limiting the volume of data, a sample of 33 developing countries was chosen. These are labelled "Reporter Countries" in Appendix A. Although the volumes of trade analyzed do, therefore, understate total trade flows, the coverage is very high. For 1977, the study's figure on non-fuel exports by the 33 developing countries to the world was approximately US\$97 billion or 64 percent of a total US\$151 billion, based on the 1980 UNCTAD Handbook of International Trade and Development Statistics. For trade among developing countries the coverage is about 60

percent of the total. ^{5/}

How representative is the sample? As one reason for selecting countries in the sample was that data were available for the entire 1963-77 period, both small and low-income countries may be somewhat under-represented, even though several African, Asian, and Latin American countries with one or both of these characteristics are included in our sample. We also note that the principal focus of the analysis will be on the exports of the sample to the "Partner Countries" (Appendix A). Because the sample over-represents exporters of manufactures, the weight of manufactured goods will be overstated in export figures; thus, in the discussion of commodity composition, it will be necessary to look also at the imports of the sample countries. Finally, from the evidence discussed in footnote 5 and estimates for 1970 by the

^{5/} The UNCTAD figure for exports from "other" (i.e., non-OPEC) developing countries to all world destinations was \$137.6 billion in 1977. (See UNCTAD, Handbook of International Trade and Development Statistics, Supplement 1980, Table 3.1). Adjusted for fuels, the total is \$116.1 billion (see Table 3.6A). To this must be added the non-fuel exports of OPEC members that are not defined as capital-surplus in this study and, more important, the non-fuel exports of countries included in the World Bank's but not the United Nation's definition of developing countries, namely, Greece, Israel, Portugal, South Africa, Spain, and Yugoslavia. The non-fuel exports of the former group were \$6.8 billion and of the latter were \$27.9 billion. Total non-fuel exports of developing countries according to the World Bank's definition, therefore, were \$150.8 billion in 1977. As far as trade among developing countries is concerned, we start with the UNCTAD figure of \$25.3 billion for exports from "other" developing countries to one another in 1977, which is adjusted to \$21.7 billion after exclusion of fuels. Non-fuel exports of Southern Europe, South Africa, and non-capital-surplus OPEC members to one another and to "other" developing countries are estimated at about \$8.9 billion. (Their total non-fuel exports are taken from the UNCTAD Handbook and the direction of exports from World Bank, World Development Report, 1979, World Development Indicators Table 11.) To this must also be added non-fuel exports from "other" developing countries to Southern Europe, South Africa, and non-capital-surplus OPEC members, which are estimated at about \$8 billion. (The market shares were taken from IMF, Direction of Trade Yearbook 1979 and the level of non-fuel exports from the UNCTAD Handbook.) Total non-fuel exports from developing countries to one another are estimated, therefore, at \$38.6 billion or 25.6 percent of their total exports.

Economic Projections Department (EPD) of the World Bank, it appears that non-fuel exports among developing countries, as the World Bank defines them, rose from 23.3 to 25.6 percent of total trade between 1970 and 1977. In our sample, by contrast, the change from 1971 to 1977 was from 22 to 24 percent of exports. It appears, therefore, that our sample is a little more oriented away from trade with developing countries than is the universe of all developing countries, but the changes in the 1970s in the sample's direction of trade are representative of those of developing countries as a whole.

The principal country groupings are those used by the World Bank, comprising developing countries (LDCs in the tables), developed or industrialized countries (DCs), capital-surplus (oil-exporting) countries (CSCs), and centrally planned economies (CPEs). The coverage of these and other sub-groups is defined in Appendix A. It can be questioned whether Spain and Yugoslavia, in particular, should be included among the developing countries. Where this appears to distort the results (on the whole it does not), a note will be made. Commodity categories are defined in Appendix B. For reasons given in Section 1.a (below), "total trade" in this paper is usually trade exclusive of fuels (SITC 3), which means that commodity composition is defined with respect to trade excluding fuels and therefore differs from conventional usage. An effort has also been made to define capital goods so as to exclude large consumer items, in particular automobiles and electrical components, transistors, tubes, and valves.

An important point to note is that the analysis is carried out almost exclusively in terms of the shares of exports going in different directions. The reasons for this are two: first, our lack of confidence in any available deflators and, second, the appropriateness of the share measure to a study of the structure of trade. Since the analysis largely excludes

fuels, the worst problem created by use of nominal data is avoided, and reliance on the share measure diminishes the problems further. Nevertheless, there are at least two major defects inherent in the approach. In the first place, changes in shares mask the dynamism (or lack of it) of the entire system. Thus, the declining shares of total manufactured exports going to developing countries, for example, conceal the equally important fact of the rapid growth of these exports. In the second place, changes in shares can reflect changes in numerators, denominators, or both, whereas the correct interpretation of the changes depends in part on what underlies them. These defects need to be kept in mind throughout the discussion below.

Finally, a reference must be made to the problem of re-exports, which are not netted out in this analysis. An attempt to do so proved fruitless, because only a few countries provide the data and only for some years. For these cases, the apparent trend was a decline in the share of re-exports in the total exports of rapidly growing economies such as Singapore and Hong Kong, but there was no clear direction for other economies. ^{6/}

A. Destination of Developing Countries' Exports

In discussing the destination of the trade of developing countries attention is paid first to overall trends in the share of trade among developing countries in their total trade and then to the effect of differences in market size and growth on the direction of developing countries' exports.

^{6/} For example Ghana's re-exports share increased for 1963 to 1973, then decreased by 1976, ranging from 5 to 15 percent.

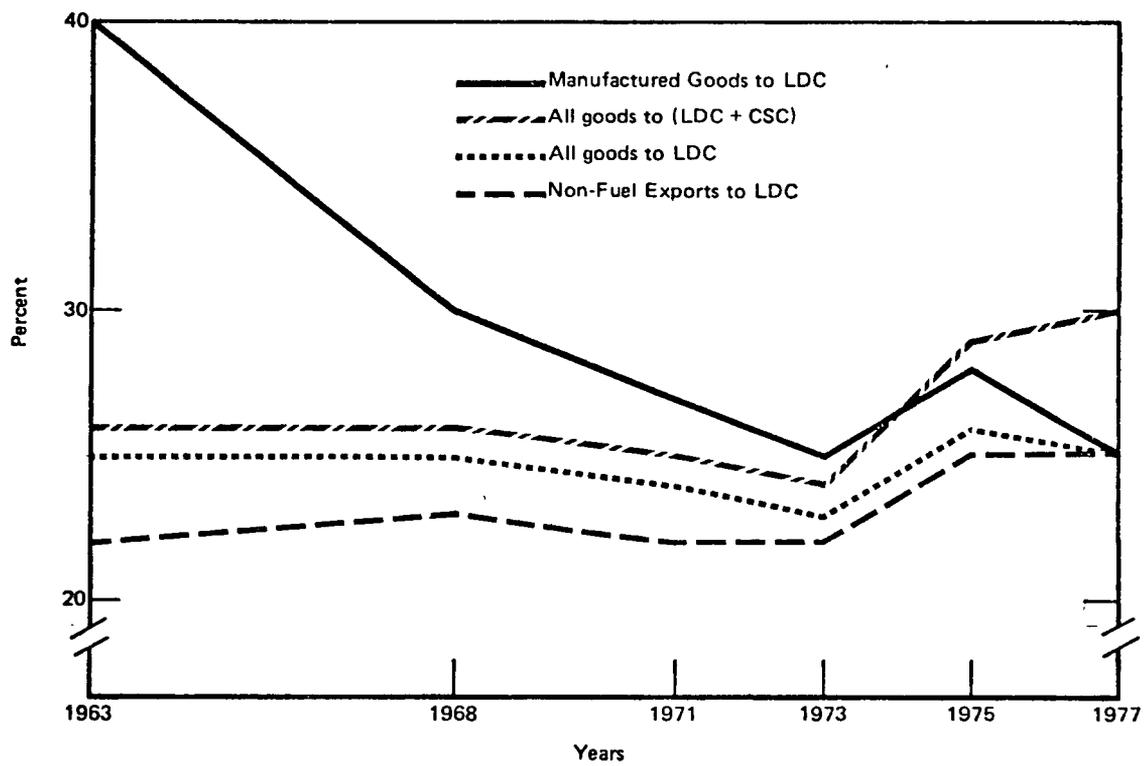
1. Trend in the Share of Trade among Developing Countries in their Total Trade

The discussion below starts with the overall trend in the shares of developing countries' markets, then examines those of major commodity sub-groups and proceeds to differences in the experiences of particular regions and functional categories of developing countries.

a. Overall Trends in the Share of Trade among Developing Countries

Earlier studies on trade among developing countries (Hughes and Laursen 1978, Hughes 1980) have observed a long-term decline in its share in total developing country exports from about 24 percent in the mid-1950s to 20 percent in the 1970s, followed by a reversal to 23 percent in 1977. This finding is confirmed for the trade of all commodities in our sample, inclusive of fuel, when the developing world is defined to include capital-surplus oil-exporting countries. The cycle is far less pronounced, however, for non-fuel exports to developing countries, excluding capital surplus oil exporters, as Figure 1 shows. With the latter included, there is a slight downward trend for the share of exports of all commodities to developing countries from 1963 (26 percent) to 1973 (24 percent), then a sharp rise to 30 percent in 1977. Excluding the capital-surplus oil exporters as markets does not by any means eliminate the upward jump between 1973 and 1977, but modifies it substantially, as the share then increases by only 2 percentage points from 23 percent in 1973 to 25 percent in 1977. Sales to the capital-surplus oil exporters clearly account for much of the upward jump in trade among developing countries broadly defined. Furthermore, excluding fuels trade, the downward trend to 1973 is much weakened, the share of trade among developing countries in their total trade remaining nearly constant from 1963 to 1973 at between 22

Figure 1: PERCENTAGE SHARE OF DEVELOPING COUNTRY EXPORTS GOING TO DEVELOPING COUNTRIES



and 23 percent. ^{7/} This change in the pattern as we focus on non-fuel trade results from the sharp decline from 35 percent in 1963 to 26 percent in 1973 in the share of trade among developing countries in their total trade in fuels, which reflects their increasing reliance upon capital surplus oil exporters. In 1963 the latter accounted for 34 percent of developing countries' fuels imports but in 1973 for 53 percent. ^{8/}

In summary, if we look only at non-fuel exports to developing countries (excluding capital-surplus oil exporters), the share in total exports was quite stable at 22 to 23 percent from 1963 to 1973 then rose somewhat in 1975 to 24 percent, where it stayed until 1977 (see Table 1). The nominal growth rates for exports to developed countries were not distinctly different from those to developing countries before 1973. From 1973 to 1977, however, trade among developing countries grew faster in all years except 1976, the year of recovery in the industrial countries. That trade with developing countries again grew faster in 1977 than trade with developed countries suggests a sustained trend towards increased shares of trade among developing countries rather than a short-term diversion in 1975. GATT data for later years confirm this, showing for the three years 1977, 1978, and 1979 that the share of trade among developing countries in their total trade was 20.4 percent, 19.9 percent, and 20.1 percent respectively. It would appear

^{7/} The shares of trade among developing countries, including the capital surplus oil exporters, in our sample are higher than those in Hughes (1980), which are derived from UNCTAD, Handbook of International Trade and Development Statistics, for various years. The differences between the ratios shown here and those in Hughes' paper are largely a consequence of differences among the definitions of the group of developing countries and the limited nature of our sample.

^{8/} The ex-post definition of capital-surplus oil-exporting countries is applied over the entire period, though of course these countries were generally not in surplus in the 1960s.

that, although the share of trade among developing countries established in 1975 has not been surpassed, neither has it been reduced.

b. Trends in Major Commodity Sub-Groups

For commodity subgroups (see Table 1), the picture is somewhat different. In manufactures in particular, one observes a strong downward trend in the share of trade among developing countries except for an interruption in 1975. It is noteworthy that most of this decline took place between 1963 and 1971. The share of exports to developing countries in their total exports of manufactures fell from 40 percent in 1963 to 27 percent in 1971, and then more slowly to 25 percent in 1977. The shift in the destination of manufactures was towards the developed countries until 1973 and then towards the capital-surplus oil exporters, although even before 1973 growth of exports to the latter was usually much higher than that to other developing countries. The capital-surplus oil exporters did, however, only take only between 1.0 and 2.5 percent of developing countries' manufactured exports in the 1960s, and this did not change until the dramatic growth rates of 50 to 100 percent a year between 1972 and 1976. By 1977 capital-surplus oil exporters were taking 7.0 percent of the manufactured exports of developing countries. Because the trend in trade in manufactures is so markedly different from that for all non-fuel trade, we return to investigate it more closely below. Note, however, that the general trend towards a declining share of developing country markets in exports of manufactures was not followed by Latin American countries (see Table 2), which experienced the opposite trend.

Within manufacturing, capital goods are of particular interest. It is sometimes argued ^{9/} that not only should there be more trade among

^{9/} See recent World Bank studies by Pack (1980) and Datta-Mitra (1979).

Table 1: TRADE AMONG DEVELOPING COUNTRIES AS SHARE OF THEIR TOTAL EXPORTS
(Percent)

	1963	1968	1971	1973	1975	1977
Food and Beverages	16	19	18	19	21	23
Non-food Agriculture	18	24	26	25	27	29
Metals and Minerals	<u>11</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>11</u>	<u>12</u>
Total Non-Fuel Primary	16	19	18	20	20	23
Manufactures	40	30	27	25	28	25
TOTAL Non-Fuel	22	23	22	22	24	24
Capital Goods - Broad	66	53	44	38	45	38
Capital Goods - Narrow	63	55	48	43	49	43

Source: Computations based on GATT trade data tapes, prepared by Systems Division, EPD. Definitions are given in Appendix B. Unless otherwise indicated, sources for all tables are the same.

developing countries in capital goods than there is, but also that one must expect developing countries to sell new capital goods at first largely to one another, because of fierce competition in the markets of industrial countries. By learning in developing country markets, world-wide competitiveness can be achieved. What we observe, in fact, is that trade among developing countries in capital goods, even quite narrowly defined, ^{10/} has declined sharply from 63 to 43 percent of their total exports of capital goods in a period in which the volume of these exports to all destinations has grown almost twice as fast as total non-fuel exports (see Appendix Table A.4). Furthermore, unlike trade in manufactures as a whole, where the decline had largely occurred by 1971, there continued to be a strong downward movement in the share of developing country markets for capital goods except for 1975. (This trend, however, again does not occur in Latin America.)

An increasing share of exports of primary goods (excluding fuel) has gone to other developing countries. This trend was opposite to that for exports of manufactures, and the latter's effect on the direction of total non-fuel exports was more than fully offset. The developing country market share for primary goods increased between 1963 and 1977 from 16 to 23 percent of all developing country exports of such goods. The share of developing country markets in metals and minerals remained relatively constant, whereas that in food and non-food agricultural commodities increased markedly, particularly in the 1970s for food and in the 1960s for non-food commodities. Since the sample in this study is biased against exporters of primary goods, these results may well understate the growing importance of

^{10/} See Appendix B. The broad definition includes automobiles and electrical components, transistors, valves and tubes, large items of trade that are probably best defined as consumer durables. Thus the narrow definition is more appropriately considered as capital goods.

trade among developing countries in primary goods. This trend suggests a burgeoning "triangular trade," in which the rapid growth and industrialization of some developing countries has led to imports of raw materials in greater variety and quantity than before. ^{11/}

c. Differences among the Experiences of Regions and Functional Categories of Developing Countries

The values and trends for the shares of developing country markets in exports vary systematically by region, as can be seen in Tables 2 and 3, with only a few countries within their regions showing important differences. Asia, on the one hand, began with above average dependence on developing countries in all commodity groups, but this also declined faster than the average, and by the end of the period the shares were at about the average. Latin America, on the other hand, had below average dependence on developing countries in 1963 but experienced an unusually large increase in the shares of developing country markets. By 1977 the region's dependence on developing countries was well above the average, especially for manufactured goods. Southern European trends followed the average very closely, whereas Africa had a mixed experience: for manufactured goods the share of developing country markets declined, but for all non-fuel goods it increased markedly. Latin America's increased trading with developing countries suggests that regional integration arrangements may have had a strong effect. For the eight Latin American countries in our sample, two-thirds of exports going to developing countries in 1977 were destined to trade associates. This figure appears not to be attributable merely to the effect

^{11/} It is somewhat of a puzzle, however, why the share of developing country markets in metals and minerals did not increase; one possible answer lies in our sample's under-representation of mineral exporters.

of proximity, as only half of exports to developing countries normally go to "neighbors" (Appendix Table A.5). Other factors were also at play, however, including, as Wionczek (1979) has noted, import-substitution and the consequent search for developing country markets for spill-over of manufactured goods. It is noteworthy that within Latin America, only Argentina of the three NICs (Brazil, Argentina, and Mexico) experienced the regional trend for increased shares of developing country markets in manufactured exports, whereas the other two experienced more fluctuating shares.

When the sample is grouped into functional categories, one observes that for the NICs the values and trends are almost identical to those for developing countries as a whole. As they accounted for 56 percent of the total exports of the 33 sample countries in 1963 and 66 percent in 1977, this is not surprising. (Further information on the role of NICs in trade among developing countries is given below.) It is important to observe that the sub-sample of oil importing countries excluding the NICs exhibits similar trends to those of the NICs. Indeed, it is only the small, low-income countries that, as a group, show a distinctly different pattern, experiencing increased dependence on developing country markets throughout the period, not only for all non-fuel exports but also for manufactured goods in general and capital goods in particular.

Observed variations by region, functional groups, and by individual country indicate that the trend towards declining importance of trade among developing countries in manufactures, though not universal, was found frequently even within the two regions experiencing an increase in the share of this trade, Africa and Latin America. The higher and rising shares for Latin America suggest integration as one factor, whereas the lower and sharply

Table 2: SHARE OF TRADE AMONG DEVELOPING COUNTRIES IN TOTAL TRADE BY REGION 1963-1977 SELECTED YEARS

(Percentage)

<u>Exporting Region</u>	<u>Non-fuel Merchandise</u>				<u>Manufactures</u>				<u>Capital Goods - Narrow</u>			
	1963	1968	1973	1977	1963	1968	1973	1977	1963	1978	1973	1977
Sample of 33 LDCs	22	23	22	24	40	30	25	25	66	55	38	38
Southern Europe	19	21	19	21	33	28	22	24	54	47	40	37
Asia	31	26	24	24	44	28	22	24	88	76	41	37
Africa	8	11	15	13	33	42	42	26	33	43	52	47
Latin America	14	21	24	30	36	45	37	51	58	57	53	69
NICs	23	24	22	25	41	29	23	25	64	53	42	42
Non-NIC Oil Importers	20	18	21	20	34	28	29	27	53	57	57	55
Small, Low Income	12	13	15	19	44	63	57	42	28	50	54	58

Table 3: SHARES OF EXPORTS TO DEVELOPING COUNTRIES IN TOTAL EXPORTS

	Manufactures						All Excluding Fuels					
	1963	1968	1971	1973	1975	1977	1963	1968	1971	1973	1975	1977
Greece	32	18	21	18	21	20	11	13	15	14	16	17
Israel	24	19	22	20	23	18	18	17	18	18	20	17
Portugal	43	36	30	22	19	17	37	33	29	22	20	17
Spain	34	38	32	30	34	32	16	27	25	24	27	27
Turkey	10	10	17	18	10	09	13	12	15	18	14	13
Yugoslavia	32	19	14	12	16	16	19	16	12	11	14	16
<u>SOUTHERN EUROPE</u>	33	28	25	22	25	24	19	21	20	19	21	21
Cameroon	79	77	70	62	75	31	08	11	14	15	19	08
Congo	06	14	29	43	55	38	07	17	26	31	40	29
Ivory Coast	59	58	64	52	71	58	12	11	12	17	21	18
Ghana	17	05	30	11	35	-	05	06	08	08	14	-
Senegal	26	73	76	71	68	-	06	15	29	32	25	-
Tunisia	53	27	18	24	19	09	16	16	13	16	26	15
Libya	22	90	93	97	-	-	16	50	38	94	40	-
Nigeria	15	-	06	07	04	13	05	-	05	06	03	03
Central African Republic	50	32	29	38	36	17	28	19	22	23	22	10
<u>AFRICA</u>	33	42	45	42	48	26	08	11	11	15	19	13
Hong Kong	27	17	15	14	14	14	29	18	15	15	15	15
Singapore	97	85	66	44	47	44	60	54	51	40	44	43
Korea	43	15	14	12	14	15	32	14	13	12	15	15
Malaysia	90	74	60	43	39	35	33	31	35	33	32	33
Philippines	07	08	30	29	26	20	04	08	09	10	09	10
Thailand	67	46	41	34	36	33	52	42	36	40	37	38
India	33	23	29	22	27	24	24	17	22	19	21	19
Pakistan	43	35	27	38	31	24	34	31	27	37	38	27
Iran	29	11	15	14	20	-	13	15	16	15	16	-
Sri Lanka	27	16	12	-	14	23	17	16	22	-	26	30
<u>ASIA</u>	44	28	25	22	23	21	31	26	25	24	24	24
Brazil	41	51	47	38	47	43	11	19	23	23	28	27
Argentina	46	53	60	60	71	63	22	35	33	39	43	43
Colombia	61	49	51	40	55	59	07	14	20	20	27	23
Honduras	93	97	45	66	80	78	19	21	11	15	21	17
Mexico	31	28	25	20	38	-	09	12	14	12	18	-
Venezuela	20	59	56	43	52	-	11	15	14	15	21	-
Paraguay	15	12	47	31	72	-	30	38	43	24	42	-
Panama	61	97	72	85	83	86	05	04	50	09	13	22
<u>LATIN AMERICA</u>	36	45	42	37	50	51	14	21	23	24	29	30

declining shares for much of Asia and the NICs, plus particular country experiences within each continent, suggest that inward- versus outward-looking trade regimes are another. The increased shares of trade with developing countries in total trade for small and low-income countries and the experiences of several "late-comers" (Senegal, Honduras, the Philippines) suggest yet a third factor, namely the stage of industrial development. It might be hypothesized, as has been discussed in Chapter II, that the importance of developing country markets to developing country exporters is greater the lower the level of development, the more inward-looking the trade regime, and the larger the role of integration schemes.

d. Conclusion on Trends in Trade among Developing Countries

It appears that for developing country exporters (as represented by our sample), the share of exports to developing countries (excluding CSCs) for total non-fuel merchandise was fairly stable from 1963 to 1973 at about 22 percent, then rose only slightly in 1975 to 24 percent, where it has stayed through 1977 and probably 1979. For manufactures, however, the share has declined markedly from 40 percent to 25 percent, although the rate of decline slowed in the 1970s. The reverse trend was experienced in Latin America, however. In short, there has not been a marked increase in the role of this trade since 1963, and what has occurred has been limited to primary goods or to Latin American countries. Some difference is observable, however, between the 1960s and the 1970s, the downward trend for manufactures being more moderate in the latter decade.

2. Market Size and Growth and "Bias" in Trade among Developing Countries

The discussion begins with the vexing issue of whether there is a "bias" towards or away from developing country markets and then considers the

effect of the income growth of capital-surplus oil-exporting countries on the direction of developing countries' exports.

a. "Bias" in the Direction of Trade

We referred in Chapter II above to several arguments that South-South trade is biased downward. It is difficult to test the hypothesis without definition of the norm relative to which a bias can be measured. A thorough test, therefore, requires comprehensive specification of a model that can determine expected trade values. Although this is a part of our intended future research, here we investigate the issue of bias by defining it more narrowly as "gravity bias," namely, a situation in which actual trade with developing countries is less than expected in relation to their relative size as markets.

Specifically, we define a bias ratio for exporter i as:

$$(1) \quad B_i = SXL_i/SYL$$

where SXL_i is the share of i 's exports going to developing countries, and SYL is the developing countries' share of world income. The values covered for our entire sample contradict the view that there is a bias. Indeed, if anything, the level of trade among developing countries is higher than their size as markets alone would predict. The share of developing countries' total exports going to other developing countries ranged from 22 percent to nearly 25 percent, whereas their share in world income was in the order of 16-18 percent. ^{12/} Clearly, shares of exports by developing countries to one another far exceed their shares in world income.

^{12/} Calculated from EPD data, excluding the CPEs.

Admittedly, this measure ignores several countervailing effects, in particular the proximity of developing countries to each other, but by isolating what is a major determinant of direction of trade, the need for a clearer statement of what might be meant by bias is emphasized.

It is interesting to observe that for manufactured exports alone, the shares of exports to one another are much higher than shares in world income (see Table 4) but that this upward bias has declined over time, which also appears to be true for most countries individually, as is shown in the charts for the B_1 measure, in Appendix Figure A.1.

Table 4: SHARES OF EXPORTS OF MANUFACTURES TO DEVELOPING COUNTRIES IN TOTAL EXPORTS AND SHARES OF WORLD INCOME

(percent)

	Share of LDC Exports Going to LDCs	LDC Share of World Income	BIAS
1963	40	15.6	2.56
1968	30	14.7	2.04
1971	27	14.6	1.85
1973	25	14.8	1.68
1975	28	16.7	1.68
1977	25	17.3	1.44

Sources: Trade data in GATT System at EPD International Trade and Capital Flows Division; income data from EPD Data Files.

b. Capital-Surplus Countries as Export Markets

Although a decline in the share of developing country markets in the period 1963-73 was mirrored by the rise of that of developed country markets, the developing country share remained relatively stable after 1973, and a diversion took place from developed to capital-surplus, oil-exporting countries. Although it may be correct to exclude the flows to CSCs in an analysis seeking to confirm whether there has been a marked rise in trade among developing countries in the 1970s, the role of these markets has been far too important to be ignored. Hence we conclude the discussion on the effects of market size with a more detailed look at developing country exports to the capital-surplus countries. One may adduce two reasons for special consideration of these countries in this study. First, these countries are probably more like developing than industrial countries, despite high per caput income levels. They are barely industrialized, have inadequate infrastructures, include large amounts of non-commercial economic activity, and are undergoing rapid structural change. This last feature tends to make their import requirements more like those of other rapidly growing developing countries. Secondly, the huge redistribution of purchasing power occurring in favor of these countries after 1973 had a large effect on the directions of world trade, and this is, of course, reflected in the direction of developing countries' exports.

After 1973 these markets boomed (as is evident from Table 5), more than doubling in importance for developing countries' non-fuel exports and taking 5 percent of the total. In manufactured and capital goods they became even more important, accounting for 7 and 9 percent of developing country exports, respectively. They did so, however, not at the expense of the share of developing country destinations, but rather at the expense of the share of

developed country markets. Thus, developed country markets fell from a share of 68 percent of developing countries' total non-fuel exports in 1973 to 63 percent in 1977.

Table 5: SHARE OF MAJOR MARKETS IN DEVELOPING COUNTRY EXPORTS
BY MAIN COMMODITY GROUP, a/ SELECTED YEARS

	LDC			CSC			DC		
	1973	1975	1977	1973	1975	1977	1973	1975	1977
Food and Beverages	19	21	23	2	6	4	72	63	64
Manufactures	25	28	25	2	6	7	66	58	61
Capital Goods (Narrow)	<u>43</u>	<u>49</u>	<u>43</u>	<u>4</u>	<u>7</u>	<u>9</u>	<u>44</u>	<u>36</u>	<u>38</u>
Total Non-Fuel	22	24	24	2	5	5	68	62	63

a/ Non-food agriculture and metals & minerals had less than 1% shares throughout the periods, and in fact these declined somewhat. In total exports to CSCs, these two categories had a weight of only 4.7% in 1977.

The experience of developing countries in exports to CSCs varied considerably by region and by specific countries, as is shown in Table 6. For the group as a whole (represented by our sample of 33) the role and the increase in the role of CSC markets were almost exactly the same as for developed country exporters (as is shown in Table 6); the same obtains for NICs as a group. By geographic region the differences are substantial, with Asia standing above all others as the region for which CSC markets became most important (as might be expected from its location and level of development), especially for manufactures and capital goods. In Asia, Korea, India and

Table 6: SHARE OF CAPITAL-SURPLUS MARKETS FOR DEVELOPING COUNTRY EXPORTS
BY REGION AND SELECTED DEVELOPING COUNTRIES, 1973 AND 1977

(In percent, except for column 1)

Exporters	\$ Million Exports	Total Non-Fuel		Food & Beverages		Manufactures		Capital Goods	
		1973	1977	1973	1977	1973	1977	1973	1977
LDCs - 33	4,768	2	5	2	4	2	7	4	9
Southern Europe	1,416	2	6	2	5	3	7	5	10
Africa	26	1	1	1	1	2	1	4	3
Asia	3,009	2	7	4	7	3	9	3	12
Latin America	346	1	2	1	2	0	1	0	1
NICs	3,282	2	5	2	3	2	7	3	9
DCs	38,256	2	6	1	4	2	6	3	9
Greece	398	3	13	2	8	5	18	19	28
Tunisia	25	8	5	11	11	7	2	49	13
Korea	1,122	1	11	0	2	2	13	1	24
India	726	4	12	4	10	5	15	16	22
Pakistan	291	9	26	20	41	7	22	27	13

Pakistan were the most dependent on CSC markets, which took well over 10 percent of their exports by 1977, with food (for Pakistan) and manufactures (for India) being particularly dependent on these markets. Korea's dependence on CSC markets is high only for capital goods (24 percent) and far less so for all non-fuel exports (11 percent). In terms of the total developing country exports to CSCs, however, Korea is by far the major single exporter, providing \$1,122 million in 1977, which is 23.5 percent of the total and 37.3 percent of the Asian total.

The regional and country-specific experience of developing country exports to capital-surplus countries exemplifies the complexity of explanations for the level of trade among developing countries. The exporters that have done well in CSC markets are those that (1) were more outward-oriented in their policies, (2) were not involved in regional trading arrangements, or (3) were closer in distance and had better transport links to CSC markets. At first glance, however, no one of these factors stands out as the most important.

B. Salient Features of Trade among Developing Countries

In the second and last major sub-section of the chapter, which deals with some of the features of trade among developing countries, the overall commodity composition and principal flows are first considered; then attention is paid specifically to the place of the NICs among the developing countries; thereupon, the factor-intensity of trade among developing countries is examined; and, finally, there is an analysis of trade among developing countries in capital goods.

1. Commodity Composition and Principal Flows

We address four areas: (a) the broad characteristics of the pattern of developing countries' exports in different directions, including the differences among the regions' export structures and the contrast with industrialized countries' exports to developing countries; (b) the commodity detail in trade among developing countries; (c) the major participants in trade among developing countries; and (d) major bilateral commodity flows.

a. The Broad Characteristics of Developing Countries' Exports in Different Directions

The exports of developing to other developing countries in 1977 were strikingly similar to those to developed countries (Table 7), with only slightly less food (32.3 versus 35.1 percent) and slightly more manufactures (54.4 versus 49.9 percent), but there is a decidedly higher weight of capital goods (20.4 versus 9.4 percent). ^{13/} Exports to CSCs and oil-exporting developing countries contain relatively more manufactures and fewer primary commodities, as might be expected. In exports to NICs food and non-food agricultural goods have a considerably greater weight than in other exports, whereas manufactures are much less important.

Over time manufactures have become increasingly important in trade among developing countries (see Table 8), although they were already relatively important in 1963, accounting for 41.0 percent of the total. ^{14/} Offsetting declines occurred in the relative importance of all three

^{13/} Within manufactures, of course, the types of goods do differ considerably, as our later discussion of capital-intensity of the goods (Section B.3) exported in different directions shows.

^{14/} This might be an overstatement attributable to re-exports, whose relative share has probably declined.

Table 7: COMMODITY COMPOSITION OF DEVELOPING COUNTRY EXPORTS TO DIFFERENT MARKETS
(1977 - percent)

	World	DC	CSC	LDC	OILX	NICS
Food & Beverages	34.3	35.1	25.7	32.3	31.1	38.4
Non-Food Agriculture	8.3	7.8	2.7	9.9	4.3	18.9
Metals & Minerals	5.2	6.3	2.0	2.7	1.5	3.9
Manufactures	<u>51.3</u>	<u>49.9</u>	<u>69.4</u>	<u>54.4</u>	<u>62.4</u>	<u>38.8</u>
Total Non-fuels	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Capital Goods - Broad	12.6	9.4	16.5	20.4	23.8	11.7
Capital Goods - Narrow	8.8	5.3	15.2	15.8	17.9	8.0
Fuels	17.8	19.1	1.7	22.3	4.7	11.9

categories of primary goods. Note also the substantial increase in the share of capital goods in exports to developing countries, which more than doubled between 1963 and 1977. The changes in the structure of exports from developing to industrialized countries were much the same on the whole as those in trade among developing countries, the weight of manufactures increasing and that of primary goods falling. It appears, however, that the rise in the importance of manufactures from 17.1 percent of exports to industrialized countries in 1963 to 49.9 percent in 1977 was far more dramatic than that in exports to developing countries, in which the share rose only from 41.0 to 54.4 percent.

By region, one observes some variation in the composition of the export basket (see Table 9). Southern Europe is above the developing country weighted average for the share of manufactures in exports both to developing and to developed countries, as are the NICs, whereas Africa and Latin America are well below the average. For all groups the share of manufactures in exports to the developing countries exceeds that in exports to developed countries. In 1963 Asia had shares of manufactures in exports to both destinations that were slightly above the developing country average, but by 1977 it was unique in having well above average shares in exports to the developed countries but slightly below average shares in exports to the developing countries, which reflects the shift of Asian exporters from developing to developed country markets. Such a drastic shift was unique to Asia, but in all cases the tendency towards increased relative importance for manufactures of developed country markets is evident.

As a footnote to the discussion of developing countries' exports, an interesting comparison is of exports of the developing countries to other developing countries with those to developing from industrialized countries.

Table 8: COMMODITY COMPOSITION OF EXPORTS FROM DEVELOPING COUNTRIES IN SELECTED YEARS

	Percent Exports from LDCs					
	To LDCs	To DCs	To LDCs	To DCs	To LDCs	To DCs
	- - - 1963 - - -		- - - 1971 - - -		- - - 1977 - - -	
Food & Beverages	36.8	52.8	29.8	39.9	32.3	35.1
Non-Food Agriculture	16.5	19.8	14.5	11.3	9.9	7.8
Metals & Minerals	4.0	9.8	3.8	10.0	2.7	6.3
Manufactures	41.0	17.1	50.7	37.9	54.4	49.9
Total Non-Fuels	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Capital Goods - Broad	9.5	3.2	15.6	5.2	20.4	9.4
Capital Goods - Narrow	7.7	2.6	12.6	3.3	15.8	5.3
Fuels	45.0	28.0	50.4	30.6	22.3	19.1

Table 9: WEIGHT OF MANUFACTURES IN EXPORTS OF
THE TOTAL SAMPLE AND OF THE REGIONS
(Percent)

<u>Exporting Region</u>	1963		1977	
	To LDCs	To DCs	To LDCs	To DCs
LDC 33	<u>41.0</u>	<u>17.1</u>	<u>54.4</u>	<u>49.9</u>
Southern Europe	66.2	29.2	76.7	62.9
Africa	20.7	3.9	25.2	10.9
Asia	42.1	25.6	53.5	62.3
Latin America	19.5	6.0	40.7	18.3
NICs	51.7	22.2	63.4	62.7

Note: Appendix Table A.1 provides a fuller picture of the commodity composition by region.

From Table 10 it appears that the former were quite different from the latter, manufactured exports accounting for 82 percent of industrialized countries exports to developing countries but only 54.4 percent of trade among developing countries. The difference between the two baskets had decreased since 1963, however.

Table 10: COMMODITY COMPOSITION OF EXPORTS FROM DEVELOPING AND INDUSTRIALIZED COUNTRIES TO DEVELOPING COUNTRIES, 1977

	LDC to LDC	DC to LDC
Food & Beverages	32.3	10.1
Non-Food Agriculture	9.9	3.0
Metals & Minerals	2.7	2.3
Manufactures	<u>54.4</u>	<u>82.0</u>
Total Non-Fuel	<u>100.0</u>	<u>100.0</u>
Capital Goods (Broad Definition)	20.4	42.1
Capital Goods (Narrow Definition)	15.8	38.4
Fuels	22.3	1.8

The contrast is even more marked in capital goods, the weight of which is more than twice as high in exports from industrialized to developing countries as in trade among developing countries. Non-fuel primary goods have a weight of 45.6 percent in trade among developing countries, but of only 18.0 percent in exports from developed to developing countries, which provides yet another perspective on the importance of primary goods in trade among developing countries.

In sum, the major characteristics of trade among developing countries are that the weight of manufactures is slightly higher than in their exports to industrialized countries but is far below the weight in exports from industrialized to developing countries. Although the share of manufactures in trade among developing countries has increased since 1963, it has not experienced as dramatic a rise as in exports from developing to industrialized countries.

b. Commodity Detail in Trade among Developing Countries

The total exports of our sample of 33 developing countries to developing country markets were about \$23 billion in 1977. Seventeen groups of commodities (at the 3-digit SITC level) with a value of \$400 million or more each accounted for nearly half of the total (as is seen in Table 11). Indeed, the top 10 groups alone accounted for 34 percent of the total. Among the important products in trade among developing countries, there are more primary than manufactured goods, largely because the latter are more heterogeneous.

A different perspective is provided if we consider products for which trade with developing countries accounts for 50 percent of total exports. These are quite different on the import and export sides. Among imports, developing country sources are important for 22 commodity groups (see Appendix Table A.3), all of them primary goods, a few of them processed: preserved fruit and vegetables, shaped wood, processed oils, tanning materials, and plywoods. Exports for which developing country destinations account for 50 percent of the total, however, include a predominance of manufactured and partly processed items, including cereal preparations, soaps and cleansers, plastic materials, agricultural machinery, textile machinery, and road vehicles such as bicycles and motorcycles.

Table 11: PRINCIPAL PRODUCTS IN TRADE AMONG DEVELOPING COUNTRIES

(in million US\$, 1977 prices)

Rank	SITC	Product Groups	1977 Exports
1.	071	Coffee	1011
2.	231	Crude Rubber	988
3.	732	Road Motor Vehicles	849
4.	042	Rice	793
5.	263	Cotton	749
6.	242	Rough Wood	740
7.	735	Ships and Boats	708
8.	719	Mach. & Appl., Non-electric	571
9.	729	Other Elec. Mach. & Apparatus	560
10.	061	Sugar & Honey	516 (7,483)
11.	682	Copper	476
12.	841	Clothing (except fur)	454
13.	044	Maize, Unmilled	446
14.	422	Vegetable Oil, Non-soft	446
15.	081	Animal Feed	439
16.	651	Yarn and Thread	426
17.	421	Soft Vegetable Oil	399 (10,568)

This view on trade among developing countries reflects two important roles of developing countries for one another: they are both major sources of many primary goods and provide key markets for a variety of semi-manufactured and manufactured goods. Among manufactures one finds that developing country markets are of major importance for several types of capital goods: metal containers for storage, agricultural machinery, textile and leather machinery, machinery for special uses, and electrical power machinery.

c. Major Participants in Trade among Developing Countries

The 10 leading developing economy exporters to developing economy markets (Taiwan excluded) accounted for more than 80 percent of the total non-fuel exports to other countries of the 33 developing countries in our sample and over 90 percent of their exports of manufactures and capital goods to other developing countries (Table 12). For manufactures the degree of concentration in the top 10 countries was the same in 1963 and 1977, whereas it increased for total non-fuel exports from 80.1 percent to 86.1 percent as a result of a concentration in the exports of primary goods, particularly food and beverages. Note, however, that among the top 10 exporters the degree of concentration in the top 3 fell from 40 percent to 38 percent for the total, especially so for manufactures (from 52 to 43 percent) and capital goods (from 72 to 54 percent).

Much the same countries are included in the list in both years, except for Pakistan and Portugal, which were not in the list for 1977, and Spain and Korea, which were not in the list for 1963. The group of principal exporters in trade among developing countries includes all of the NICs (except Portugal in 1977), although Mexico, Greece, and Israel are included in the list only for manufactured or capital goods. Apart from the NICs only three

**Table 12: SHARES OF TEN TOP EXPORTERS IN TRADE AMONG DEVELOPING COUNTRIES
FOR MAJOR COMMODITY GROUPS, 1963 and 1977**

	Total Non-Fuel Exports				Manufactures				Capital Goods - Narrow Definition				Food and Beverages			
	1963		1977		1963		1977		1963		1977		1963		1977	
1. Singapore	17.27	Brazil	14.54	Singapore	22.60	Spain	19.28	Yugoslavia	32.52	Spain	24.41	Argentina	20.43	Brazil	23.46	
2. India	11.32	Spain	12.26	India	16.82	Singapore	12.74	Singapore	27.19	Brazil	17.54	Thailand	14.90	Argentina	20.95	
3. Malaysia	10.10	Singapore	11.26	Hong Kong	12.43	Brazil	11.35	Spain	11.58	Singapore	12.46	Singapore	12.60	Thailand	13.64	
4. Argentina	10.03	Argentina	11.17	Yugoslavia	8.94	Korea	10.32	Malaysia	4.78	Argentina	9.83	India	9.84	Malaysia	7.19	
5. Thailand	7.21	Malaysia	7.82	Portugal	7.91	Hong Kong	8.77	Portugal	3.85	Yugoslavia	9.37	Brazil	7.40	Singapore	6.11	
6. Hong Kong	5.92	Korea	6.65	Spain	5.84	Argentina	7.22	Argentina	3.09	Korea	7.04	Malaysia	5.51	Spain	4.31	
7. Brazil	4.70	Thailand	5.91	Israel	3.87	India	6.71	India	2.86	India	4.06	Sri Lanka	4.52	India	3.97	
8. Portugal	4.60	India	5.26	Pakistan	3.74	Yugoslavia	4.60	Mexico	2.83	Malaysia	3.12	Portugal	2.63	Sri Lanka	2.68	
9. Yugoslavia	4.54	Hong Kong	5.13	Mexico	3.56	Israel	3.79	Brazil	2.77	Greece	2.32	Pakistan	2.55	Korea	2.02	
10. Pakistan	4.43	Yugoslavia	3.55	Malaysia	3.49	Malaysia	2.69	Hong Kong	2.65	Israel	2.02	Spain	2.23	Pakistan	1.76	
TOTALS	<u>80.12</u>		<u>83.55</u>		<u>93.07</u>		<u>93.47</u>		<u>94.12</u>		<u>92.16</u>		<u>82.61</u>		<u>86.09</u>	

Note: Shares here mean the exports of a commodity group from a given country to LDCs as a percent of exports from all 33 LDCs in our sample to LDCs. Thus, for example, in 1963 Singapore accounted for 17.27 percent of non-fuel exports to LDCs by the 33 LDC sample.

countries are included, two of them - Thailand and Malaysia - largely as exporters of primary goods, and India as an exporter of manufactured goods. A fourth, Pakistan, was an important exporter of both primary and manufactured goods in 1963, but was outside the top 10 in 1977. Indeed, as to be expected, the non-NIC countries in general lost ground relative to the NICs, their share in exports to developing countries declining consistently with the exception of India's share in capital goods exports, which increased slightly from 2.8 percent to 4.1 percent

The most dramatic changes in relative importance of specific countries are the sharp increase in the shares for Brazil, Spain, and Korea and the decline for India, Yugoslavia, and - to a smaller extent - Singapore. In 1963 Brazil was only seventh and Spain not among the first 10, but in 1963 they were first and second with 28 percent of inter-developing country exports between them. Korea's rise was less marked, moving from less than 1 percent to 6.7 percent and sixth rank, but this rise occurred despite the fact that for Korea's total non-fuel exports, the importance of developing country markets declined substantially over that period.

d. Major Bilateral Flows in Trade among Developing Countries

Finally, we look at the major bilateral commodity flows. Those in excess of \$50 million, at the 3-digit SITC level in 1977, are shown in Table 13. A total of 31 such flows are identified, totalling \$3,069 million, or 14 percent of total trade among developing countries. The largest 10 such flows alone were \$1,847 million or 8.5 percent of trade among developing countries. Most notable is the predominance of primary goods. Of these bilateral flows, only 8 were in manufactures and they totalled only \$578 million. As manufactured goods in trade among developing countries represented 54.4

percent of total non-fuel exports (see Table 7), this list of major flows clearly under-represents manufactures. The latter are somewhat more diversified in terms of the commodities involved.

There is no great surprise in the countries that are in this list: they are on the whole the same as in Table 12. As to the commodities for which large bilateral flows exist, they are generally the same as those shown in Table 11. There are several products, however, with bilateral flows of over \$50 million that have total flows among developing countries of less than \$400 million and do not appear in Table 11. These are marked with the letter a/ in Table 13.

2. Trade among Developing Countries and the NICs

In the discussion below of the place of NICs in the overall picture we consider first the major role they play in the total exports of the sample of developing countries; then the role of all developing countries as markets for NICs and of NICs as markets for all developing countries is examined; finally, NICs are distinguished from other developing countries, in order to identify the relative success of the two sub-groups as suppliers to NICs and their relative importance as markets for them. In this last section the attempt is to identify the effect of rapid NIC growth on one another and on other developing countries.

a. The Weight of NICs in Developing Countries' Trade

It is evident from the preceding section that the major exporters in trade among developing countries are the NICs. ^{15/} NICs were the source of

^{15/} The NICs are listed in Appendix A. Israel and Argentina are added to the OECD list of 10, but Taiwan is excluded, as data for Taiwan are not in the GATT system.

Table 13: MAJOR BILATERAL COMMODITY FLOWS, 1977

Rank	3 digit SITC Commodity	Exporter - Importer	US\$ Million
1.	Crude Rubber	Malaysia - Singapore	542
2.	Rough wood	Indonesia - Korea	328
3.	Rice	Thailand - Indonesia	180
4.	Coffee	Brazil - Spain	154
5.	Coffee	Ivory Coast - Spain	118
6.	Fresh Fruits	Argentina - Brazil	114
7.	Rough Wood	Malaysia - Korea	108
8.	Batteries, Valves, Transistors	Singapore - Malaysia	105
9.	Fixed Vegetable Oils, soft	Brazil - India	103
10.	Shaped wood ^{a/}	Malaysia - Singapore	95
11.	Ships and Boats	Spain - Yugoslavia	83
12.	Road Motor Vehicles	Singapore - Malaysia	78
12.	Crude Rubber	Malaysia - Spain	78
14.	Rice	Thailand - Spain	77
15.	Ships and Boats	Korea - Liberia	76
15	Fresh Meat ^{a/}	Yugoslavia - Greece	76
17	Ships and Boats	Yugoslavia - India	72
18	Sugar & Honey	Thailand - Taiwan ^{b/}	68
19	Crude Rubber	Malaysia - Korea	67
19	Fixed Vegetable Oil, soft	Brazil - Iran	67
21	Coffee	Colombia - Spain	62
22	Machinery for special ind. ^{a/c/}	Singapore - Malaysia	58
23	Iron Ore Concentrates ^{a/}	Brazil - Argentina	57
24	Batteries, Valves, Transistors	Korea - Hong Kong	53
24	Coffee	Brazil - Argentina	53
24	Rough Wood	Ivory Coast - Spain	53
27	Feedstuff	Singapore - Malaysia	55
27	Feedstuff	Brazil - Yugoslavia	55
29	Iron & Steel Bars ^{a/}	Spain - Singapore	53
29	Rice	Thailand - Singapore	53
31	Cocoa ^{a/}	Ghana - Spain	52
			3,069

^{a/} Products that do not appear in Table 11.

^{b/} Taiwan is identifiable as a destination of exports in the GATT System with the label "Asia N.E.S.", though it is not possible to obtain data on Taiwan as an exporter from the system on a consistent basis.

^{c/} SITC 719.

66 percent of all non-fuel exports in our sample of 33 countries but took only 38 percent of all imports. Focusing on the exports, we find that this share is far higher for manufactures (78 percent) and capital goods narrowly defined (83 percent), but - surprisingly - still very high for food (58 percent) and all primary goods (54 percent). These findings underline the fact that several newly industrializing economies have a strong natural resource base, particularly Brazil and Argentina. Although these two stand out, they do not completely account for the NICs' exports of food. In 1977 Brazil and Argentina accounted for 44 percent of all 33 developing countries' food exports, non-NICs for 42 percent, and other NICs for 14 percent.

b. Role of all Developing Countries as Markets for NICs and Vice Versa

As mentioned above, the share of developing country markets in NICs' exports followed exactly the same pattern as for all developing countries, being about 22 to 23 percent from 1963 to 1973 and then rising somewhat to 25 percent in 1977. For manufactures the share fell continuously from 41 to 25 percent and for capital goods from 64 percent to 42 percent, but it rose for food and beverages, from 16 to 24 percent. The NICs of course largely determine the pattern for all developing countries, given their high share in the total exports of our sample, but the pattern for non-NICs was similar to that for NICs, especially for manufactures. ^{16/}

The role of NICs as exporters in trade among developing countries in 1977 was much greater than their role as importers. Over time, however, NICs became more important among developing country markets for all commodity

^{16/} As Table 2 clearly shows, for functional as opposed to regional groupings of countries, only the small, low-income countries exhibited a different pattern, with their exports to developing countries increasing strongly over the period.

categories, their shares of developing country markets for developing country exports increasing from 46.1 to 51.0 percent in primary goods and from 17.4 to 27.6 in manufactures (see Table 14). In relation to developing country exports to all world destinations, however, NICs became more important as markets only in primary goods, their share increasing from 7.4 to 11.7 percent of developing countries' exports of these goods. The rise was particularly dramatic for non-food agriculture. Their importance among world markets for manufactured and capital goods did not rise, however.

c. Relative Role of NICs and other Developing Countries as Suppliers of, and Markets for, NICs

If we distinguish NICs from other developing countries, interesting patterns emerge. Table 15 shows the origin of NIC imports. It is clear that for non-food raw materials, developing countries outside the group were a source for more than one-third of these imports, although their share fell somewhat between 1963 and 1977. NICs were the fastest-growing group among the developing countries and experienced the greatest expansion of imports. Table 15 suggests that their growth had spill-over benefits by creating export opportunities for all developing countries (including other NICs), at least equal to those created for developed country exporters, as is indicated by the slight rise from 19 percent to 20 percent in the shares of all developing countries in NIC markets. In manufactures and foods these shares rose substantially, from 5 to 10 percent and 37 to 45 percent, respectively, which means that developing countries shared more than proportionately in the new NIC markets for these categories. The spill-over was disproportionately high for NICs' trade with one another. However, the share of non-NICs as sources for NIC imports generally declined except in manufactures, where it was in any event very small. Thus, the non-NIC developing countries were unable to

Table 14: THE ROLE OF NIC MARKETS IN TRADE AMONG
DEVELOPING COUNTRIES: 1963 and 1977

	1963		1977	
	Exports to NICs as % of Total Exports <u>a/</u>	NICs as Percent of LDC Markets <u>b/</u>	Exports to NICs as % of Total Exports	NICs as Percent of LDC Markets
Food & Beverages	5.9	36.6	10.2	44.3
Non-Food Agriculture	11.8	68.0	20.7	71.4
Metals & Minerals	4.4	40.4	7.0	55.8
Total Primary Non-Fuel	7.4	46.1	11.7	51.0
Manufactures	7.0	17.4	6.9	27.6
Total Non-Fuel	7.4	33.8	9.2	38.2
Capital Goods - Narrow	9.1	14.5	9.0	21.0

a/ (LDC exports to NICs ÷ LDC exports to World) x 100.

b/ (LDC exports to NICs ÷ LDC exports to all LDCs) x 100.

expand their exports to NICs as quickly as the growth of NIC demand, which suggests the important role of supply constraints considerations. In general, it was the NICs that were able to obtain the greatest advantages in selling to the most rapidly growing markets among developing countries, namely, themselves.

The export side of NICs' trade reflects the large and growing role of developed countries as markets for manufactured goods. Table 16 shows that the share in the NICs' exports of exports to developing countries declined for manufactures but increased sharply in primary goods. If NIC markets are distinguished from those of other developing countries, however, the picture is altered a little. Almost the entire rise from 15 to 24 percent in the share of exports of primary products from NICs to developing countries was due to a rise in the share of the other NICs' markets. This is consistent with the view that NICs are fast-growing markets requiring large imports of raw materials.

d. Conclusion

The trade between NICs and other developing countries is in fact quite large in raw materials, somewhat less so in food, and very small in manufactures. The growth of NIC markets has provided spill-over effects for other developing countries, but they have not maintained their shares in this market for primary goods, losing ground not only to developed countries in raw materials but also to NICs themselves in food and manufactures. Developing countries outside the NIC group have on the whole not been able to respond as effectively to the rapid growth of export opportunities in NIC markets as have developed countries and the NICs themselves.

Table 15: PERCENTAGE DISTRIBUTION OF NIC IMPORTS BY ORIGIN, 1963 AND 1977

	1963				1977			
	DCs	All LDCs	NICs	Non-NICs	DCs	All LDCs	NICs	Non-NICs
Food & Beverages	50	37	13	24	44	45	22	23
Non-Food Agriculture	40	58	9	49	44	47	7	40
Metals & Minerals	54	43	6	37	60	39	6	33
Non-Fuel Primary	47	44	11	33	46	44	15	29
Manufactures	88	5	3	2	84	10	7	3
Total Non-Fuel	74	19	6	13	72	20	9	11
Capital Goods - Narrow	95	3	2	1	93	5	4	1

Table 16: PERCENTAGE DISTRIBUTION OF NIC EXPORTS BY DESTINATION, 1963 AND 1977

	1963				1977			
	DCs	All LDCs	NIC	Non-NIC	DCs	LDC	NIC	Non-NIC
Food & Beverages	79	16	6	10	62	24	11	13
Non-Food Agriculture	67	16	10	6	58	29	16	13
Metals & Minerals	81	9	4	5	68	15	8	7
Total Non-Fuel Primary	77	15	6	11	62	24	12	12
Manufactures	<u>51</u>	<u>41</u>	<u>5</u>	<u>36</u>	<u>62</u>	<u>25</u>	<u>6</u>	<u>19</u>
Total Non-Fuel	<u>69</u>	<u>23</u>	<u>6</u>	<u>17</u>	<u>62</u>	<u>25</u>	<u>8</u>	<u>17</u>
Capital Goods - Narrow	20	64	8	56	38	42	8	36

3. Capital-Labor Ratios in Exports of Developing Countries

It has been argued by Krueger (1978) among others that trade among developing countries is less beneficial than exports to industrialized countries from the point of view of employment, because these exports have higher capital-labor ratios. We test this prediction here by computing the direct capital-labor ratios for baskets of goods exported from NICs to industrialized countries and other developing countries respectively.

The modified three-country Heckscher-Ohlin model discussed in Chapter II predicts that the middle country exports to industrialized countries will be more labor intensive than exports to developing countries. Furthermore, the continuum of country factor endowments should lead one to expect that goods that go in greatest proportion to developing country markets will also have the highest capital-labor ratios. NIC exports at the 3 digit SITC level for 1977 are therefore subdivided into four categories:

- exports of which developing country markets take 50 percent of exports ("principal developing country goods").
- exports of which developing country markets take between 30 and 50 percent ("secondary developing country goods").
- exports of which industrialized country markets take between 60 and 80 percent ("secondary developed country goods").
- exports of which industrialized countries take 80 percent or more ("principal developed country goods").

Capital-labor ratios (inclusive of human capital) are taken from Balassa (1979), assigned, with his concordance, to the 3 digit goods in each of these categories, and a weighted average capital-labor ratio is computed. The results are shown in Table 17, and they clearly confirm the expectation that trade among developing countries is more capital- and skill-intensive than exports of developing countries to industrialized countries.

Whereas the overall average capital-labor ratio of NIC exports is about \$30,664, it is substantially higher for exports to developing countries (\$45,342) and lower for exports to developed countries (\$25,407). Furthermore, for goods 50 percent or more of which go to developing country markets, the ratio is even higher, at \$53,589, whereas for goods that go largely to developed country markets, the ratio is far lower, at \$15,075. The test is of course not as precise as one might make it, but it does conform strongly to the general conclusions of Krueger (1978) and Balassa (1979) and contradicts the finding of Amsden (1980) that trade among developing countries is not more capital intensive than their exports to industrialized countries.

Table 17: DIRECT FACTOR CONTENT OF NIC MANUFACTURED EXPORTS, 1977

	<u>Capital-Labor Ratio (\$000/Worker)</u>
Principal Developing Country Exports	53,589
Secondary Developing Country Exports	44,170
<u>All Developing Country Exports</u>	45,347
Secondary Developed Country Exports	39,780
Principal Developed Country Exports	15,075
<u>All Developed Country Exports</u>	25,407
All Exports	<u>30,664</u>

4. Capital Goods Trade among Developing Countries

It is argued that advanced developing countries (NICs) can benefit other developing countries by developing appropriate capital goods for export

to them. Furthermore, from the point of view of NICs themselves, the export of such capital goods may serve to stimulate innovation of products and production processes. In addition, since exports of capital goods to industrialized countries may not be possible at first, the more accessible developing country markets can offer opportunities to advance up the ladder of technological sophistication. Finally, the modified Heckscher-Ohlin theory implies that developing countries with larger endowments of capital, skills, and technical experience should be exporting goods that are more intensive in these factors, such as capital goods, to other developing countries, while continuing to export more labor-intensive goods to developed countries.

As we see in Table 18, the weight of capital goods in exports to developing countries is far higher than for developed country destinations. Similarly, the change over time is as predicted, as the weight of capital goods in exports to developing countries has increased substantially ^{17/} from 7.7 to 15.8 percent; and for NICs this has also risen (but not as sharply), from 12.1 to 19.8 percent. The same rise is seen for all countries exporting these goods, except for Yugoslavia (see Table 19). At the same time, the share of capital goods exports to developing country markets has declined markedly, as is shown in Part B of the table. Three countries in particular

^{17/} We define capital goods as shown in Appendix B, in two categories: broad and narrow. The former is based on the U.N. Broad Economic Categories (BEC), capital goods plus transport equipment. The latter excludes two large items in trade among developing countries that appear to us to be better considered as consumer durables or parts thereof: 732.1, Passenger Cars; and 729, Batteries, Lamps, Auto Electrical Equipment, Valves, Tubes, Transistors. The narrow definition also excludes Motor Vehicle Parts, Motorcycles, Bicycles, and Invalid Carriages. The use of the narrow definition does make some difference to conclusions. For example, in Spain's exports of "capital goods broad" the share of exports to developing countries declines sharply (50% to 38%), although for the narrow definition it remains constant, as is seen in Part A of Table 18. In general, however, the conclusions are unaffected.

Table 18: SELECTED INDICATORS OF TRENDS IN TRADE IN CAPITAL GOODS ^{a/} AMONG DEVELOPING COUNTRIES

	<u>A</u> Country Share in LDC ^{b/} Trade of K Goods			<u>B</u> Exports to LDCs as % of Total			<u>C</u> Weight of Capital Goods In Exports to LDC			<u>D</u> Weight of Capital Goods In Exports to DCs (1977)
	1963	1971	1977	1963	1971	1977	1963	1971	1977	
Spain	11.6	32.0	24.4	49	50	50	25.6	35.5	31.5	17.2
Brazil	2.8	10.4	17.5	85	75	60	4.5	12.1	19.1	8.3
Singapore	27.2	11.4	12.5	99	82	47	12.0	13.5	28.5	15.9
Argentina	3.1	7.1	9.8	78	78	89	2.4	9.7	13.9	6.7
Yugoslavia	32.5	11.5	9.4	54	24	25	54.9	42.4	41.8	27.5
Korea	6.7	7.0	7.0	46	28	25	6.5	3.9	16.8	10.1
India	2.9	6.1	4.1	76	62	49	1.9	10.8	17.6	4.8
Malaysia	4.8	2.5	3.1	99	94	32	3.6	3.9	6.3	6.6
Greece	0.6	0.6	2.3	37	35	51	5.0	4.6	18.2	6.1
Portugal	3.9	4.9	15.0	76	56	23	6.4	12.9	15.2	11.4
LDC 33	100.0	100.0	100.0	63	48	43	7.7	12.6	15.8	5.3
NICs	-	-	-	64	46	42	12.1	16.9	19.8	6.9
DCs	-	-	-	34	31	33	32.4	35.9	38.4	23.9

^{a/} The narrow definition is used here - see footnote 17.

^{b/} By country share is meant: Percent of LDC-33 exports of capital goods to LDCs, accounted for by the specific country.

have risen to prominence in capital goods exports to developing countries: Spain, Brazil, and Korea. Nevertheless, while sharply increasing the weight of capital goods in their exports to developing countries, Brazil and Korea have expanded exports to developing country markets far less rapidly than to industrialized countries (and to CSCs for Korea). Thus, the share of their total capital goods exports going to developing countries has fallen from 85 to 60 percent and from 46 to 25 percent, respectively. Spain's exports to developing countries have throughout the period accounted for only half of its exports of capital goods.

The data confirm the theoretical expectation that trade in 1977 among developing countries contains relatively more capital goods than trade with industrialized countries and that the importance of capital goods in trade among developing countries increases over time. ^{18/} It is not the case, however, that developing countries are turning towards developing country markets for capital goods, indeed quite the reverse is true - they are turning away from these markets. This does not necessarily mean, however, that developing countries' markets were not valuable for other developing countries. The successful exports to industrialized countries may have initially been exported to the developing countries, even if only in small quantities. (The likelihood of this being significant is reduced, however, by the recognition that the shares of capital goods exported to developing countries began to fall shortly after 1963 for most countries. At that time, however, no developing country other than Spain and Yugoslavia had achieved any very substantial level of technological sophistication.) An alternative

^{18/} A related conclusion is that the capital-labor intensity of exports to LDCs is higher than that for exports to DCs, as observed directly in the previous section.

Table 19: CHANGES IN DIRECTION OF EXPORTS OF CAPITAL GOODS FROM
MAJOR EXPORTERS, 1963-77

(Percent Share by Destination)

	LDC Share			CSC Share			DC Share		
	1963	1971	1977	1963	1971	1977	1963	1971	1977
Spain	49	50	50	2	2	6	49	46	42
Brazil	85	73	60	0	0	2	12	27	38
Singapore	99	82	47	0	2	4	0	15	46
Argentina	78	78	89	0	0	0	22	22	11
Yugoslavia	54	24	25	1	3	11	12	35	15
Korea	46	28	25	0	1	24	54	71	51
India	76	62	49	18	11	22	5	18	21
Malaysia	99	94	32	0	0	0	1	4	68
Portugal	76	53	23	1	0	3	23	46	67
Greece	37	35	51	3	13	28	61	47	13

view is that capital goods exported to different destinations may differ markedly, with those to developed countries being consistently simpler products with little design and technology requirements. In this case, even if smaller in aggregate, exports to developing countries might provide greater external benefits via learning by doing and so forth. More analysis in this area is clearly needed, focusing upon individual commodities within the capital goods category.

IV. SUMMARY OF MAIN FINDINGS

There is little point in repeating the many observations made on trade among developing countries. The aim of this chapter is rather to bring out the main points and most challenging hypotheses. Reference is made largely to the facts discussed in Chapter III while bringing out some of the implications for the theoretical issues dealt with in Chapter II.

A. The Main Trends in the Destination of Developing Countries' Trade

Contrary to a widespread impression, there has been no large shift toward trade among developing countries since 1973, at least when the focus is upon non-fuel trade and developing countries are defined exclusive of the capital-surplus, oil-exporting countries. The share of non-fuel exports to developing countries, excluding capital-surplus oil exporters, was quite stable at between 22 and 23 percent of their total exports between 1963 and 1973, whereupon it rose to 24 percent in 1975 and 1977. This overall stability gives a misleading impression, however, since at a more disaggregated level there have been opposing and mutually cancelling trends for manufactures and primary commodities.

Manufactured exports were the developing countries' most dynamic export sector in the 1960s and 1970s. The direction of these exports also changed dramatically, the share of developing countries as markets falling from 40 percent in 1963 to 27 percent in 1971 and 25 percent in 1977. In the 1960s and early 1970s it was the industrialized countries that were the main recipients of an increased share of developing countries' manufactured exports. In the later 1970s it was the capital-surplus, oil-exporting countries, whose share rose from 2 percent in 1973 to 7 percent in 1977.

Within manufactures capital goods exports have tended to go more to other developing countries at any moment, but the decline in the importance of these markets has been noteworthy, from 66 percent in 1963 to 38 percent of total capital goods exports in 1977.

In terms of the discussion of the determinants of the direction of trade examined in Chapter II, the changes in the direction of developing countries' manufactured exports can perhaps be explained as follows: in the 1960s and early 1970s exports to industrialized countries soared as a number of countries exploited the opportunities for Heckscher-Ohlin-based trade in labor-intensive manufactures. This development was further encouraged by declining trade barriers in industrialized countries and their rapid overall import growth. The developing countries, meanwhile, remained strongly protectionist overall. In the 1970s, with a large shift in global income towards oil exporters and slower growth in industrialized countries, the direction of developing countries' exports of manufactures shifted towards the former.

Primary commodity exports from the sample of developing countries, especially non-food agriculture and food and beverages, shifted toward developing country markets, just as manufactured exports shifted away from them. The share of developing country markets for food and beverages rose from 16 to 23 percent between 1963 and 1977, for non-food agriculture from 18 to 29 percent and for total non-fuel primary commodities from 16 to 23 percent. This rise offset the decline in the importance of developing countries' markets for manufactures.

The existence of wide differences in relevant factor endowments, the failure of some developing countries to achieve rapid growth in food production, and - most important - the rapid industrialization of some

resource-poor developing countries seem to explain these trends in primary commodities. Most of the increase in the shares of the markets of developing countries in their exports of primary commodities is, in fact, accounted for by the increased demand for primary commodities of NICs. (Moreover, much of the increased exports to NICs came from other NICs.) In all, an important effect of NICs on other developing countries seems to be through their demand for primary goods. In 1977 NICs purchased more than half of the non-fuel primary commodities exported by the 33 developing countries to one another but only 28 percent of the manufactures.

It should be stressed, finally, that even though exports of non-fuel primary commodities grew more rapidly to developing countries' markets than to the rest of the world, the importance of manufactures rose in all markets. The effect of the overall dynamism of exports of manufactures swamped that of the shift in direction toward industrialized countries. Thus, the share of exports of manufactures in developing countries' trade with one another rose from 43 percent in 1963 to 54 percent in 1977, and this share in their exports to the NICs rose from 22 to 40 percent. The shift in the destination of manufactures is shown in the fact that their importance in developing countries' exports to other destinations rose much more than in trade with one another. Thus, manufactures rose from 17 to 50 percent of non-fuel exports of developing countries to industrialized countries and from 30 to 70 percent of their exports to capital-surplus, oil-exporting countries between 1963 and 1977.

B. Principal Hypotheses on Trade among Developing Countries

Four particular findings or hypotheses of the paper should be stressed: (1) the apparent absence of any "bias" of developing country exports toward industrialized country markets; (2) the effect of commercial policy on the direction of developing countries' exports; (3) the relatively high capital intensity of developing countries' manufactured exports to one another; and (4) the lack of evidence for an overwhelming role among developing countries for exports in capital goods.

1. The Myth of a Bias against Trade among Developing Countries

Developing countries exports to one another of all non-fuel commodities of manufactures and of non-fuel primary commodities exceed what might be expected, on the basis of their weight in the world economy. It should be noted that forces of comparative advantage on Heckscher-Ohlin lines suggest that efficient trade should be predominantly with industrialized countries, especially in manufactures. Moreover, industrialized countries have not only been liberalizing their trade policies, at least in manufactures, whereas developing countries have not, but they have substantially more open trade regimes in general. Thus, one might expect trade of developing countries with industrialized countries actually to exceed that indicated by the latter's weight in the world economy. Since this is not the case (but rather the reverse), it is difficult to argue that there is an effective bias against trade among developing countries.

If there is in fact such a bias, the argument must be that, because of proximity, the opportunities for intra-industry trade, and the importance of similar demand patterns, developing countries ought to trade much more with one another than their weight in the world economy suggests. In response, it

should be noted that transport costs are generally of decreasing importance in determining the optimal location of production and patterns of trade. Thus, the reasons for believing that there should be more trade among developing countries than there is - potential for intra-industry trade and similarity in demand - are also reasons for believing that the source of bias against such trade is likely to be the commercial policies of developing countries themselves. If, therefore, trade among developing countries should be higher than it already is, their own trade policies are likely to be the main "biasing" factor.

2. Developing Countries' Commercial Policies and the Direction of Their Exports

From the point of view of exporting developing countries, the commercial policies of all the other developing countries that are potential markets are a pervasive factor. One would expect the effects to be shared by all developing country exporters, therefore, except to the extent that regional or other preferences are important. Despite this feature of the environment, the shares of different destinations differ markedly for countries and regions whose economic potential one might expect to be similar. An important reason is probably the commercial policies of the countries as exporters.

The evidence is quite striking: while the East Asian NICs, for example, have experienced low and declining shares of exports to developing countries for their manufactured exports, the reverse has been true for Latin America. The explanation is probably the effect of outward-looking policies leading to specialization on Heckscher-Ohlin lines, on the one hand, and inward-looking policies, especially in the context of regional preferences, leading to spillover exports to countries with similar demand patterns, on the other hand.

3. The Capital Intensity of Trade

One of the implications of trade theory is that trade of developing countries with one another will be more capital-intensive than with industrialized countries. The evidence presented above strongly supports this assumption, manufactured exports to industrialized countries being almost half as capital intensive as those to developing countries. Furthermore, the higher the share of industrialized country markets for a given product, the less capital-intensive it is. The capital intensity of those products, half of whose exports go to developing country markets, is three and a half times greater than that of those products, 80 percent of whose exports are destined for the markets of industrialized countries and only 20 percent for those of developing countries.

4. Capital Goods Exports and Developing Country Markets

It is frequently argued that trade among developing countries in capital goods can be beneficial for both exporters and importers. It is certainly the case that a higher proportion of capital goods is exported to developing countries than of manufactures overall, 43 against 25 percent in 1977. Furthermore, capital goods amounted to 16 percent of trade among developing countries and only 5 percent of their trade with industrialized countries in the same year. Nevertheless, the importance of developing country markets has been declining for the exporters of capital goods, from 63 percent in 1963 to 43 percent in 1977, and this shift in direction occurred very early in their development for many industrializing countries. It can, therefore, be questioned whether exports to developing countries are so essential a first step for exporters of capital goods as is sometimes suggested.

APPENDICES

	<u>Page</u>
Appendix A	Country Coverage and Aggregations..... 88
Appendix B	Definition of Capital Goods Categories..... 90

Tables

A.1	Commodity Composition of Inter-LDC Exports by Region..... 93
A.2a	Percentage Distribution of Exports of LDC-33 by Destination and Commodity Group..... 94
A.2b	Percentage Distribution of Exports of Oil Exporting Countries by Destination and Commodity Groups..... 95
A.2c	Percentage Distribution of Exports of Oil Importing Countries by Destination and Commodity Groups..... 96
A.2d	Percentage Distribution of Exports of Developed Countries by Destination and Commodity Groups..... 97
A.2e	Percentage Distribution of Exports of Southern Europe by Destination and Commodity Groups..... 98
A.2f	Percentage Distribution of Exports of Asia by Destination and Commodity Groups..... 99
A.2g	Percentage Distribution of Exports of Latin American Countries by Destination and Commodity Groups..... 100
A.2h	Percentage Distribution of Exports of Africa by Destination and Commodity Groups..... 101
A.2i	Percentage Distribution of Exports of NICs by Destination and Commodity Groups..... 102
A.3	Products for which Share of Trade with Developing Countries Exceeded 50 Percent in 1977..... 103
A.4	Annual Growth Rates of Exports by Destination and Commodity Group..... 104
A.5	Exports to Trade Associates and Neighbors as Percent of Total Exports to LDCs..... 105

Figures

A.1	"Gravity Bias" of Inter-LDC Trade by Country, 1963-1977..... 106
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APPENDIX ACOUNTRY COVERAGE AND AGGREGATIONSReporter Countries and Groupings

Southern Europe: Greece, Israel, Portugal, Spain, Turkey, Yugoslavia.

Africa: Cameroon, People's Republic of the Congo, Ivory Coast, Ghana, (Central African Republic), Senegal, (Nigeria), Tunisia, Libya.

Asia: Iran, Hong Kong, Singapore, Korea, Malaysia, Philippines, Thailand, India, Pakistan, (Sri Lanka).

Latin America: Brazil, Argentina, Colombia, Honduras, Mexico, Venezuela, Paraguay, (Panama).

Aggregations

LDCs33: All above countries; the four in parentheses have several missing data points (Panama: 1967; Sri Lanka: 1973; Central African Republic: 1972; Nigeria: 1968 and 1969).

OILX: Oil Exporters-(People's Republic of the Congo, Nigeria, Tunisia, Libya, Iran, Malaysia, Mexico, Venezuela.

OILM: All other countries in above sample.

DC: Industrialized Countries.

NIC: Greece, Israel, Portugal, Spain, Yugoslavia, Hong King, Singapore, South Korea, Brazil, Argentina, Mexico.

Partner Country Groupings

- (OILX) Oil Exporters: Algeria, Angola, Bahrain, Bolivia, Brunei, Congo, Ecuador, Egypt, Gabon, Indonesia, Malaysia, Mexico, Nigeria, Oman, Peru, Syrian Arab Republic, Trinidad & Tobago, Tunisia, Venezuela.
- (OMLOY) Oil Importers-Low Income: Dahomey, Burundi, Central African Republic, Chad, Ethiopia, Guinea, Kenya, Madagascar, Mali, Malawi, Niger, Rwanda, Sierra Leone, Somalia, Tanzania, Uganda, Upper Volta, Comoro Islands, the Gambia, Afghanistan, Bhutan, Bangladesh, Burma, Kampuchea, India, Laos, Nepal, Pakistan, Sri Lanka, Viet Nam, Zaire.
- (OMMIDY) Oil Importers-Middle Income: Oil Importing NICs: Greece, Israel, Portugal, Spain, Yugoslavia, Hong Kong, Singapore, South Korea, Brazil, Argentina plus: Other Mid-Y Oil Importers: Martinique, Virgin Islands, Bermuda, Mauritania, Mozambique, Sudan, Togo, Cameroon, Ghana, Ivory Coast, Liberia, Zimbabwe, Senegal, Zambia, Seychelles, Equatorial Guinea, Sao Tome & Principe, Cape Verde Islands, Guinea Bissau, Grenada, Guyana, Panama (Canal Zone), Uruguay, Suriname, Barbados, Bahamas, Cyprus, Malta, Turkey, French Polynesia, New Caledonia, Guam, American Samoa, Pacific Islands, Gilbert & Ellice Islands, Macau, New Hebrides, St. Vincent, Dominica, St. Lucia, St. Kitts-Nevis-Anguilla, Belize, Antigua, Cuba, Guadeloupe, Netherlands Antilles, French Guiana, Mauritius, South Africa Afars & Issas, Jordan, Morocco, Lebanon, Yemen, Yemen Democratic Republic, Reunion, Tonga, British Solomon Islands, Philippines, Papua New Guinea, Thailand, Western Samoa, Fiji, Haiti, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Jamaica, Nicaragua, Paraguay.
- (LDC) Developing Countries: All countries in above three categories.
- (SEURO) Southern Europe: Greece, Israel, Portugal, Spain, Turkey, Yugoslavia.
- (NIC) Newly-Industrialized Countries: Greece, Israel, Portugal, Spain, Yugoslavia, Hong Kong, Singapore, South Korea, Brazil, Argentina, Mexico.
- (CSC) Capital-Surplus Countries: Iran, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, United Arab Emirates.
- (CPE) Centrally Planned Economies: Albania, Bulgaria, China, Cuba, Czechoslovakia, German Democratic Republic, Hungary, Democratic Republic of Korea, Mongolia, Poland, Romania, USSR.
- (DC) Industrialized Countries: All other countries.

APPENDIX BDefinition of Capital Goods Categories

The capital goods categories used in this study have a broader and a narrower definition. The first, K-GOOD BROAD, is defined so as to include items labelled as "Capital Goods" in category 41 of U.N. Classification by Broad Economic Categories, Statistical Papers Series M, No. 53, Rev. 1, 1976, as well as certain parts and accessories for capital goods (category 42 in the above document), and transport equipment (categories 51, 52, 53). Since the GATT system uses SITC Rev. 1, whereas the BEC uses Rev. 2, an exact correspondence is impossible; we have attempted to approximate the above 5 categories under SITC Rev. 1, on the basis of the concordance given in the Rev. 2 documents.

As the broader category includes passenger cars (SITC 7321) and other apparent consumer items such as batteries, electric lamps, valves, tubes, and transistors (in SITC 729), and as these items are large in developing countries' exports, we have also defined a narrower category of capital goods, K-GOOD NARROW, excluding these items and a few other less important non-capital items as described below. The one item in 729 that is doubtless capital (729.7: Electron and Proton Accelerators) will not figure largely in trade among developing countries, hence we have not attempted to include it.

K-GOODS BROAD

- 692 (Metal Containers)
- 695 (Tools Used in Hand or Machine)
 - [Less 695.24 (Interchangeable tools)]
- 698.2 (Safes, Strong-rooms, Strong-boxes of base metal)
- 7 (Machinery & Transport Equipment)
 - [Less 717.3 (Sewing Machines)
 - 719.4 (Domestic Appliances, Non-Electric)
 - 724 (Telecommunications Equipment)]
 - but including 724.91 (Electrical Line Telephone and Telegraph Equipment)
 - 724.92 (Microphones, Loudspeakers and Amplifiers)
 - [Less 725 (Domestic Appliances, Electric)]
- 812.1 (Central Heating Apparatus)
- 821.02 (Medical Furniture)
- 861.3 (Binoculars, Microscopes)
 - [Less 861.31 (Binoculars & Refracting Telescopes)]
- 861.7 (Medical Instruments)
- 861.8 (Meters and Counters, Non-Electric)
- 861.9 (Measuring & Scientific Instruments)
- 864.2 (Clocks and Parts)
- 894.5 (Fair-Ground Amusements)
- 895.11 (Filing Cabinets)

K-GOODS NARROW

K-Goods Broad

Less 729 (Batteries, Lamps, Auto Elec. Equip.,
Valves, Tubes, Transistors)

7321 (Passenger Motor Cars)

7328 (Parts for Motor Vehicles)

7329 (Motorcycles)

7331 (Bicycles)

7334 (Invalid Carriages)

Appendix Table A.1: COMMODITY COMPOSITION OF INTER-LDC EXPORTS BY REGION
(Percent)

	1963					1977				
	Sample	S.Europe	Africa	Asia	Lat.America	Sample	S. Europe	Africa	Asia	Lat.America
Food & Beverages	36.8	20.5	56.4	32.6	60.9	32.3	13.8	38.8	27.8	53.6
Non Food Agriculture	16.5	8.4	10.6	19.1	16.6	9.9	6.5	27.7	14.4	3.9
Metals & Minerals	<u>4.0</u>	<u>3.8</u>	<u>10.2</u>	<u>4.1</u>	<u>2.7</u>	<u>2.7</u>	<u>2.4</u>	<u>6.5</u>	<u>3.1</u>	<u>1.8</u>
Non-Fuel Primary	57.4	32.7	77.3	55.9	80.2	44.9	22.7	73.0	45.3	59.3
Manufactures	<u>41.0</u>	<u>66.2</u>	<u>20.7</u>	<u>42.1</u>	<u>19.5</u>	<u>54.4</u>	<u>76.7</u>	<u>25.2</u>	<u>53.5</u>	<u>40.7</u>
All excl. Fuels	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
(Value in \$US Million)	(14,882)	(2,868)	(1,380)	(6,353)	(4,281)	(91,563) ^{a/}	(24,031)	(4,260)	(42,716)	(20,556)
K Goods Broad	9.5	23.9	4.0	7.5	4.5	20.4	31.0	5.0	16.1	20.1
K Goods Narrow	7.7	22.6	3.0	4.9	4.0	15.8	27.6	4.2	10.5	16.0
Fuels	45.0	3.9	11.3	24.4	15.1	22.3	3.0	627.2	14.6	4.5

^{a/} In 1977 the sample excludes seven countries for which data were unavailable (Ghana, Iran, Libya, Mexico, Paraguay, Senegal, Venezuela) and the values shown as well as the percentages in the table are for the remaining 26 countries. These countries accounted for 6 percent of non-fuel exports to the world in 1975, hence the approximate value for all 33 countries in 1977 is estimated to be US\$97,057 (=US\$91563 x 1.06).

Appendix Table A.2b: PERCENTAGE DISTRIBUTION OF EXPORTS OF OIL-EXPORTING COUNTRIES BY DESTINATION AND COMMODITY GROUPS

	DC	CSC	LDC			CPEs	WORLD	(Value in Million US\$)
			TOTAL	of which				
				OILX	NICs			
<u>1963</u>								
Non-fuel Prim.	69.5	.5	13.0	.7	9.2	4.8	88.0	
Food & Bev.	27.7	.4	4.2	.4	2.4	.6	33.0	
Non-food Agr.	21.7	.1	7.2	.2	6.1	3.8	32.7	
Metals & Min.	20.2	NIL	1.7	.2	.7	.4	22.2	
Manufactures	6.8	.1	4.3	.8	1.8	NIL	11.2	
TOTAL NON-FUEL	76.8	.6	17.5	1.6	11.1	4.8	100.0	2791.9
<u>1971</u>								
Non-fuel Prim.	55.8	1.2	14.1	.6	11.3	6.2	77.5	
Food & Agr.	24.9	1.1	4.3	.2	3.3	2.2	32.6	
Non-food Agr.	14.4	.1	7.7	.2	7.1	3.3	25.5	
Metals & Min.	16.6	NIL	2.2	.2	.9	.7	19.5	
Manufactures	13.5	.5	6.3	1.5	2.2	1.2	21.6	
TOTAL NON-FUEL	69.8	1.7	20.8	2.1	13.7	7.4	100.0	4015.8
<u>1977</u>								
Non-fuel Prim.	50.5	1.2	22.0	.8	16.5	5.9	79.7	
Food & Bev.	19.9	.8	8.2	.4	4.4	1.1	30.0	
Non-food Agr.	20.0	.4	12.2	.4	11.1	4.1	36.7	
Metals & Min.	10.7	.1	1.7	.1	1.0	.7	13.1	
Manufactures	13.1	.3	5.5	.6	3.8	.1	19.1	
TOTAL NON-FUEL	64.5	1.6	27.8	1.4	20.4	6.0	100.0	6654.7

Note: Components may not add up to total because of discrepancies in aggregating the different levels of SITC in the GATT systems and rounding. Nil means that the share is less than 0.5 percent.

Appendix Table A.2c: PERCENTAGE DISTRIBUTION OF EXPORTS OF OIL-IMPORTING COUNTRIES BY DESTINATION AND COMMODITY GROUPS

	DC	CSC	LDC			CPEs	WORLD	(Value in Million US\$)
			TOTAL	of which				
				OILX	NICs			
<u>1963</u>								
Non-fuel Prim.	55.1	.7	12.3	3.8	4.9	5.5	74.1	
Food & Bev.	39.2	.6	8.8	3.1	3.0	2.5	51.5	
Non-food Agr.	12.1	.1	2.8	.3	1.6	2.4	17.5	
Metals & Min.	3.8	NIL	.7	.3	.3	.6	5.1	
Manufactures	13.2	.3	10.0	4.4	1.5	1.5	25.3	
TOTAL NON-FUEL	68.5	1.0	22.7	8.4	6.5	7.0	100.0	12089.8
<u>1971</u>								
Non-fuel Prim.	39.1	.8	10.1	1.8	5.1	4.3	54.5	
Food & Agr.	27.4	.7	7.0	1.4	3.1	2.6	37.7	
Non-food Agr.	6.6	.1	2.5	.3	1.6	1.2	10.4	
Metals & Min.	5.1	NIL	.6	.1	.4	.5	6.3	
Manufactures	27.7	1.0	12.0	3.8	3.7	3.5	44.5	
TOTAL NON-FUEL	67.3	1.8	22.4	5.6	8.9	7.8	100.0	24104.1
<u>1977</u>								
Non-fuel Prim.	29.2	1.6	9.9	2.7	4.6	4.3	45.3	
Food & Bev.	22.1	1.4	7.7	2.3	3.4	3.3	34.6	
Non-food Agr.	3.7	.1	1.6	.3	1.0	.5	6.0	
Metals & Min.	3.4	.1	.6	.1	.3	.5	4.6	
Manufactures	32.7	3.9	13.6	4.6	3.6	3.1	53.8	
TOTAL NON-FUEL	62.4	5.5	23.6	7.3	8.2	7.4	100.0	84908.5

Note: Components may not add up to total because of discrepancies in aggregating the different levels of SITC in the GATT systems and rounding. Nil means that the share is less than 0.5 percent.

Appendix Table A.2d: PERCENTAGE DISTRIBUTION OF EXPORTS OF DEVELOPED COUNTRIES BY
DESTINATION AND COMMODITY GROUPS

	DC	CSC	LDC			CPES	WORLD	(Values in Million US\$)
			TOTAL	of which				
				OILX	NICS			
<u>1963</u>								
Non-fuel Prim.	21.2	.2	5.2	1.2	1.8	1.3	28.2	
Food & Bev.	10.5	.2	3.7	.9	1.1	.9	15.4	
Non-food Agr.	6.0	NIL	1.0	.1	.5	.3	7.4	
Metals & Min.	4.8	NIL	.6	.1	.2	.1	5.5	
Manufactures	44.3	1.1	20.1	4.6	6.3	2.1	70.1	
TOTAL NON-FUEL	66.3	1.3	25.8	5.9	8.1	3.5	100.0	94207.1
<u>1971</u>								
Non-fuel Prim.	16.6	.2	3.8	.7	1.6	.7	21.5	
Food & Agr.	8.9	.2	2.6	.6	.9	.4	12.2	
Non-food Agr.	3.5	NIL	.7	.1	.4	.2	4.5	
Metals & Min.	4.2	NIL	.6	.1	.3	.1	4.9	
Manufactures	53.5	1.3	18.6	3.8	7.9	2.7	76.8	
TOTAL NON-FUEL	71.0	1.7	23.1	4.6	9.9	3.5	100.0	232518.0
<u>1977</u>								
Non-fuel Prim.	14.4	.5	3.7	1.0	1.6	.9	19.8	
Food & Bev.	8.2	.4	2.4	.8	.9	.6	11.7	
Non-food Agr.	3.1	NIL	.7	.1	.4	.2	4.1	
Metals & Min.	3.1	.1	.6	.1	.3	.1	4.0	
Manufactures	49.8	4.9	19.6	5.8	7.9	3.7	78.6	
TOTAL NON-FUEL	65.2	5.8	23.9	6.9	9.8	4.7	100.0	663041.0

Note: Components may not add up to total because of discrepancies in aggregating the different levels of SITC in the GATT systems and rounding. Nil means that the share is less than 0.5 percent.

Appendix Table A.2f: PERCENTAGE DISTRIBUTION OF EXPORTS OF ASIA BY
DESTINATION AND COMMODITY GROUPS

	DC	CSC	LDC				WORLD	(Value in Million US\$)
			TOTAL	of which		CPEs		
				OILX	NICs			
<u>1963</u>								
Non-Fuel Prim.	43.7	1.3	17.4	5.6	7.3	6.3	69.3	
Food & Bev.	19.3	1.2	10.2	4.5	2.7	1.7	32.8	
Non-food Agr.	17.5	.1	6.0	.6	4.1	4.1	27.8	
Metals & Min.	6.9	NIL	1.3	.5	.4	.5	8.7	
Manufactures	15.1	.5	13.0	6.4	1.8	.8	29.6	
TOTAL NON-FUEL	59.1	1.8	31.1	12.4	9.3	7.1	100.0	6353.6
<u>1971</u>								
Non-fuel Prim.	31.1	1.6	12.1	2.2	6.8	5.2	50.2	
Food & Agr.	13.3	1.4	6.6	1.7	2.5	2.1	23.4	
Non-food Agr.	10.7	.1	4.7	.4	3.9	2.6	18.3	
Metals & Min.	7.1	.1	.9	.1	.4	.5	8.5	
Manufactures	32.3	1.2	12.2	4.3	3.6	2.6	48.6	
TOTAL NON-FUEL	64.1	2.8	24.7	6.6	10.5	7.8	100.0	11349.7
<u>1977</u>								
Non-fuel Prim.	23.2	1.9	10.7	2.6	5.4	3.4	39.5	
Food & Bev.	12.2	1.6	6.6	2.1	2.3	2.0	22.5	
Non-food Agr.	6.5	.2	3.4	.3	2.6	1.1	11.3	
Metals & Min.	4.5	.1	.7	.1	.4	.3	5.7	
Manufactures	39.9	5.1	12.6	4.0	4.0	1.2	59.1	
TOTAL NON-FUEL	64.1	7.0	23.6	6.7	9.5	4.7	100.0	42716.8

Note: Components may not add up to total because of discrepancies in aggregating the different levels of SITC in the GATT systems and rounding. Nil means that the share is less than 0.5 percent.

Appendix Table A.2g: PERCENTAGE DISTRIBUTION OF EXPORTS OF LATIN AMERICAN COUNTRIES
BY DESTINATION AND COMMODITY GROUPS

	DC	CSC	LDC			CPEs	WORLD	(Value in Million US\$)
			TOTAL	of which				
				OILX	NICs			
<u>1963</u>								
Non-fuel Prim.	77.2	NIL	11.1	1.4	6.5	3.6	92.1	
Food & Bev.	56.3	NIL	8.3	1.2	4.7	1.6	66.4	
Non-food Agr.	12.2	NIL	2.4	.1	1.5	1.7	16.3	
Metals & Min.	8.7	0	.4	NIL	.2	.3	9.4	
Manufactures	4.9	NIL	2.8	.7	.7	.1	7.7	
TOTAL NON-FUEL	82.2	NIL	13.9	2.1	7.1	3.6	100.0	4280.7
<u>1971</u>								
Non-fuel Prim.	61.2	.1	14.9	1.6	9.0	3.1	79.4	
Food & Agr.	47.8	.1	10.8	1.3	6.4	2.4	61.2	
Non-food Agr.	4.7	NIL	3.1	.2	1.9	.6	8.4	
Metals & Min.	8.6	0	1.1	.1	.7	.1	9.8	
Manufactures	10.8	NIL	8.0	2.2	2.9	.3	19.2	
TOTAL NON-FUEL	72.8	.2	23.2	3.8	12.1	3.4	100.0	7030.0
<u>1977</u>								
Non-fuel Prim.	48.5	1.5	18.1	4.1	9.9	7.4	75.5	
Food & Bev.	41.7	1.4	16.4	3.9	8.8	6.6	66.1	
Non-food Agr.	2.6	.1	1.2	.2	.7	.4	4.2	
Metals & Min.	4.2	0	.5	NIL	.4	.4	5.2	
Manufactures	10.9	.2	12.2	4.6	2.5	.7	23.9	
TOTAL NON-FUEL	59.4	1.7	30.3	8.7	12.4	8.0	100.0	20555.7

Note: Components may not add up to total because of discrepancies in aggregating the different levels of SITC in the GATT systems and rounding. Nil means that the share is less than 0.5 percent.

Appendix Table A.2h: PERCENTAGE DISTRIBUTION OF EXPORTS OF AFRICA BY
DESTINATION AND COMMODITY GROUPS

	DC	CSC	LDC			CPEs	WORLD	(Values in Million US\$)
			TOTAL	of which				
				OILX	NICs			
<u>1963</u>								
Non-fuel Prim.	83.9	.3	6.2	1.6	2.3	2.9	94.0	
Food & Bev.	61.3	.3	4.5	1.4	1.7	2.5	69.2	
Non-food Agr.	15.6	NIL	.9	.1	.4	.2	16.6	
Metals & Min.	7.1	0	.8	.2	.3	.2	8.2	
Manufactures	3.4	NIL	1.7	.4	.6	NIL	5.1	
TOTAL NON-FUEL	88.0	.3	8.0	2.0	2.9	3.0	100.0	1379.7
<u>1971</u>								
Non-fuel Prim.	75.6	1.0	7.4	.8	4.4	6.6	90.9	
Food & Agr.	55.9	1.0	3.6	.5	2.0	5.3	66.1	
Non-food Agr.	12.5	NIL	2.5	.2	1.8	.6	15.7	
Metals & Min.	7.2	NIL	1.3	.1	.6	.7	9.2	
Manufactures	3.9	.2	3.7	.7	.3	.3	8.3	
TOTAL NON-FUEL	80.2	1.3	11.3	1.5	4.7	6.9	100.0	1793.3
<u>1977</u>								
Non-fuel Prim.	71.2	.5	9.8	1.0	5.9	3.8	85.4	
Food & Bev.	59.4	.4	5.2	.7	2.6	2.6	67.7	
Non-food Agr.	9.6	.1	3.7	.3	2.9	.8	14.3	
Metals & Min.	2.2	NIL	.9	.1	.4	.4	3.5	
Manufactures	8.9	.1	3.4	.3	.4	.2	13.1	
TOTAL NON-FUEL	81.2	.6	13.4	1.4	6.3	4.0	100.0	4260.5

Note: Components may not add up to total because of discrepancies in aggregating the different levels of SITC in the GATT systems and rounding. Nil means that the share is less than 0.5 percent.

Appendix Table A.3: PRODUCTS FOR WHICH SHARE OF TRADE WITH DEVELOPING COUNTRIES EXCEEDED 50 PERCENT IN 1977

Imports of 33 Sample Countries

011	Meat, Fresh, Chilled or Frozen
042	Rice
051	Fruit, Fresh, and Nuts (not incl. Oil Nuts), Fresh or Dried
052	Dried Fruit (incl. Artificially Dehydrated)
053	Fruit, Preserved and Fruit Preparations
054	Vegetables, Fresh, Frozen or Simply Preserved
061	Sugar and Honey
071	Coffee
072	Cocoa
074	Tea and Maté
075	Spices
081	Feeding-Stuff for Animals (not incl. Unmilled Cereals)
121	Tobacco, Unmanufactured
231	Crude Rubber (incl. Synthetic and Reclaimed)
242	Wood in the Rough or Roughly Squared)
243	Wood, Shaped or Simply Worked
264	Jute
265	Vegetable Fibres, Except Cotton and Jute
431	Animal and Vegetable Oils and Fats, Processed
532	Dyeing and Tanning Extracts, and Synthetic Tanning Materials
631	Veneers, Plywood Boards, 'Improved' or Reconstituted Wood
687	Tin

Exports of 33 Sample Countries

001	Live Animals
022	Milk and Cream
024	Cheese and Curd
042	Rice
044	Maize
046	Meal and Flour of Wheat or of Meslin
048	Cereal Preparations of Flour and Starch of Fruits & Vegetables
091	Margarine and Shortening
122	Tobacco Manufactures
266	Synthetic and Regenerated (Artificial) Fibers
431	Animal and Vegetable Oils and Fats, Processed
553	Perfumery and Cosmetics, Dentifrices (Except Soaps)
554	Soaps, Cleansing and Polishing Preparations
561	Manufactured Fertilizer
571	Explosive and Pyrotechnic Products
581	Plastic Materials, Regenerated Cellulose and Artificial Resins
641	Paper and Paperboard
664	Glass
692	Metal Containers for Storage and Transport
712	Agricultural Machinery
717	Textile and Leather Machinery
718	Machinery for Special Uses
722	Electric Power Machinery
733	Road Vehicles Other Than Motor Vehicles
862	Photographic and Cinematographic Supplies
892	Printed Matter

Appendix Table A.4: ANNUAL GROWTH RATES OF EXPORTS BY DESTINATION AND COMMODITY GROUP

(Uninflated Values)

	DC	CSC	LDC	OILX	NICS	CPES	WORLD
	<u>1963-1971</u>						
Food & Bev.	4.1	12.0	5.9	-1.0	9.4	10.5	4.8
Non-food Ag.	0.5	9.8	6.7	4.3	7.9	0.7	1.9
Met. & Min.	8.0	26.4	7.6	-4.1	11.9	8.8	8.1
Non-fuel Prim.	3.9	12.3	6.2	-0.6	9.0	6.1	4.5
Manufactures	19.1	25.3	11.4	7.2	19.6	21.8	16.7
Total Non-Fuel	7.8	17.4	8.5	3.9	11.9	10.5	8.3
Capital Goods- Narrow	28.1	31.1	15.3	10.8	24.8	15.3	19.5
	<u>1971-1977</u>						
Food & Bev.	17.6	34.6	25.0	32.8	23.5	26.1	20.2
Non-food Ag.	13.0	37.8	15.6	26.3	14.8	9.4	13.5
Met. & Min.	11.2	39.5	16.3	21.4	16.6	21.9	12.9
Non-fuel Prim.	15.8	35.1	21.9	31.2	19.9	21.3	18.0
Manufactures	25.8	53.5	24.8	26.4	22.4	19.4	26.2
Total Non-Fuel	20.2	46.0	23.3	27.9	20.7	20.6	21.7
Capital Goods- Narrow	30.0	56.4	28.1	27.9	33.7	27.5	30.5

Appendix Table A.5: EXPORTS TO TRADE ASSOCIATES AND NEIGHBORS
AS PERCENT OF TOTAL EXPORTS TO LDCs a/

(Selected Countries, 1977)

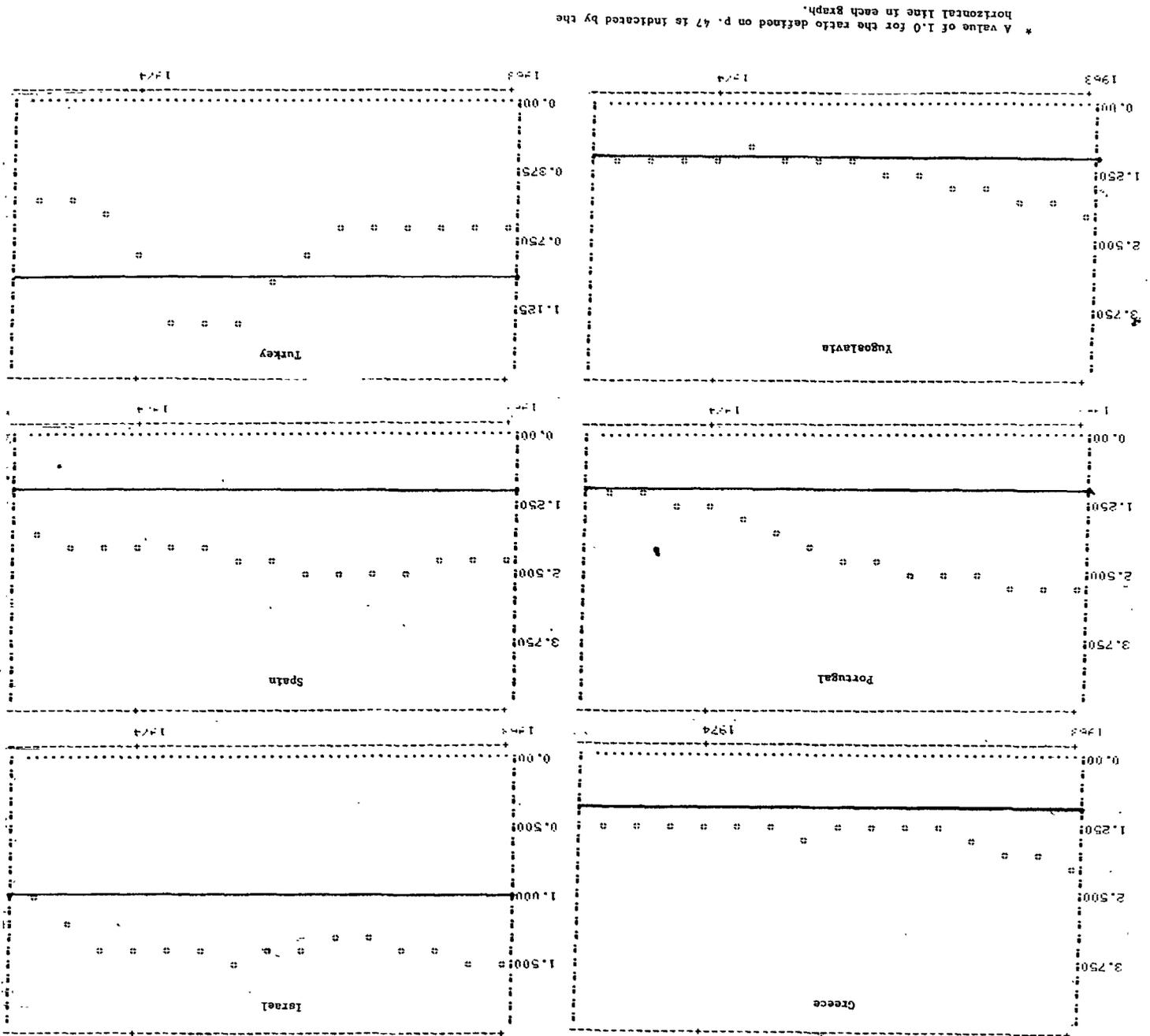
	<u>% of Exports to Trade Associates</u>		<u>% of Exports to Neighbors</u>	
	Total Non-Fuel	Manufactures	Total Non-Fuel	Manufactures
Iran	-	-	22	19
Hong Kong	-	-	23	27
Singapore <u>b/</u>	47 (17)	56 (20)	68 (27)	76 (30)
Malaysia <u>b/</u>	57 (20)	79 (35)	71 (35)	83 (37)
S. Korea	-	-	47	43
Philippines	39	40	72	77
Thailand	47	53	54	61
India	-	-	50	28
Pakistan	-	-	50	46
Sri Lanka	-	-	33	17
<u>(Asia)^{c/}</u>	-	(22)		(50)
Ivory Coast	27	90	29	82
C.A.R.	0	0	20	12
Cameroon	0	0	49	95
Ghana	10	89	9	47
Senegal	26	3	20	3
Nigeria	46	24	41	30
Tunisia	-	-	95	80
<u>(Africa)</u>		(57)		(61)
Greece	-	-	89	78
Portugal	-	-	29	23
Spain	-	-	50	48
Turkey	-	-	63	80
Yugoslavia	-	-	57	47
<u>(Southern Europe)</u>	-	-		(49)
Brazil	40	68	29	37
Argentina	57	68	43	52
Colombia	65	75	58	77
Honduras	50	90	55	93
Mexico	58	58	47	55
Venezuela	40	51	31	52
Paraguay	82	89	10	24
Panama	-	-	68	68
<u>(Latin America)</u>		(67)		(49)

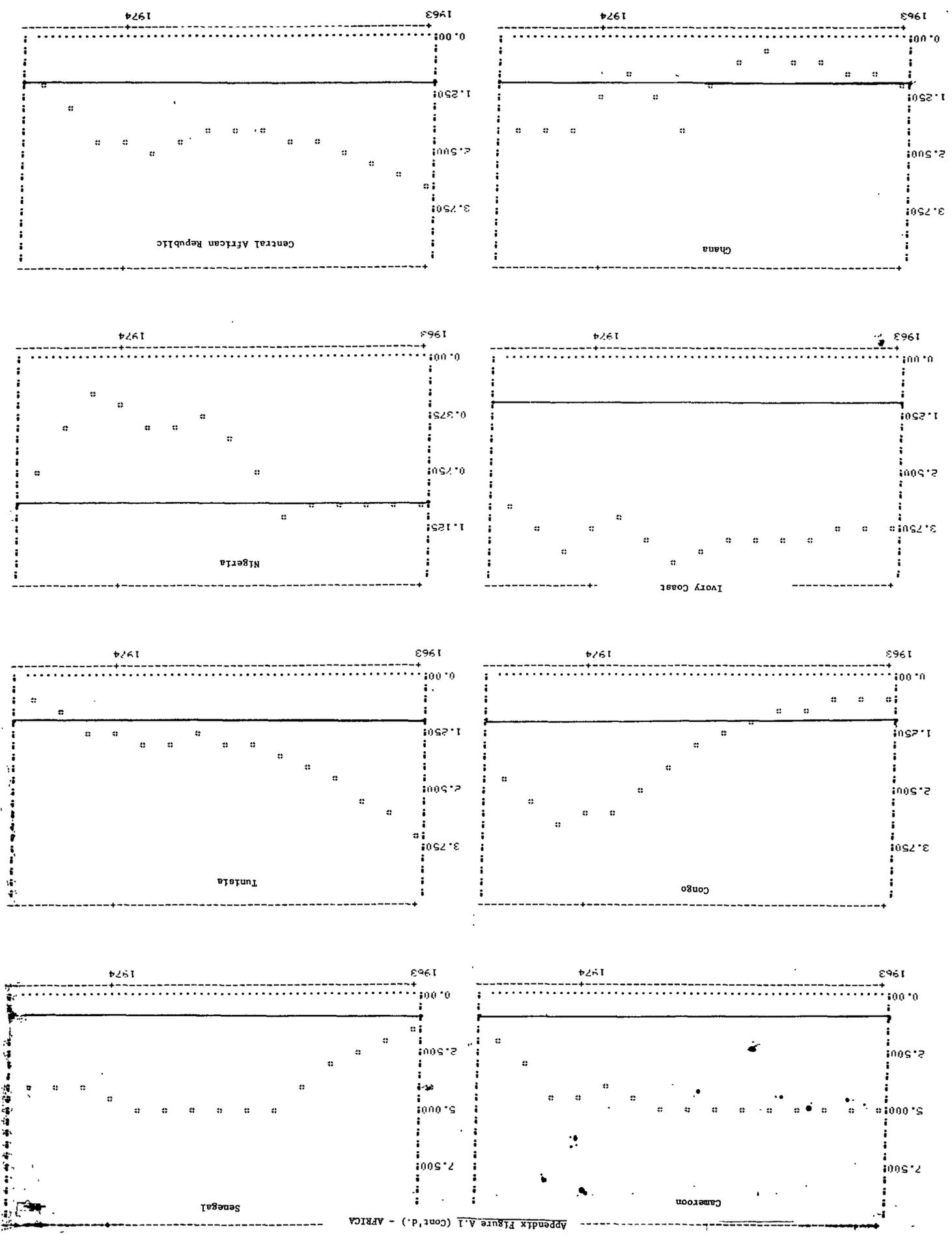
a/ Neighbors are defined as contiguous countries plus those within about 500 miles by sea routes.

b/ Figures in brackets for Singapore and Malaysia exclude trade between these two countries.

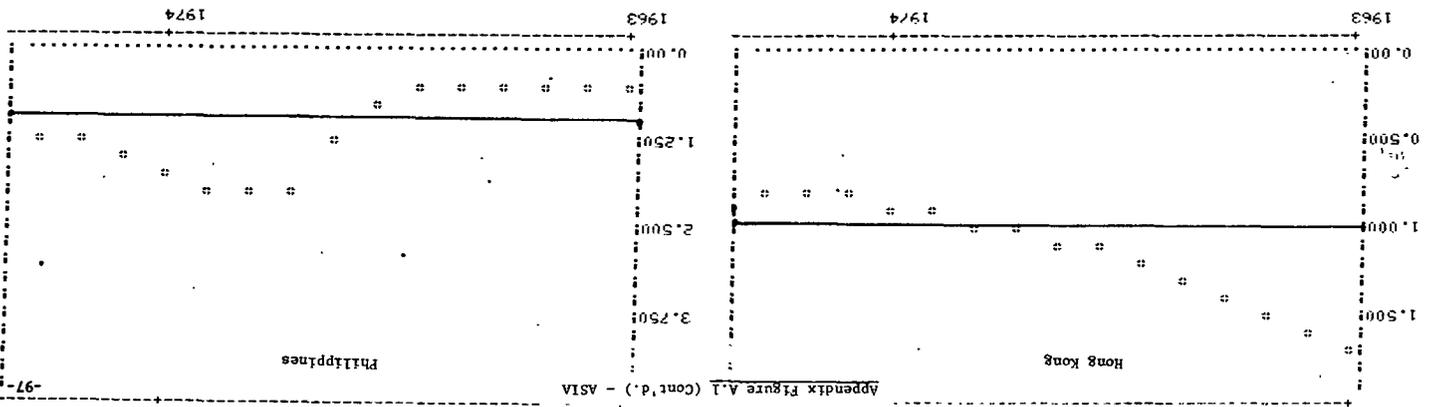
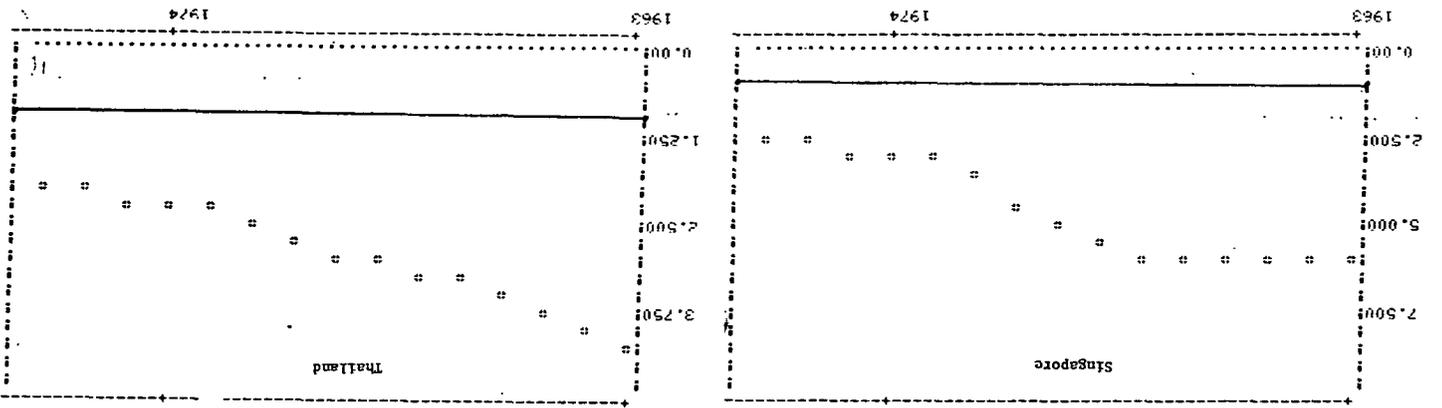
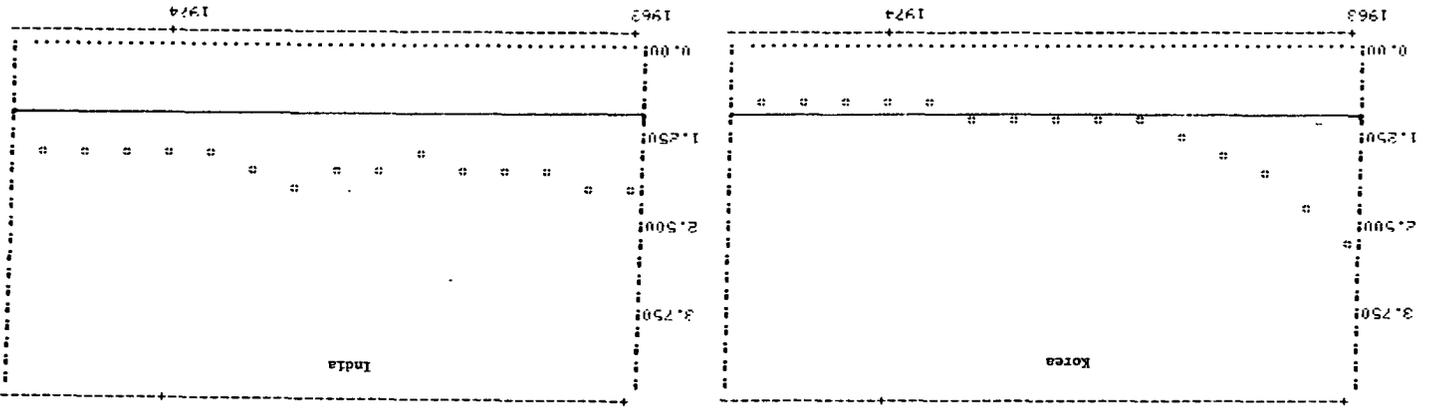
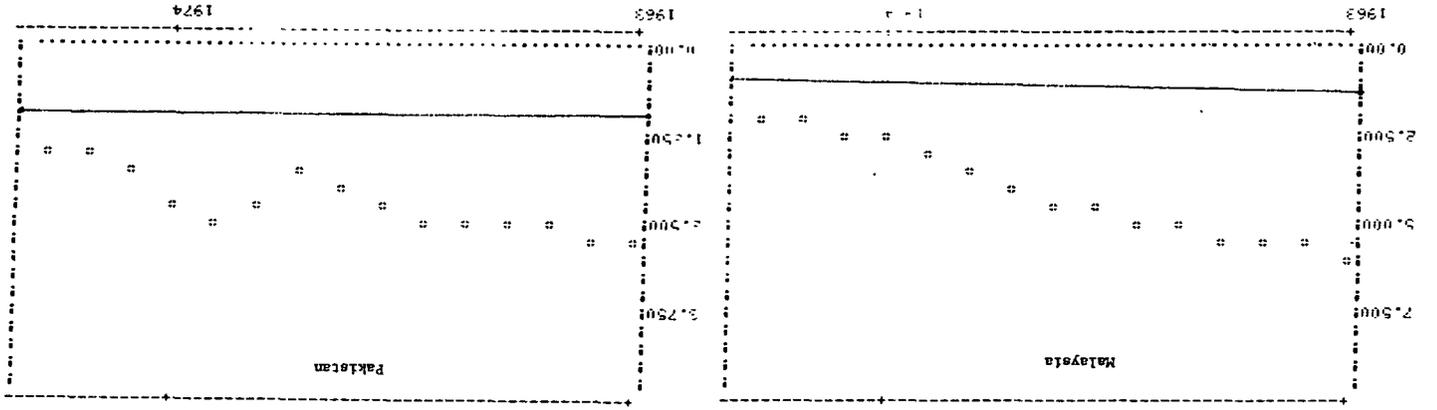
c/ Figures in brackets for continent groups are average percentages, including countries that do not trade with associates.

Southern Europe

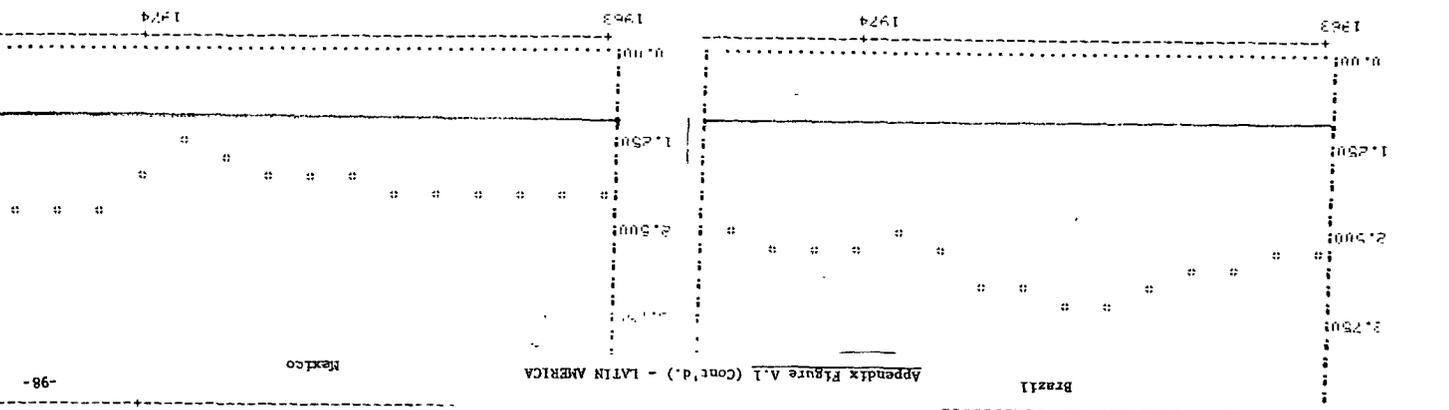
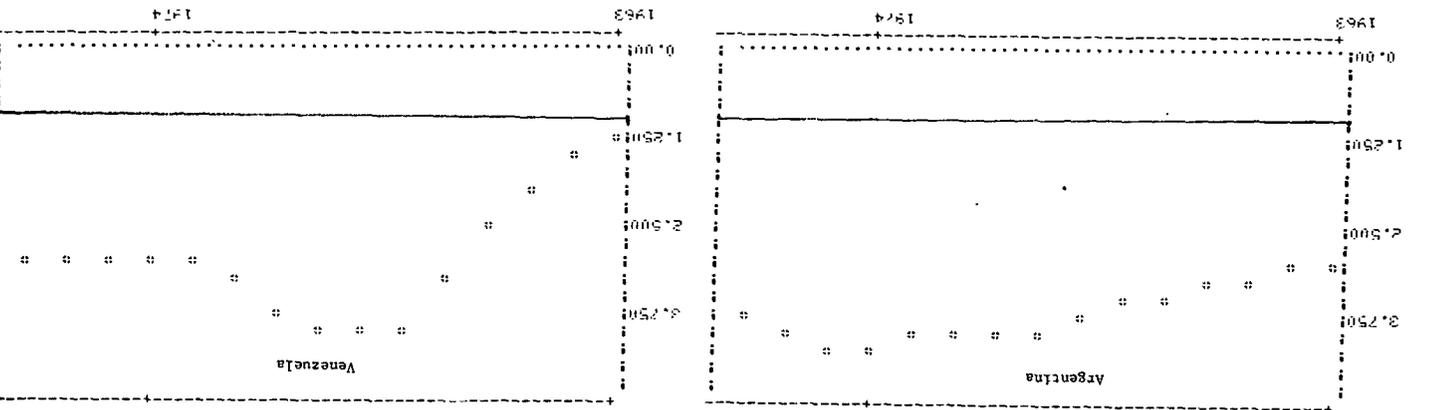
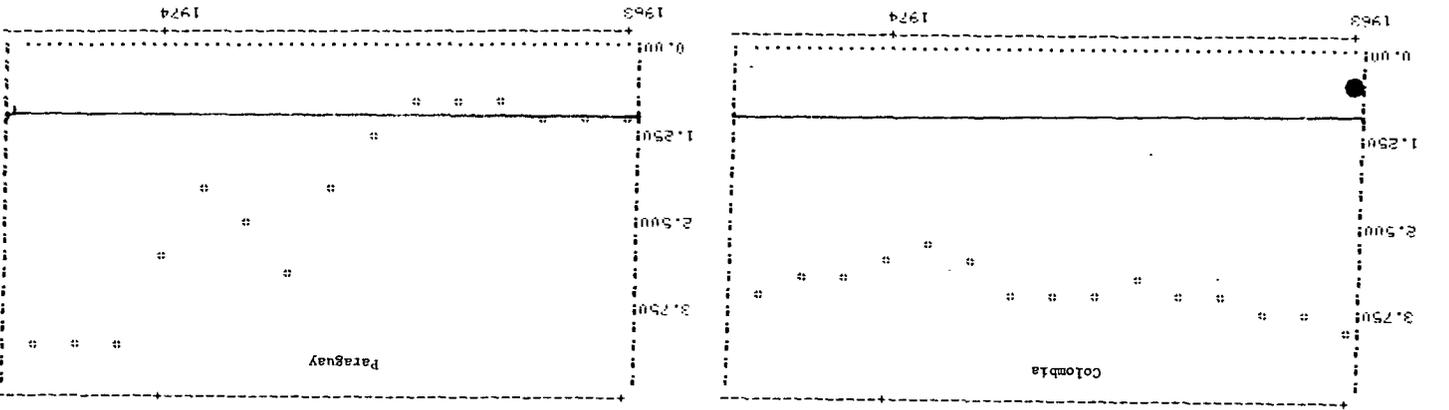
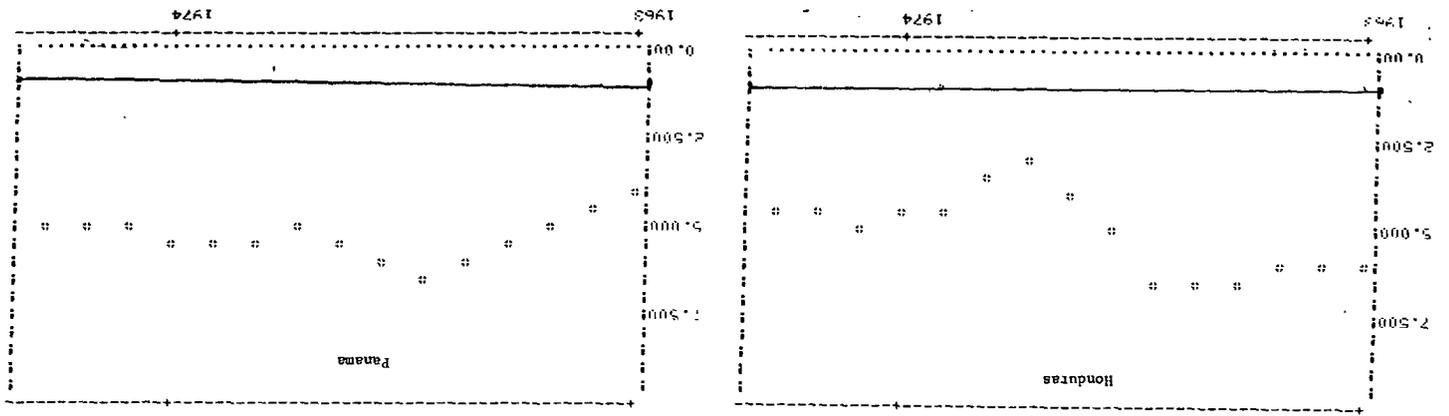




Appendix Figure A.1 (Cont'd.) - AFRICA



Appendix Figure A.1 (Cont'd.) - ASIA



Appendix Figure A.1 (Cont'd.) - LATIN AMERICA

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