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Recent Trends in Trade among Developing Countries

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RECENT TRENDS IN TRADE AMONG DEVELOPING COUNTRIES*

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The paper presents the early results of empirical work on trade among developing countries. The main conclusion is that non-fuel trade among developing countries, excluding capital surplus oil exporters, remained a remarkably stable share of their total trade between 1963 and 1977. This constancy does, however, conceal 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. 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: (i) there is no obvious sign of a bias against trade among developing countries, except whatever effect their own commercial policies may have; (ii) the more inward-looking countries tend to send a higher proportion of their exports to other developing countries and regional integration strengthens this effect; (iii) exports of manufactures to developing countries are much more capital intensive than those to industrialized countries; and (iv) exports to developing country markets may not be the vital first stage for capital goods exports that is sometimes supposed.

1. Introduction

Recent concern that rising protectionism and slower growth of industrial countries will limit exports from developing countries and thus limit growth, has led many to advocate a shift in emphasis toward 'South-South' trade. There is in fact a widespread impression that a large shift has already occurred since the 1973 oil crisis and the 1975 recession. Such a significant

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re-orientation of developing countries' trade and attendant policies raises a number of points bearing closer investigation. What are the policy issues involved? What does trade theory tell us about the direction of trade? What have been the principal trends in trade among developing countries, and what do they reveal about the nature of this trade?

The present paper, focusing largely on the last point, provides a quantitative description of the patterns and changes in the nature of this trade, and then addresses a number of hypotheses about trade among developing countries. Before we turn to these tasks in sections 3 and 4 respectively, we review briefly in section 2 the main policy issues and theoretical arguments that impinge upon trade among developing countries.

2. Policy issues and theory

2.1. 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'. A related view is that of Stewart (1976), who suggests that colonial trade patterns have 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. Such trade 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, and possibly increased protectionism, the effects of which on developing countries can be mitigated, if not escaped altogether, only if they increase trade with one another. There are those who argue that in the 1970s booming trade among developing countries has already performed just the role that Lewis recommends.

Most of the debate on the actual and desired level of trade among developing countries is implicitly concerned with manufactured goods. An important topic that is, therefore, infrequently mentioned is trade in primary commodities [Hughes (1980) is an exception], which seem to offer a valuable opportunity for expanded trade among developing countries. A relevant concept here is that of 'triangular trade' among industrial, newly industrializing and developing countries. Thus, it is suggested that rapid growth and structural change in the newly industrializing countries lead to increases in their demand for the primary goods which are 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. The higher labor intensity is questioned by Amsden (1980), while Stewart (1976) points to the dynamic benefits. Hughes (1980) and Keesing (1978) while apparently accepting the facts of the Krueger argument for the past, suggest that the future potential of advantageous trade among developing countries is far greater.

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 that are dominated by industrialized countries, 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 [Vaitos (1978) and Hughes (1980)] sometimes still argue that these are the best available vehicles for wider liberalization by developing countries, but that care must be taken to avoid costly trade-diverting schemes and to look instead for opportunities for trade-creation. The most likely focus for such arrangements is said to be the newly industrializing countries. 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) and Frank (1978)].

2.2. Trade theory and the direction of developing countries' trade

The most widely used predictive theory of trade, Heckscher-Ohlin, in its customary two-country form does not deal with the issue of the direction of trade, and simply predicts that developing countries as a group will export labor intensive products to industrial countries. This also suggests that there is little reason for trade among developing countries. 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. This extension of Heckscher-Ohlin theory provides only qualitative predictions of how much trade will take place between whom and in what, and 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, 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. Empirical studies which measured capital-labor content of trade-baskets bilaterally, such as that of Tatemoto and Ichimura (1959) for Japan, and those for several developing countries summarized in Krueger (1978), have generally found that exports of developing countries to other developing countries are more capital intensive than exports to industrial countries. Krueger (1978, 1980) attributes this at least in part to the distorting effect of inward-looking policies.

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

Product-cycle theory, which is focused on manufactures, stresses country-specific knowledge, with that knowledge and product location being slowly diffused over the world. This 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, but 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. Unfortunately, it is

in practice 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.

Similarly, *intra-industry trade* may exist among developing countries inasmuch as it is based on the existence of economies of scale, firm-specific knowledge as has been demonstrated at the micro-economic level by Rhee and Westphal (1980).

A view that indicates explicitly that the level of trade among developing countries should be high is that of *Linder*. The argument, which is restricted to manufactures, suggests that 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 *ceteris paribus* among developed countries and a large trade among developing countries, with relatively little trade between developed and developing countries.

In summary, trade theory is not explicit or rigorous on the question of trade among developing countries, rather it provides a number of broad suggestions about the level and characteristics of this trade. We are able to address here only some of these hypotheses. In section 3 we outline the principal facts on this trade asking among other questions whether the share of trade among developing countries has risen sharply in the seventies, or whether it has been low as implied by simpler Heckscher–Ohlin interpretations; how the commodity composition of this trade compares to trade with industrial countries; and whether the demand by the NICs for raw materials has generated a large ‘Ricardian’ trade among developing countries. In section 4 we address specifically the hypothesis of bias in the level of this trade relating this to the Linder view; the effect of inward-looking policies; the capital–labor ratio differences in exports of NICs to different destinations as a test of the extended Heckscher–Ohlin model; and the evolution of trade in capital goods among developing countries as a test of the learning-by-doing arguments.

3. Trends in trade among developing countries

Before we present the results of our empirical analysis, we outline the data sources, assumptions made and definitions used.¹ The empirical basis for the study is the UN trade data system. Because of gaps and in order to observe individual countries while limiting the volume of data, a sample of thirty three developing countries was chosen, shown in the appendix. For 1977, the study’s value of non-fuel exports by the sample to the world was

¹Detailed references as to the data and definitions are given in Havrylyshyn and Wolf (1981).

approximately U.S.\$ 97 billion or 64 percent of a total U.S.\$ 151 billion for all developing countries. For trade among developing countries the coverage is about 60 percent of the total.

The principal country groupings are those used by the Bank, comprising developing countries (LDCs in the tables), developed or industrialized countries (DCs), capital-surplus oil exporters (CSCs), and centrally planned economies (CPEs). 'Total trade' in this paper is trade exclusive of fuels (SITC 3), which means that percent 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: firstly, our lack of confidence in any available deflators and, secondly, the appropriateness of the share measure to a study of the structure of trade. 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, while the correct interpretation of the changes depends in part on what underlies them.

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 countries like Singapore and Hong Kong, but no clear direction for other economies.²

3.1. The direction of developing countries' exports

3.1.1. Overall trends in the share of trade among developing countries

Earlier studies on trade among developing countries [Hughes (1980)] have observed a long-term decline in its share in total developing country exports from about 24 percent in the mid-50s 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

²For example Ghana's re-exports share increased for 1963 to 1973 then decreased again, ranging from 5 to 15 percent.

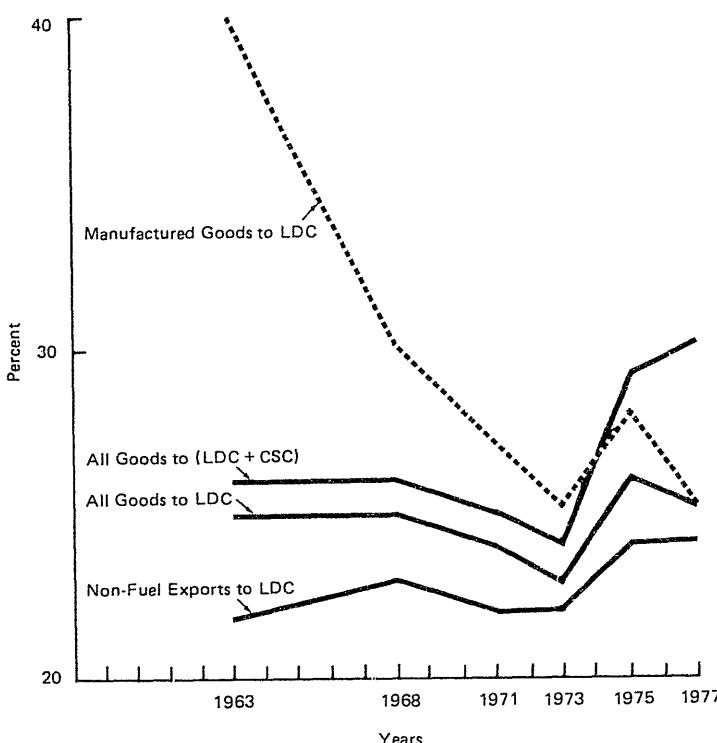


Fig. 1. Percentage share of developing country exports going to developing countries.

pronounced, however, for non-fuel exports to developing countries excluding capital-surplus oil exporters, as fig. 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 reduces it substantially, as the share then increases by only 2 percentage points from a 1973 value of 23 percent to a 1977 value of 25 percent. 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 and 23 percent.³

³The 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*, various years. The differences between the ratios shown here and those in Huges' paper are largely a consequence of differences among the definitions of the group of developing countries and the limited nature of our sample.

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.

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 and then rose somewhat in 1975 to 24 percent where it stayed until 1977 (see table 1). That trade with developing countries again grew faster in 1977 than trade with developed countries,⁴ suggests a sustained trend towards increased shares of trade among developing countries rather than a short-term diversion during 1975.

Table 1
Trade among developing countries as share of their total exports (percentage).^a

	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	11	9	10	11	11	12
Total non-fuel primaries	16	19	18	20	20	23
Manufactures	40	30	27	25	28	25
Total non-fuels	22	23	22	22	24	24
Capital goods	63	55	48	43	49	43

^aSource: computations based on UN trade data tapes, prepared by Systems Division, EPD, World Bank. Unless otherwise indicated, sources for all tables are the same. Definitions of commodity and country-group categories are given in the appendix.

3.1.2. Trends in major commodity subgroups

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 save 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

⁴GATT (1980) confirms 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.

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 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 per annum 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) who experienced the opposite trend.

Table 2

Share of trade among developing countries in total trade by region, 1963-1977, selected years (percentage).

Exporters	Non-fuel merchandise				Manufactures				Capital goods				Narrow
	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	21	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	

Within manufacturing, capital goods are of particular interest. It is sometimes argued⁵ that not only should there be more trade among 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

⁵See for example Pack (1980), Mitra (1979).

countries in capital goods, even narrowly defined,⁶ 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. Furthermore, unlike trade in manufactures as a whole, where the decline had largely occurred by 1971, there continued to be a strong onward movement in the share of developing country markets for capital goods save for 1975. (This trend is, however, again not observed 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 from 16 to 23 percent of all developing country exports of such goods between 1963 and 1977. The share of developing country markets in metals and minerals remained relatively constant while 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 underestimate the growing importance of trade among developing countries in primary goods. This trend is suggestive of 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.⁷

3.1.3. 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 quite systematically by region, as can be seen in table 2. 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

⁶The narrow definition used here excludes SITC 731 (automobiles) and SITC 729 (batteries, lamps, auto electrical equipment, valves, tubes and transistors). These are two very large items of trade that are better defined as consumer goods.

⁷It 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.

closely⁸ while Africa had a mixed experience: For manufactured goods the share of developing country markets declined, while for all non-fuel goods it increased markedly. Latin America's increased trading with developing countries suggests that regional integration schemes may have had a strong impact, as we discuss below.

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 subsample 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.

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 seventies. 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.

3.1.4. Capital-surplus countries as export markets

While a decline in the share of developing country markets in the period 1963–1973 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

⁸The inclusion of some Southern European countries, following the World Bank definition of 'developing', may be questioned. As the values of table 2 make clear, excluding Southern Europe would have little effect on the conclusions: the share of exports to developing countries would be slightly higher, but the trend would remain exactly as described in the previous section.

far too important to be ignored. Hence we conclude this discussion on destination of exports 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. First, these countries are probably more like developing than industrial countries, despite high *per capita* 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.

Table 3

Share of major markets in developing country exports by main commodity group, selected years (percentage).^a

	LDCs			CSCs			DCs		
	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	43	49	43	4	7	9	44	36	38
Total non-fuels	22	24	24	2	5	5	68	62	63

^aNon-food agriculture and metals and 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.

After 1973 these markets boomed (as is evident from table 3), 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.

The experience of developing countries in exports to CSCs varied considerably by region and by specific countries, as is seen in table 4. 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; the same obtains for NICs as a group. By geographic

Table 4

Share of capital-surplus markets for LDC-exports by region and selected LDCs, 1973 and 1977
(percentage, except for column 1).

Exporters	\$ million exports	Total non-fuels		Food and beverages		Manufactures		Capital goods	
		1973	1977	1973	1977	1973	1977	1973	1977
Sample of 33 LDCs	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

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 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 only high 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 linkages to CSC markets. At first glance, however, not one of these factors stands out as the most important. We return to points (1) and (2) below.

3.2. Commodity composition and principal flows

The exports of developing to other developing countries in 1977 were

strikingly similar to those to developed countries (table 5), with only slightly less food (32.3 vs. 35.1 percent) and slightly more manufactures (54.4 vs. 49.9 percent), but there is a decidedly higher weight of capital goods (20.4 vs. 9.4 percent).⁹ 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, while manufactures are much less important.

Table 5
Commodity composition of developing country exports to different markets, 1977
(percentage).

	World	DC's	CSC's	LDC's	OILXs	NIC's
Food and 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 and minerals	5.2	6.3	2.0	2.7	1.5	3.9
Manufactures	51.3	49.9	69.4	54.4	62.4	38.8
Total non-fuels	110.0	100.0	100.0	100.0	100.0	100.0
Capital goods	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

Table 6
Weight of manufactures in exports of the total sample and of the regions
(percentage).

Exporters	1963		1977	
	To LDC's	To DC's	To LDC's	To DC's
Sample of 33 LDCs	41.0	17.1	54.4	49.9
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

Over time manufactures have become increasingly important in trade among developing countries (table 6) although they were already relatively important in 1963, accounting for 41.0 percent of the total.¹⁰ Offsetting

⁹Within manufactures of course the types of goods do differ considerably, as our later discussion of capital-intensity of the goods exported in different directions shows.

¹⁰This might be an overstatement attributable to re-exports, whose relative share has probably declined.

declines occurred in the relative importance of all three categories of primary goods. There was also a substantial increase in the share of capital goods in exports to developing countries, from 7.7 percent in 1963 to 15.8 percent in 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 only rose from 41.0 to 54.4 percent.

By region, one observes some variation in the composition of the export basket (table 6). 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, while 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 same tendency towards increased relative importance for manufactures of developed country markets is evident.

Comparing exports of the developing countries to other developing countries with those to developing from industrialized countries,¹¹ one finds 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. 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 (38.4 percent) as in trade among developing countries (15.8 percent). 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.

In sum, the broad 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 developed countries. While 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.

¹¹The values are taken from Havrylyshyn and Wolf (1981, table 10).

We look now at some 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. 17 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, while the top 10 groups alone accounted for 34 percent of the total. These are (with 1977 export values in million U.S.\$ in parentheses): coffee (1011), crude rubber (988), vehicles (849), rice (793), cotton (749), rough wood (740), ships and boats (708), non-electric machinery and appliances (571), miscellaneous electric machinery and apparatus (560) and sugar (516).

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,¹² 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, motorcycles, and so forth.

This view on trade among developing countries reflects two important roles of developing countries for one another: They are 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.

3.3. Major participants in trade among developing countries

The ten leading developing country exporters to developing country markets (Taiwan excluded) accounted for more than 80 percent of the total non-fuel exports to other developing 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. These are in order of importance of non-fuel exports to developing countries: Brazil, Spain, Singapore, Argentina, Malaysia, South Korea, Thailand, India, Hong Kong and Yugoslavia. This group of principal exporters includes most of the NICs, except Portugal, Mexico, Greece and Israel, though the last three are included in the list for manufactures or capital goods. Apart from the NICs

¹²From appendix table A.3 in Havrylyshyn and Wolf (1981).

only three 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 is outside the top ten in 1977. Indeed, as is to be expected, the non-NIC countries in general lost ground over time 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.

3.4. Trade among developing countries and the newly industrializing countries

It is evident from the preceding section that the major exporters in trade among developing countries are the 'newly industrializing countries'.¹³ NICs were the source of 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.

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 (table 2). 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.

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 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. 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

¹³The NICs are listed in the appendix. Israel and Argentina are added to the OECD list of ten, but Taiwan is excluded as data are not available.

percent of developing countries' exports of these goods, the rise being particularly dramatic for non-food agriculture. Their importance among world markets for manufactured and capital goods did not rise, however.¹⁴

Table 7
Distribution of NIC imports by origin, 1963 and 1977 (percentage).

	1963				1977			
	DCs	All LDCs	NICs	Non-NICs	DCs	All LDCs	NICs	Non-NICs
Food and beverages	50	37	13	24	44	45	22	23
Non-food agriculture	40	58	9	49	44	47	7	40
Metals and minerals	54	43	6	37	60	39	6	33
Non-fuel primaries	47	44	11	33	46	44	15	29
Manufactures	88	5	3	2	84	10	7	3
Total non-fuels	74	19	6	13	72	20	9	11
Capital goods	95	3	2	1	93	5	4	1

If we distinguish NICs from other developing countries, interesting patterns emerge. Table 7 shows the origin of NIC imports. For non-food raw materials, developing countries outside the group were a source for over 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 8 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

Table 8
Shares of exports of manufactures to developing countries in total exports and shares of world income (percentage).^a

	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

^aSources: Trade data in UN system at EPD, World Bank; income data from EPD Data Files.

¹⁴Havrylyshyn and Wolf (1981, table 14).

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, as the share of non-NICs as sources for NIC imports generally declined except in manufactures, where it was in any event very small.

In conclusion, 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.

4. Key hypotheses on trade among developing countries

4.1. 'Bias' in the direction of trade

We have referred above to several arguments that South-South trade is biased downward [Stewart (1976)]. 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 which can determine expected trade values. As this is beyond the scope of the present study, we here investigate the issue of bias by defining it more narrowly as 'market-size 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

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

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 computed 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, while their share in world income was in the order of 16–18 percent. Clearly, shares of exports by developing countries to one another far exceed their shares in world income.

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 the 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, but that this upward bias has declined over time, which also appears to be true for most countries individually.¹⁵

It is clear that from table 8 developing countries exports to one another of manufactures exceed what might be expected on the basis of their weight in the world economy. The share values of table 1 also make clear that this is the case for all non-fuel exports, and since 1973 for non-fuel primary commodities. 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, while 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.

4.2. Developing countries' commercial policies and the direction of their exports

From the point of view of developing countries as exporters the commerical policies of other developing countries as markets are an important pervasive feature of the trading environment. One would expect the effects to be shared by all developing countries, except to the extent that regional or other preferences are important. Despite this common 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 exporter countries themselves.

As we have noted above (section 3.1), Asian shares of exports of manufactures going to developing countries declined more rapidly than for other regions and were below average by 1977. It is on the whole Asian

¹⁵As discussed in Harrylyshyn and Wolf (1981).

Table 9
Shares of exports of manufactures going to developing
countries, 1963, 1975 and 1977.

	1963	1975	1977
Greece	32	21	20
Israel	24	23	18
Portugal	43	19	17
Spain	34	34	32
Turkey	10	10	9
Yugoslavia	32	16	16
<i>Southern Europe</i>	33	25	24
	--	--	--
Cameroon	79	75	31
Congo	6	55	38
Ivory Coast	59	71	58
Ghana	17	35	--
Senegal	26	68	--
Tunisia	53	19	9
Nigeria	15	4	13
Central African Republic	50	36	17
<i>Africa</i>	33	48	26
	--	--	--
Hong Kong	27	14	14
Singapore	97	47	44
Korea	43	14	15
Malaysia	90	39	35
Philippines	7	26	20
Thailand	67	36	33
India	33	27	24
Pakistan	43	31	24
Iran	29	20	--
Sri Lanka	27	14	23
<i>Asia</i>	44	23	21
	--	--	--
Brazil	41	47	43
Argentina	46	71	63
Colombia	61	55	59
Honduras	93	80	78
Mexico	31	38	--
Venezuela	20	52	--
Paraguay	15	72	-
Panama	61	83	86
<i>Latin America</i>	36	50	51
	--	--	--
Sample of 33 LDCs	40	28	25

countries that have implemented more outward-looking trade policies.¹⁶ Furthermore, as table 9 shows, the most successful exporters in Asia tend to

¹⁶For an evaluation of export promotion policies of developing countries see Balassa (1978) and Krueger et al. (1981).

have export shares for manufactures going to developing countries below even the Asian average of 21 percent in 1977. Thus, for Korea it is 15 percent, and Hong Kong 14 percent. Singapore is quite high at 44 percent, however, much of this is unidentifiable re-exports; what is striking about Singapore is the dramatic decline from a 97 percent share in 1963. Similarly, the countries of Southern Europe, which have been relatively outward-looking, had shares in 1977 well below the average with the exception of Spain at 32 percent. Values for Greece, Israel, Portugal and Yugoslavia were respectively 20, 18, 17 and 16 percent.

In contrast, the countries of Latin America had well above average shares of 51 percent for manufactures. Within the region those with somewhat more outward-looking regimes had lower shares, for example, Brazil with 43 percent in 1977. While the higher values in Latin America may be attributable to trade-diversion effects of regional integration schemes, it is unlikely that this accounts for all of the difference. Indeed, a recent overview of integration schemes finds intra-integration trade shares for LAFTA and ASEAN are about equal (11 percent) in 1975. No doubt some part of the difference is a result of import-substitution and the consequent search for developing country markets for spill-over of manufactured goods.

The values for Africa are more difficult to interpret because they fluctuate much more over time than in other countries. However, it is notable that the one country in the sample which has made an effort towards an outward-looking policy, Tunisia, experienced a sharp fall in the share to 9 percent in 1977. Ivory Coast, which has a much more inward-looking policy approach to industrialization, experienced shares well above average of 60–70 percent.

Observed variations by region, functional groups and 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 while the lower and sharply declining shares for much of Asia and the NICs, plus particular country experiences within each continent, suggest that inward vs. outward-looking trade regimes are another.

4.3. 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 above predicts that for 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 which 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').

Table 10
Direct factor content of NIC manufactured exports, 1977.

	Capital-labor ratio \$ worker
Principal developing country exports	53,589
Secondary developing country exports	44,170
<i>All developing country exports</i>	<i>45,347</i>
Secondary developed country exports	39,780
Principal developed country exports	15,075
<i>All developed country exports</i>	<i>25,407</i>
<i>All exports</i>	<i>30,664</i>

Capital-labor ratios (inclusive of human capital) are taken from Balassa (1979), assigned, according to 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 10, 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.

While the overall average capital-labor ratio of NIC exports is about \$30,664, it is substantially higher for exports to developing countries (\$5,342) 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 which 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 contrasts with the finding of Amsden (1980) (who regresses export shares by commodity on capital-labor ratios) that trade among developing countries is not more capital-intensive than their exports to industrialized countries.

4.4. Capital goods trade among developing countries

It is sometimes argued that advanced developing countries (NICs) can benefit other developing countries by developing appropriate capital goods for export to them.¹⁷ 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 be impossible at first, the more accessible developing country markets can offer opportunities to advance up the ladder of technological sophistication.

Table 11
Selected indicators of trends in trade in capital goods^a among developing countries.

	A Country share ^b in LDC trade of k goods			B Exports to LDCs as "% of total			C Weight of capital goods in exports to LDCs			D Weight of capital goods in exports to DC's	
	1963	1971	1977	1963	1971	1977	1963	1971	1977	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	
33 LDCs	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	

^aThe narrow definition is used here.

^bBy country share is meant: percent of 33 LDCs' exports of capital goods to LDCs, accounted for by the specific country.

As we see in table 11, the weight of capital goods in exports to developing countries is indeed far higher than for developed country destinations. Similarly, the change over time is as predicted, as the weight of capital goods

¹⁷ See Stewart (1976), Pack (1980) and Mitra (1979).

in exports to developing countries has increased substantially 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. At the same time, the share of capital goods exports going to developing country markets has declined markedly, as is shown in part B of the table. Three countries in particular 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 export to developing countries, Brazil and Korea have expanded exports to developing country markets far less rapidly than those 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. 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, 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 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.

5. Summary of main findings

5.1. *The main trends in the destination of developing countries' trade*

Contrary to a widespread impression, there has been no large shift towards 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 trends for manufactures and primary commodities.

Manufactures 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' manufactures 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.

The changes in the direction of developing countries' manufactures 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 commodities exports, especially non-food agriculture and food and beverages, shifted towards developing country markets just as manufactures 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 newly industrializing countries. (Moreover, much of the increased exports to newly industrializing

countries came from newly industrializing countries themselves.) In all, an important effect of newly industrializing countries on other developing countries seems to be via their demand for primary goods. In 1977 newly industrializing countries 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 to developing countries' markets grew more rapidly than those 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 towards industrialized countries. Thus, the share of exports of manufactures in developing countries' trade with one another rose from 41 percent of total non-fuel exports in 1963 to 54 percent in 1977 and the one in their exports to the newly industrializing countries 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 their importance in the 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.

5.2. Key hypotheses on trade among developing countries

Four particular findings or hypotheses of the paper deserve to be stressed: (i) the lack of support for the hypothesis that there is a 'bias' against trade between developing countries; (ii) the effect of commercial policy on the direction of developing countries' exports; (iii) the relatively high capital intensity of developing countries' manufactured exports to one another; and (iv) the lack of evidence for an overwhelming role for exports to developing countries in capital goods exports.

5.2.1. Bias against trade among developing countries

The share of exports of manufactures from our sample to developing countries is well in excess of the latter's relative share in the world economy. Though the narrow sense of 'bias' we have used may not justify the conclusion that the hypothesis of bias against trade among developing countries is contradicted, the finding is certainly not supportive of the hypothesis. 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.

5.2.2. Developing countries' commercial policies and the direction of their exports

Variations over time and across countries in the share of exports of manufactures destined for developing countries appears to bear out the view that inward-looking trade policies as well as membership in integration schemes lead to higher values for these shares.

The evidence is quite striking: While the East Asian NICs, for example, have experienced low and declining shares of exports to developing countries in their manufactures 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 spill-over exports to countries with similar demand patterns, on the other hand.

5.2.3. The capital intensity of trade among developing countries

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 prediction, manufactures 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 products half of which go to developing country markets is three and a half times greater than that of products 80 percent of which are destined for the markets of industrialized countries.

5.2.4. Capital goods exports and developing country markets

It is frequently argued that trade among developing countries in capital goods can be particularly 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.

Appendix: Definitions

A.1. Country groups

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

Africa: Cameroon, Congo, Ivory Coast, Ghana, (Central African Empire), 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).

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

OILXs: Oil exporters - Congo, Nigeria, Tunisia, Libya, Iran, Malaysia, Mexico, Venezuela.

OILMs: All other countries in above sample.

DCs: Industrialized countries.

NICs: Greece, Israel, Portugal, Spain, Yugoslavia, Hong Kong, Singapore, South Korea, Brazil, Argentina, Mexico.

CSCs: Iraq, Kuwait, Libya, Qatar, Saudi Arabia, United Arab Emirates.

A.2. Commodity groups

SITC codes

Food and beverages:	0 + 1 + 22 + 4
Non-food agriculture:	2 - 22 - 27 - 28
Metals and minerals:	27 + 28 + 68
Manufactures:	5 + 6 + 7 + 8 - 68
Capital goods:	Based on UN broad economic categories; for details see Harrylyshyn and Wolf (1981).
Fuels:	3

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