

## Open Economies Work Better!

### Did Africa's Protectionist Policies Cause Its Marginalization in World Trade?

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Sub-Saharan Africa has declined in importance in world trade mainly because it has not remained competitive. External protection has not played a major role in this decline; indeed, OECD trade preferences gave Africa an advantage over many exporters. But Africa's own trade barriers are too high. Many studies show that liberal trade policies generally lead to superior growth, an important finding if Africa is to reverse its diminishing role in world trade.



## Summary findings

In the mid-1950s Sub-Saharan Africa accounted for 3.1 percent of global exports. By 1990 this share had fallen to 1.2 percent. The reasons for this decline are important for policymaking.

If external protection in OECD markets was an important contributing factor, the solution to Africa's trade problems requires liberalizing industrial countries' trade barriers. But if Africa's marginalization resulted primarily from inappropriate domestic policies that reduced the region's ability to compete internationally, changes in Africa's own policies are crucial for a reversal of adverse trade trends.

Ng and Yeats find that Africa's extensive loss of competitiveness played a key role in its decline in world trade. If Africa had merely retained its 1962–64 OECD market shares, its exports now would be 75 percent (\$11 billion) higher. In addition, global demand for the region's major exports grew considerably more slowly than demand for most other goods.

In short, Africa's problem was two-pronged: It experienced declining market shares for its major export

products, which, in turn, were of declining relative importance in world trade. And it was unable to diversify its export base. As a result, it is now among the regions mostly highly dependent on relatively few export products and — unlike all other regions — this dependence has increased sharply over the past three decades.

Empirical evidence developed by Ng and Yeats shows that external protection has not played a major role in this decline; indeed, OECD trade preferences gave Africa an advantage over many exporters.

Trade restrictions and domestic policy interventions often create a bias against tradables, especially exports, that prevents the achievement of otherwise attainable growth rates. Import barriers in Africa are far higher than in developing countries with faster export growth, and appear to work against potential export products.

If the region is to reverse its unfavorable export trends, it must adopt trade and structural adjustment policies that help make it competitive and help African exporters capitalize on foreign trade opportunities.

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This paper — a product of the International Trade Division, International Economics Department — is part of a larger effort in the department to identify barriers to developing countries' exports and assist in their removal. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Sarah Lipscomb, room N5-056, telephone 202-473-3718, fax 202-522-1159. Internet address [slipscomb@worldbank.org](mailto:slipscomb@worldbank.org). August 1996. (38 pages)

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#### I. Introduction

United Nations statistics show the relative importance of sub-Saharan Africa in world trade experienced a substantial secular decline over the last three or four decades. Specifically, UNCTAD (1993) reports that sub-Saharan Africa accounted for 3.1 percent of global exports in 1955, yet by 1990 this share had fallen to 1.2 percent -- a decline that implies annual trade losses of approximately \$65 billion. While the empirical evidence relating to Africa's marginalization in global trade is uncontested, less agreement exists about the responsible factors. Official pronouncements by some African governments or spokesmen indicate that protectionism in OECD markets played an important role. However, many development economists and international organizations like the World Bank or International Monetary Fund maintain that inappropriate domestic policies greatly diminished Africa's ability to compete internationally, and have advocated (often unpopular) structural adjustment programs to reverse unfavorable trade and economic trends. Since these alternative explanations for Africa's trade problems have very different corrective policy implications it is important to determine which is basically correct.

This study's objective is to produce and analyze empirical information that should help resolve the issue. Specifically, several trade performance indices, such as those relating to changes in a country's competitive position, or to changes in demand for its exports, are employed to assess the impact of "competition" and "demand" factors on Africa's trade. A third measure -- which relates to export

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diversification -- is also analyzed to determine if Africa's failure to develop new export products contributed to the region's marginalization in world trade. In order to assess the importance of external markets conditions, statistics relating to OECD tariffs and nontariff barriers facing African exports are compiled and their trade restrictive effects assessed.

The study proceeds as follows. Section II discusses the nature of the trade performance indices used in the analysis and then applies these measures to United Nations statistics on African exports. The objective here is to determine how: (i) changes in Africa's ability to compete internationally, and (ii) how changes in the relative demand for the goods Africa exports affected the region's global trade shares. To put this analysis in proper perspective, Africa's trade performance indices are compared to those of other developing countries. Next, Section III employs a World Bank-UNCTAD database on OECD tariffs and nontariff trade barriers to determine how external market conditions affected African exports. Particular attention is given to the effects of the trade preferences Africa receives under the Lome Convention or the Generalized System of Preferences (GSP). Section IV then compiles data on African trade barriers with the objective of determining how their level and structure compare with those in developing countries whose export growth rates are well above average. The objective here is to determine whether Africa's own trade policies contributed to the region's poor trade performance. The study closes with an overall assessment of the findings and a discussion of their implications for policy purposes.

## II. Data and Methodological Issues

The empirical approach used in this study assumes a given country's export growth is the result of three separate factors, two of which relate to changes in demand and competitive conditions.<sup>1</sup> The influence of demand for traditional goods (defined as products exported in a specific base period) is

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<sup>1</sup>A detailed description, and early application, of this procedure can be found in GATT (1966). The analysis also constituted a large part of Kravis (1970) classic analysis of the influence of trade on the 20th century growth of developing countries.

measured by the change in the total value of world trade in these items. In calculating the hypothetical influence of this factor it is assumed that the country maintains its global trade share for each commodity, which causes the influence of changes in demand to be isolated. Specifically, if  $D_{0,j}$  and  $D_{t,j}$  represent world trade in product  $j$ , at time period  $0$  and  $t$  respectively, this factor can be expressed as,

$$(1) \quad \Delta E_{d,i} = \Sigma(s_{0,j})(D_{t,j} - D_{0,j})$$

where  $s_{0,j}$  is the share of the country ( $i$ ) in global exports of product  $j$  in the base period  $0$ , and the summation is over all goods exported. Equation (1), therefore, shows the change in country  $i$ 's exports that would have occurred if only changes in demand took place.

Second, the improvement, or deterioration, in the competitive position of country  $j$  for its traditional exports is measured by the difference between the exports that would have occurred in period  $t$  if the country's initial market share had not changed and those that were in fact realized. This factor ( $E_{c,i}$ ) can be expressed as,

$$(2) \quad \Delta E_{c,i} = \Sigma(s_{t,j} - s_{0,j})(D_{t,j})$$

where  $S_{t,j}$  is the share of the country in global exports of product  $j$  in period  $t$ , and the summation is again over all goods exported. Equation (2), therefore, shows how much exports changed, above or below the level associated with pure demand changes, due to changes in a country's market shares.

In order to assist in the use of these equations for cross-country comparisons, two common indices involving the demand and competitive factors will be employed. The first, involving the demand factor, shows the percentage change in exports that would have occurred due to demand changes,

$$(3) \quad I_{dj} = [\Delta E_{di} \div \Sigma s_{oj} D_{oj}] \cdot 100$$

The second shows how much the competitive factor increased or decreased exports above or below that projected purely on the basis of demand changes,

$$(4) \quad I_{cj} = [([\Sigma s_{ij} D_{ij} - \Sigma s_{oj} D_{oj}] \div \Delta E_{di}) - 1] \cdot 100$$

Finally, allowance must be made for situations where new export products occur between the initial and end periods. This third index, the diversification factor, equals the actual change in exports minus that predicted by the competition and demand factors. Appendix 1 provides a hypothetical numeric example which illustrates the interrelationships between these indices.

Empirical analyses of sub-Saharan Africa's export performance, along the lines suggested by the above equations, is complicated by the very poor quality of trade data reported by these countries.<sup>2</sup> As an alternative to their use, import statistics for OECD countries in the United Nations COMTRADE Database were used as proxies for the unreliable or missing African data. This implies that, instead of being measured in global terms, Africa's export performance is assessed by its trade with industrial countries. However, in defense of this approach it should be noted that United Nations estimates indicate that approximately 82 percent of Africa's exports go to OECD markets -- 60 percent of all exports go

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<sup>2</sup>A World Bank report by Yeats (1990a) documents the very poor quality of United Nations statistics on African trade. Further evidence relating to this point is provided by Rozanski and Yeats (1994). It should be noted that many of the African countries have not provided the United Nations with trade data since the early 1980s so much of the UN information that is available is based on "estimates" of this exchange. It should be noted that a major attraction of the OECD import statistics used in this study is that these data should not be affected by "unrecorded" trade which is known to be a major problem in many African countries' data.



to OECD Europe.<sup>3</sup> Second, the analysis is based on empirical information which is tabulated in terms of the Standard International Trade Classification (SITC - Revision 1) and no account could be taken of any differences in demand or competitive factors that may have occurred within these product groups. Third, in order to provide a more accurate representation of the broad influence of the demand, competition and diversification factors on African exports, the analysis focuses on non-oil goods. Inclusion of crude petroleum (which accounted for 49 percent of SSA exports in 1994, and is largely produced by only four countries (namely, Angola, Congo, Gabon and Nigeria) would have obscured the true picture of what was occurring for all other export products and countries.

Several considerations resulted in the 1962-64 to 1991-93 period being selected for this analysis. First, it was felt desirable to analyze Africa's export performance over as long an interval as possible in order to identify secular trends. The earlier period was chosen since 1962 was the first year COMTRADE records became available. Similarly, at the time this study was initiated several OECD countries had not yet reported their full 1994 trade statistics. Second, a three year average was used for compiling trade data in both the base and end periods in order to reduce the potential influence of any atypical factors which might influence the statistics -- like abnormal commodity prices in a given (single) year. This could be an important consideration for African countries whose exports are heavily concentrated in primary products. Finally, some maintain that Africa's competitive position in OECD markets has been adversely affected by the erosion of their tariff preferences due to MFN tariff cuts or the spread of industrial countries' regional arrangements. In 1962-64 neither the GSP nor the Lome Convention had been implemented (both began in the early 1970s). As such, this study's comparisons are between the early 1960s when Africa did not benefit from tariff concessions and the early 1990s when

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<sup>3</sup>UNCTAD (1993, Table A1) provides estimates of the geographic destination of African exports. This information is updated in each annual issue of the UNCTAD report so time series on the direction of this trade can be compiled back to the early 1950s. Table 3.4 in the document provides detailed information on the destinations of individual African country's exports while Table 3.3 provides similar information on the origin of imports.

Africa received preferences, i.e., between a less and more favorable tariff environment.

### III. Major Factors Influencing Africa's Trade Performance

Table 1 identifies the major products sub-Saharan Africa exported to OECD markets, ranked in terms of their 1962-64 values, it reports the value of shipments of these items, and also shows how the region's competitive position changed over the last three decades. The products listed were the 30 largest three-digit export items in the 1962-64 base period when they accounted for 86 percent of all African shipments (their corresponding share stood at 63 percent in 1991-93). The table also reports Africa's initial share of OECD imports of each good along with the 1962-64 to 1991-93 share change. Finally, the table shows compound annual growth rates for OECD imports of each product, both globally and from sub-Saharan Africa, along with similar information for broad groups like foodstuffs, agricultural materials, or manufactures.

The most striking point evident in Table 1 concerns the general deterioration in Africa's competitive position for these key export items (as reflected in changes in market shares) and its implications. For the 30 products combined, Africa's market share declined by over 11 percentage points (from 20.8 percent to 9.7 percent) which implies annual trade losses for the region of just under \$11 billion. (To put this figure in proper perspective UNCTAD (1993) reports 1991 OECD official development assistance to Sub-Saharan Africa totalled \$10.9 billion). Africa's competitive position for oilseeds and vegetable oils experienced major negative changes as the region's market shares for groundnuts, palm nuts and kernels, palm oil and other fixed vegetable oils all fell by between 47 to almost 80 percentage points. Table 1 also shows that the declining African market shares cut across all major product groups, the decline was -3.1 percentage points overall, but larger reductions occurred for

**Table 1. The Value, Share, and Changes in Sub-Saharan Africa's Major Non-Oil Export Products in OECD Markets: 1962-64 to 1991-93.**

Export Product (SITC)	Values (\$million)		Share of African Exports (%)		Africa's Share of OECD Imports (%)		Growth Rates for Exports from	
	1962-64	1991-93	1962-64	1991-93	1962-64	Share change (points)	Africa	World
Unwrought copper alloys (682.1)	510.8	780.8	14.73	5.16	32.4	-22.5	1.47	5.69
Green or roasted coffee (071.1)	447.9	1,053.0	12.91	6.95	22.7	-7.2	2.99	4.36
Cocoa beans raw or roasted (072.1)	337.3	1,338.0	9.72	8.83	80.1	-9.9	4.87	5.34
Groundnuts green (221.1)	185.5	11.1	5.35	0.07	81.6	-79.9	-9.24	3.68
Non-conifer saw logs (242.3)	176.6	734.2	5.09	4.85	36.1	-16.1	5.04	7.20
Raw cotton (263.1)	161.0	379.5	4.64	2.51	11.4	1.8	3.00	2.48
Unmanufactured tobacco (121.0)	119.9	589.7	3.46	3.89	13.8	-1.6	5.65	6.09
Iron ore (281.3)	115.0	247.3	3.32	1.63	9.5	-6.3	2.68	6.65
Raw beet and cane sugar (061.1)	93.0	415.1	2.68	2.74	10.0	5.8	5.29	3.64
Palm nuts and kernels (221.3)	84.2	2.6	2.43	0.02	92.3	-69.2	-11.28	-6.95
Natural rubber and gums (231.1)	77.8	191.1	2.24	1.26	10.3	-2.7	3.15	4.22
Fresh bananas (051.3)	61.3	202.8	1.77	1.34	14.2	-9.8	4.21	8.52
Palm oil (422.2)	57.5	53.0	1.66	0.35	59.0	-54.1	-0.28	8.63
Vegetable oil residues (081.3)	54.7	68.7	1.58	0.45	10.1	-8.8	0.79	8.06
Agave fibers (265.4)	52.7	15.4	1.52	0.10	33.3	18.5	-4.15	-5.60
Manganese ore (283.7)	44.8	176.2	1.29	1.16	27.8	4.2	4.83	4.33
Groundnut oil (421.4)	39.9	78.2	1.15	0.52	55.3	-19.1	2.35	3.85
Shaped lumber (243.3)	38.6	418.1	1.11	2.76	15.5	-6.7	8.56	10.69
Tea (074.1)	36.7	246.0	1.06	1.62	8.5	13.7	6.78	3.31
Base metals nes (689.5)	36.4	252.4	1.05	1.67	29.2	-16.0	6.90	9.88
Posts and poles (242.9)	32.5	1.4	0.94	0.01	57.5	-56.2	-5.50	3.40
Fixed vegetable oils (422.9)	31.2	6.5	0.90	0.04	48.4	-46.8	-5.26	6.41
Nonindustrial diamonds (667.2)	26.4	1,792.7	0.76	11.84	5.2	4.3	15.65	13.27
Unwrought tin alloys (687.1)	26.0	2.9	0.75	0.02	8.9	-8.5	-7.28	3.45
Inorganic bases (513.6)	25.2	35.3	0.73	0.23	12.1	-11.4	1.17	11.93
Industrial diamonds (275.1)	23.2	23.0	0.67	0.15	21.0	-16.3	-0.03	5.31
Unwrought aluminum alloys (684.1)	21.3	272.0	0.61	1.80	4.1	-1.6	9.18	11.09
Tin ores (283.6)	20.4	6.9	0.59	0.05	19.1	26.2	-3.67	-6.49
Crude asbestos (276.4)	19.3	23.3	0.56	0.15	10.1	0.3	0.65	0.55
Natural gums and resins (292.2)	18.6	76.7	0.54	0.53	28.4	11.8	5.15	3.90
All Above Items	2,975.7	9,495.6	85.79	62.69	20.8	-11.1	4.08	7.37
<b>MAJOR PRODUCT GROUPS</b>								
Foods and feeds	1,775.4	6,044.1	51.19	39.90	8.0	-5.7	4.31	8.84
Agricultural materials	629.8	2,094.9	18.16	13.83	5.6	-2.7	4.23	6.60
Ores, minerals and nonferrous metals	919.5	2,600.5	26.51	17.17	10.1	-7.3	3.65	8.28
Manufactures	135.2	4,230.0	3.90	27.93	0.3	-0.1	12.61	13.50
ALL NONFUEL PRODUCTS	3,468.4	15,146.3	100.00	100.00	3.7	-3.1	5.21	11.83

Source: Computed from UN Comtrade Statistics

ores, minerals and metals (-7.3 percentage points) and foodstuffs (-5.7 points).<sup>4</sup>

Aside from Africa's market share losses for these products, Table 1 shows that they also experienced well below average rates of growth in global trade. World trade in all nonfuel goods increased at a compound annual growth rate of 11.8 percent, yet the corresponding growth rate for the 30 African products was more than six and one-half points lower. *Africa, therefore, suffered from a two pronged problem -- it experienced declining market shares for its major exports which, in turn, were of declining relative importance in world trade.* Both factors contributed to Africa's diminished role in world trade.

A question of considerable interest is which countries were primarily responsible for the erosion of Africa's market shares. Was the erosion broad based in terms of the competition, or was one or two groups of countries primarily responsible? For answers, Table 2 examines the 1962-64 to 1991-93 import share changes that occurred for various groups of countries classified by the World Bank in terms of their income level and region (i.e., OECD members, North Africa, low income Asia, Middle East, etc.). For each of the 30 products these share changes are compared with those for Africa. Perhaps the most surprising finding is that the OECD countries themselves made the largest overall displacement of African exports. Specifically, while Africa's trade shares fell by 11.1 percentage points for these products, OECD shares rose by 9.9 points. Market shares for middle income Asia rose by over 4 percent, while those for other (non-OECD) Europe and central Asia increased by almost the same amount. In contrast, Latin America's trade shares dropped by about 4 points which was about one-third the overall African

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<sup>4</sup>OECD trade barriers probably played a positive role for several products in which Africa increased its market share. For example, the 5.8 percentage point increase for raw sugar (SITC 061.1) was likely the result of increasingly restrictive EEC import controls on other suppliers while African exporters (primarily Mauritius and Reunion which account for over 90 percent of Sub-Saharan exports of raw sugar) had preferential market access and guaranteed market shares under the Lome Convention. In some cases, share changes that initially appeared positive actually have negative implications. For example, most exporters of tin ores (SITC 283.6) developed a capacity to export processed tin products leaving Africa as one of the few remaining suppliers of unprocessed tin. In other words, Africa's market share increase was the result of most other countries shifting to more profitable exports of processed tin and not a real increase in Africa's competitiveness.

**Table 2. Market Share Changes for Competing Countries: Who Displaced Africa in OECD Markets?**

Export Product (SITC)	Change in Country Group's Share of OECD Markets: 1962-64 to 1991-93								
	Sub-Saharan Africa	High Income Countries		Low and Middle Income Countries					
		OECD Countries	non-OECD Countries	Low Income Asia	Middle Income Asia	North Africa	Latin America	Middle East	Other Europe & Asia
Unwrought copper alloys (682.1)	-22.5	-1.4	0.1	0.1	1.1	0.0	4.5	0.4	16.1
Green or roasted coffee (071.1)	-7.2	10.7	0.0	0.6	4.9	0.0	-9.4	-0.1	-0.0
Cocoa beans raw or roasted (072.1)	-9.9	1.4	0.0	-0.2	12.7	-0.0	-3.6	-0.0	0.0
Groundnuts green (221.1)	-79.9	41.1	0.4	29.6	-0.1	-0.4	11.7	-0.2	0.4
Non-conifer saw logs (242.3)	-16.1	10.0	-0.2	-2.7	17.0	0.0	-0.3	-0.1	4.9
Raw cotton (263.1)	1.8	7.6	0.0	3.2	0.1	-4.2	-28.7	-0.3	14.3
Unmanufactured tobacco (121.0)	-1.6	-11.6	0.0	0.2	0.5	-0.1	14.7	-0.1	-1.6
Iron ore (281.3)	-6.3	0.2	-0.2	1.9	0.6	-2.4	12.0	0.0	0.4
Raw beet and cane sugar (061.1)	5.8	3.3	-6.5	-2.0	6.9	0.0	2.5	0.0	-2.9
Palm nuts and kernels (221.3)	-69.2	20.9	-0.0	0.2	38.7	-0.1	11.1	0.2	0.0
Natural rubber and gums (231.1)	-2.7	1.5	-1.4	-3.9	50.3	0.1	-0.2	-0.0	0.0
Fresh bananas (051.3)	-9.8	2.0	-2.5	-0.0	7.2	0.0	14.3	0.0	0.0
Palm oil (422.2)	-54.1	13.7	-0.0	-0.0	56.2	-0.0	0.3	0.0	0.0
Vegetable oil residues (081.3)	-8.8	-12.5	-0.0	-4.5	2.1	-1.1	29.6	-2.0	-1.9
Agave fibers (265.4)	18.5	4.5	-0.1	0.5	-0.1	-0.0	10.7	-0.0	0.6
Manganese ore (283.7)	4.2	18.9	0.0	-11.0	-1.0	-7.8	-15.5	-0.2	-7.2
Groundnut oil (421.4)	-19.1	23.4	0.5	-6.4	0.1	-0.1	2.6	0.0	-0.5
Shaped lumber (243.3)	-6.7	-1.1	0.2	-3.0	20.7	0.0	1.8	0.0	-6.9
Tea (074.1)	13.7	19.1	2.8	-41.8	3.4	0.0	3.6	0.0	0.0
Base metals nes (689.5)	-16.0	13.8	0.4	2.9	-0.5	0.0	-3.4	0.0	0.1
Posts and poles (242.9)	-56.2	20.5	3.2	2.2	0.1	0.1	30.2	0.0	0.0
Fixed vegetable oils (422.9)	-46.8	51.1	2.3	-2.7	2.5	0.0	-7.8	0.2	1.2
Nonindustrial diamonds (667.2)	4.3	-24.6	1.2	11.9	1.8	0.0	0.1	0.4	3.2
Unwrought tin alloys (687.1)	-8.5	-6.5	1.8	8.8	23.3	0.2	24.0	0.0	0.7
Inorganic bases (513.6)	-11.4	-4.0	0.1	2.3	0.1	0.8	5.9	0.2	4.4
Industrial diamonds (275.1)	-16.3	-28.0	0.7	0.8	0.3	-0.1	0.3	-0.0	0.2
Unwrought aluminum alloys (684.1)	-1.6	-23.0	0.5	0.2	1.5	0.8	10.9	1.0	9.0
Tin ores (283.6)	26.2	35.0	0.5	2.5	-29.3	0.0	-32.1	0.0	2.2
Crude asbestos (276.4)	0.3	-5.3	0.0	-0.0	0.1	0.0	2.5	0.0	4.1
Natural gums and resins (292.2)	11.8	17.0	-0.4	-14.2	-3.7	0.6	-6.1	-4.9	-0.0
All Above Items	-11.1	9.9	-0.1	-0.1	4.2	-0.7	-4.0	-0.2	3.6

Source: Computed from United Nations COMTRADE statistics

losses.<sup>5</sup> Perhaps the key point to note from the table is that no other country group has experienced any general loss of competitive position which come close to matching that for Africa.

Table 3 provides another perspective on Africa's trade performance by showing how the demand and competitive factors (i.e., equations 3 and 4) affected the regions total exports, and how Africa's experience compared with that of other developing countries. The table shows average 1962-64 and 1991-93 exports from Africa as well as from other groups of countries.<sup>6</sup> In addition, compound annual growth rates for those products each country group exported in the base period are given (see column 4 - demand growth) as well as the actual export growth rates (column 5) that occurred. Finally, the table gives the percentage change in each groups exports caused by the demand, competition and diversification factors.<sup>7</sup>

The key point reflected in Table 3 is that Sub-Saharan Africa's export performance differed markedly from that of every other country group. With the exception of North Africa, all other developing country groups increased their levels of international competitiveness with the result that actual exports were above (often substantially) levels that would have occurred as a result of demand alone.

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<sup>5</sup>For some products the statistics in Table 2 require clarification. The 10 percentage point increase in OECD countries' market share for coffee is largely due to increased roasting of coffee beans in industrial countries and exporting the processed beans to other OECD members. The four-digit SITC group does not distinguish between green and roasted beans and industrial countries have been shifting from Africa to other suppliers (mainly in Latin America) for the former. For example, in 1992 Germany (the largest OECD exporter) imported \$1.3 billion of what appears to be largely green beans (\$500 million came from Colombia alone) and exported \$378 million of what appear to be largely roasted beans.

<sup>6</sup>Many World Bank studies utilize a classification scheme that groups countries by geographic region and by income level. The groupings have been used in preparing the statistics reported in Table 2. For more information concerning this approach see World Bank (1995, Tables 1 and 2).

<sup>7</sup>A specific example may help explain these numbers. Table 3 indicates the demand factor, which assumes that a group merely retained its 1962-64 market shares, would have increased low income Asia's exports by 779 percent or \$18.1 billion. However, this country group substantially increased its market shares for its major export products -- this further increased the gains from the demand factor by 383 percent to approximately \$87.4 billion. As a result, low income Asia's 1991-93 exports totaled \$89.5 billion -- i.e., the \$2.1 billion trade base plus the \$87.4 billion contribution of the demand and competitive factor. Note that in the case of Africa the competitive factor reduced the regions exports 41.7 percent below the level that would have occurred if only the demand factor were operative.

**Table 3. The Impact of Competition, Demand, and Diversification Factors on Sub-Saharan African and Other Developing Countries' Exports: 1962-64 to 1991-93.**

Country Group*	All Non-Fuel Exports (\$million)		Growth Rate (%)**		Factor Influence on Current Exports (% change)		
	1962-64	1991-93	Demand Growth	Actual Exports	Demand	Competition	Diversification
All Sub-Saharan Africa	3,468	15,146	7.58	5.41	572.1	-41.7	0.5
Low Income Africa	2,757	11,433	7.55	5.21	566.8	-52.1	0.6
Middle Income Africa	711	3,713	7.69	6.08	596.9	-37.9	0.4
Low Income Asia	2,060	89,544	8.49	14.42	778.6	383.4	0.2
Middle Income Asia	1,635	114,976	8.33	16.40	740.1	724.9	0.1
Latin America & Caribbean	6,745	97,673	7.98	10.02	658.5	77.7	0.1
North Africa	1,064	18,490	9.53	10.53	1,058.4	-19.1	--
Middle East	289	4,712	9.34	10.48	1,020.8	36.7	0.1
Other Europe and Asia	2,219	45,323	10.38	11.38	1,386.4	30.7	--
High Income Non-OECD	841	105,364	14.26	18.83	3,979.6	304.7	--
All Non-OECD excluding Sub-Saharan Africa	18,954	521,231	9.68	12.57	1,131.9	115.1	--
OECD Countries	49,560	1,304,252	12.87	12.39	2,762.9	-11.6	--

\*The composition of the country groups are as follows:

Low Income Africa: Benin, Burkina Faso, Burundi, Central African Republic, Chad, Comoros, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Nigeria, Rwanda, Sao Tome and Principe, Sierra Leone, Somalia, Sudan, Tanzania, Togo, Uganda, Zaire, Zambia and Zimbabwe.

Middle Income Africa: Angola, Cameroon, Cape Verde, Congo, Cote d'Ivoire, Namibia, Senegal, Swaziland, Botswana, Mauritius, Mayotte, Reunion, Seychelles.

For the country composition of all other groups see World Bank (1995).

\*\*The demand growth column shows the compound annual growth rate for global exports of the products exported in the base period. The actual exports column shows the actual rate of growth of the countries' exports.

Source: Computed from UN Comtrade statistics.

The increase in middle income Asia's market shares (Republic of Korea, Malaysia and Thailand are major exporters in this group) raised exports more than 700 percent what would have resulted from demand changes, while the corresponding increase for low income Asia (China, India and Pakistan are in this group) was over 380 percent. In contrast, the erosion of sub-Saharan Africa's market shares reduced exports by about 42 percent below what would have occurred if only demand changes occurred. The market share erosion effects were strongest for low income African countries where "potential" exports were reduced by about 52 percent.

A second important point concerning Africa's export experience is that the demand factor was lower than that for every other country group. Low income Asia's factor (778.6) indicates the overall increase in demand for its exports was almost 40 percent greater than for Africa's products, while that for all non-OECD countries was almost twice as great. Table 3, therefore, reinforces the findings from the previous (Table 1) product specific analysis. *Africa has experienced declining market shares for its major export products which were of declining relative importance in international trade.*

Given that some countries in the regional groups exported (at least) small values of almost all three-digit SITC products in 1962-64, the previous analysis may have failed to properly reflect the importance of diversification on export growth.<sup>8</sup> Several indices are available which can provide useful insights concerning this issue. One such measure is the share of total exports that are accounted for by (say) the three largest three-digit SITC products. Two other indices of diversification have been

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<sup>8</sup>The relationship between export diversification, trade and economic growth has been examined in a number of studies including Coppock (1962), Khalaf (1974) or MacBean (1966). It is generally held that diversification has positive implications for exports (particularly for the stability of export earnings) although the supporting empirical evidence is surprisingly mixed. A second related group of studies have also argued that countries have a number of legitimate reasons for wanting to achieve greater diversification in the geographic distribution of their trading partners (Hirschman 1945). Amjadi and Yeats (1995) show that sub-Saharan Africa is far more trade dependent on OECD Europe than is any other group of developing countries. Yeats (1990b) argues that as a result of this dependence, and the associated monopoly power it gives European countries, Africa pays considerably higher than average prices for its exports.



employed to measure export concentration.<sup>9</sup> The first (the global diversification index) is based on the divergence of a country's export trade shares from the product's share in world trade. The second (the Hirschman index) reflects the relative importance of individual products in a country's overall export structure.<sup>10</sup>

Table 4 shows these concentration indices values in the base and end periods for each of the regional groups. As was the case with the competition and demand factors, Africa's experience regarding export diversification differs sharply from that of the other regions. First, while the concentration ratios for the other exporters were either essentially static or declining, those for Africa show the region was becoming increasingly dependent on a relatively smaller number of commodities. Specifically, in 1962-64 the three largest three-digit SITC products accounted for about 36 percent of total exports, yet three decades later this share rose to 62 percent. Both the middle East and North Africa had higher concentration ratios in 1992-94, but neither region showed the marked increase evident in the sub-Saharan African indices. For all non-OECD countries as a group, the three product concentration ratios fell by about five percentage points to a level that was half that for Africa. Each of the other two indices in Table

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<sup>9</sup>UNCTAD (1993 and other issues) utilizes a measure of diversification which is a count of the number of three-digit products that are exported by a country. A practical problem relating to application is that some specific level of exports must be attained before the items is considered an established export. This is due to the fact that minimal exports of some goods may occur due to random or irregular developments when a country has not yet fully established itself in export markets for the product. UNCTAD does not consider a product to be an export item unless it accounts for at least 0.3 percent of total trade).

<sup>10</sup>Specifically, the global diversification index for country  $j$  ( $G_j$ ) is defined as,

$$G_j = [\Sigma | h_{ij} - h_i | ] \div 2$$

where  $h_{ij}$  is the share of commodity  $i$  in the exports of country  $j$ , and  $h_i$  is the share of the commodity in world trade. The Hirschman index for country  $j$  ( $H_j$ ) is measured by,

$$H_j = \sqrt{\Sigma(x_{ij}/X)^2}$$

where  $x_{ij}$  is the value of  $j$ 's exports of commodity  $i$  and  $X$  is  $j$ 's total exports. Both indices range between 0 and 1 with the higher values reflecting increased concentration. The Hirschman index discriminates more finely between countries which are relatively more concentrated in their export structure while the global index discriminates more finely between countries which are relatively more diversified.

**Table 4. Concentration and Diversification Indices for Sub-Saharan Africa and Other Groups of Developing Countries: 1962-64 to 1991-93.**

Country Group	Share of Three Largest Products in Total Exports (%)*		Product Diversification Index**		Product Concentration Index***	
	1962-64	1991-93	1962-64	1991-93	1962-64	1991-93
All Sub-Saharan Africa*	36.5	62.3	0.71	0.77	0.20	0.49
Low Income Africa	39.2	62.9	0.72	0.79	0.22	0.50
Middle Income Africa	43.9	74.3	0.76	0.80	0.24	0.60
Low Income Asia	30.4	34.5	0.61	0.53	0.17	0.20
Middle Income Asia	38.5	30.8	0.74	0.44	0.21	0.15
North Africa	63.0	68.7	0.74	0.73	0.44	0.43
Latin America & Caribbean	38.9	23.8	0.62	0.40	0.22	0.13
Middle East	92.0	91.0	0.84	0.84	0.82	0.79
Other Europe & Central Asia	26.1	25.6	0.50	0.44	0.13	0.12
High Income Non-OECD	41.0	40.8	0.68	0.49	0.25	0.22
All Non-OECD excluding Sub-Saharan Africa	35.5	30.4	0.46	0.34	0.21	0.15
OECD Countries	12.8	23.1	0.17	0.14	0.05	0.11

\* The share of the three largest three-digit SITC products in total exports.

\*\*The diversification index for country j ( $G_j$ ) is defined as,

$$G_j = [\sum |h_{ij} - h_i|] \div 2$$

where  $h_{ij}$  is the share of commodity i in the exports of country j, and  $h_i$  is the share of the commodity in world trade.

\*\*\*The Hirschman index for country j ( $H_j$ ) is measured by,

$$H_j = \sqrt{\sum (x_{ij}/X)^2}$$

where  $x_{ij}$  is the value of j's exports of commodity i and X is j's total exports. Both indices range between 0 and 1 with the higher values reflecting increased concentration. The hirschman index discriminates more finely between countries which are relatively more concentrated in their export structure while the global index discriminates more finely between countries which are relatively more diversified.

Source: Computed from United Nations Series D Trade Records.

4 convey the same message, i.e., Africa is now among the regions which are most highly dependent on a relatively few export products and, unlike all other regions, this trade dependence has *increased sharply* over the last three decades.

#### IV. OECD Protectionism and the External Environment for African Exports

Did external protectionism play a role in the marginalization of Africa in world trade that occurred over the last three decades? Such could be the case if foreign tariffs and nontariff barriers discriminate against Africa specifically, or against the types of products Africa exports. Statistics on OECD trade barriers compiled by UNCTAD can provide direct evidence which bears on this question.<sup>11</sup>

##### A. OECD Tariff Barriers Facing Africa

A problem one faces in attempting to provide answers is the widespread departure from the most-favored-nation (MFN) principle in OECD trade regimes. Recently these departures have taken the form of regional trade preferences such as the North American Free Trade Arrangement (NAFTA), EU-EFTA preferences for trade within and between member states, or EU and EFTA preferences for Eastern Europe and Mediterranean countries.<sup>12</sup> Sub-Saharan Africa receives trade preferences under the OECD's Generalized System of Preference (GSP) schemes, and through the European Union's Lomé

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<sup>11</sup>To assist developing countries in the Uruguay Round the World Bank and UNCTAD developed a database on tariffs and nontariff barriers with related software for analyzing this information. Since the trade barrier data was matched with tariff line level trade statistics it allowed developing countries to analyze the impact of trade barriers on their exports and to help formulate national strategies for negotiating in the Round. The system, called SMART (Software for Market Analysis and Restrictions on Trade) has been installed in over 40 developing countries.

<sup>12</sup>Braga and Yeats (1994, Table 1) estimate that almost 50 percent of world trade in manufactures occurs under preferences. European intra-trade accounts for almost two thirds of this total with the EU and EFTA arrangements being of particular importance. Aside from the intra-trade of countries within these two groups, which is all duty free, a protocol allows for duty free trade in manufactures between EU and EFTA. According to Braga-Yeats tabulations the European arrangements cover a trade value more than *seven times greater* than that of NAFTA intra-trade. See Harmsen and Leidy (1994) for a listing of free trade arrangements that have been notified to the GATT.

Convention.<sup>13</sup> Many GSP schemes differentiate between developing countries in general, and those the United Nations designates as "least developed countries" (LDC) -- even lower preferential tariffs may be extended to the latter.<sup>14</sup>

Figure 1 examines the average margins these tariff preferences provide Sub-Saharan Africa in the EU, United States and Japan combined while Table 5 provides similar information for the three OECD markets separately. The figure and table show the average nominal tariff on African exports to these three markets along with their average preference margin (negative values for the latter show the number of percentage points the African duty was below that on other countries). For example, Angola faced EU tariffs that averaged three-tenths of one percent, a rate 3.2 percentage points below the average for all other exporters of the same products.<sup>15</sup> Similar statistics for Taiwan (China) and the Republic of Korea have again been included for comparison of the relative importance of OECD tariff barriers facing African and Asian countries.

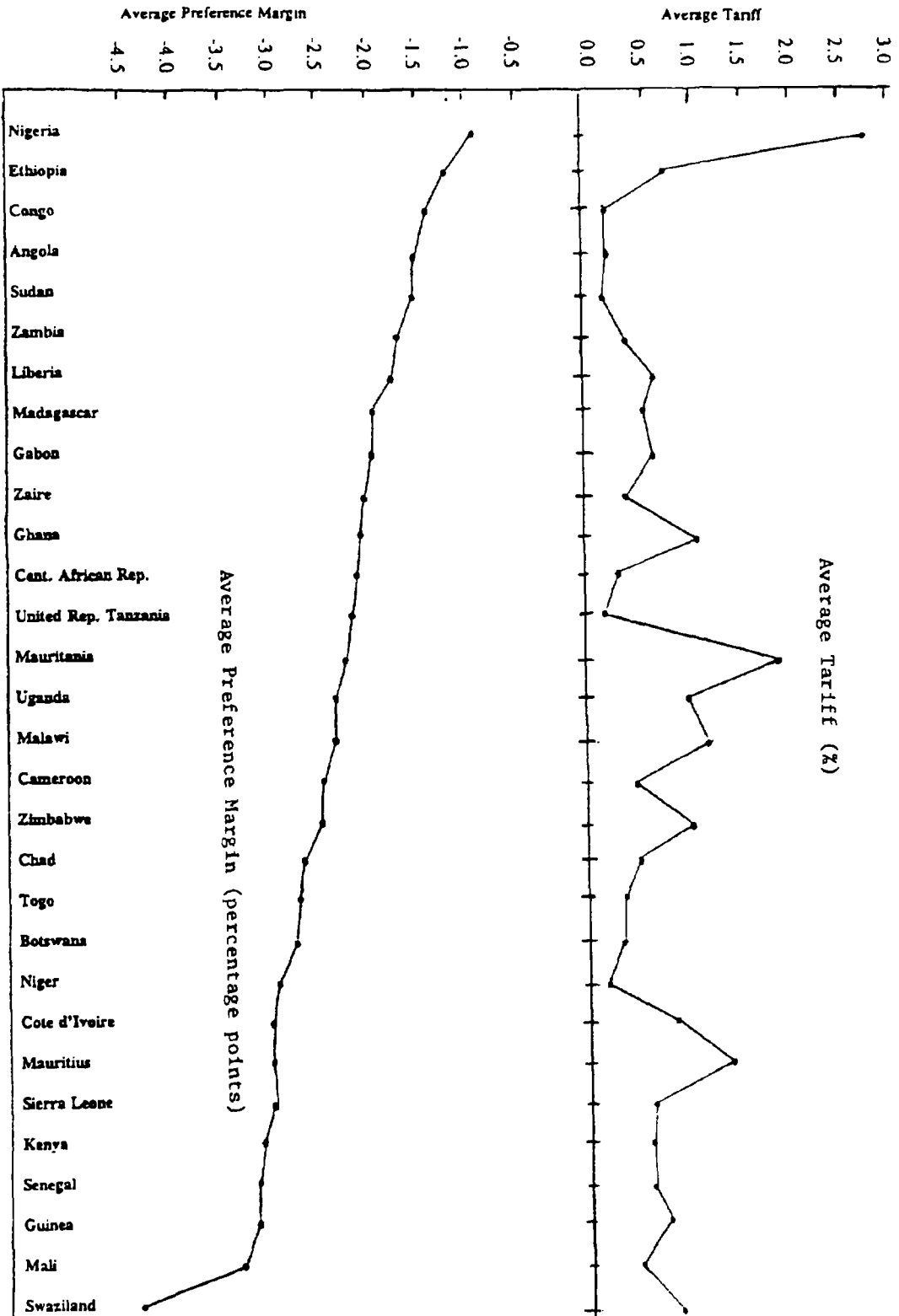
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<sup>13</sup>Several points should be noted concerning GSP preferences. First, some agricultural and manufactured products are exempted and developing countries' exports of these goods encounter MFN tariffs. The exemptions are important as UNCTAD (1994, p. 8) estimates that approximately 51.6 percent of developing countries' exports of products subject to OECD MFN duties are afforded preferences. However, for various reasons, like preference ceilings or rules of origin, only about 50 percent of GSP eligible products actually receive this treatment. This implies that preferential market access only occurs for about one-quarter of developing countries' exports of goods subject to MFN duties. Second, GSP treatment may be withdrawn from specific products once predetermined ceilings are reached. Third, several countries like Singapore, Hong Kong and Taiwan (China) have been "graduated" from GSP schemes (it is unlikely this would happen to a SSA country in the foreseeable future) and no longer receive their tariff preferences. Other developing country suppliers may also have GSP preferences withdrawn if they fail "competitive need" tests, i.e., they are judged able to compete successfully with other suppliers without preferences.

<sup>14</sup>Least developed countries in Africa are: Benin, Botswana, Burkina Faso, Burundi, Cape Verde, Central African Republic, Chad, Comoros, Djibouti, Equatorial Guinea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, Sao Tome and Principe, Sierra Leone, Somalia, Sudan, Togo, Uganda, Tanzania, Zaire and Zambia.

<sup>15</sup>The duties in Table 5 are unweighted averages of pre-Uruguay tariffs on an African country's exports and those facing its competitors. The tariff facing "other" exporters is the average of the MFN, GSP, Least Developed, ACP, or regional preference tariff actually applied to other suppliers of the same items. Some industrial and advanced developing countries may face duties that are considerably higher than suggested by these African preference margins if there are significant imports from other Sub-Saharan countries, or if other preferences (GSP, EFTA-EEC, Least Developed, regional arrangements, etc.) cover a high share of trade.

Figure 1. Pre-Uruguay Round Average Tariffs and Tariff Preferences for Sub-Saharan Africa's Exports to the EU, Japan and United States (%)



**Table 5. The Incidence of EU, Japanese and US Tariffs on Sub-Saharan African Non-Oil Exports**  
(unweighted averages - all figures in percent).

Exporting Country	European Union		Japan		United States	
	African Tariff	Preference Margin*	African Tariff	Preference Margin	African Tariff	Preference Margin
Angola	0.3	-3.2	1.8	0.0	0.1	-0.4
Botswana	0.1	-2.9	0.0	-2.1	3.5	-1.1
Cameroon	0.1	-2.8	0.0	0.0	2.1	-1.1
Central African Rep.	0.2	-2.3	0.0	0.0	9.0	-1.1
Chad	0.2	-2.9	2.5	0.0	1.6	0.0
Congo	0.0	-2.2	0.0	0.0	0.3	-0.6
Cote d'Ivoire	0.3	-3.3	1.2	-0.5	3.3	-2.0
Ethiopia	0.1	-1.9	1.5	-1.3	2.0	0.4
Gabon	0.0	-2.7	0.0	0.0	2.9	0.7
Ghana	0.1	-3.1	2.3	0.0	2.6	-0.9
Guinea	0.0	-2.9	1.8	-1.9	1.9	-1.0
Kenya	0.2	-3.5	2.4	-1.1	3.1	-2.3
Liberia	0.3	-1.9	0.0	-0.3	2.5	-1.1
Madagascar	0.4	-2.7	0.8	-0.2	0.8	-1.0
Malawi	0.1	-3.5	0.0	-0.1	5.4	-0.6
Mali	0.2	-3.5	0.0	-1.6	3.1	-2.2
Mauritania	0.2	-3.9	3.6	-0.4	1.2	-1.6
Mauritius	0.2	-3.4	4.8	-1.1	6.4	-1.8
Niger	0.0	-3.0	0.0	0.0	3.3	-1.6
Nigeria	0.1	-2.6	3.7	-0.8	5.2	0.7
Senegal	0.3	-3.5	3.6	0.1	4.9	-1.2
Sierra Leone	0.0	-4.0	2.6	-0.7	2.3	-0.2
Sudan	0.1	-1.9	0.0	0.0	0.7	-1.0
Swaziland	0.5	-4.9	6.7	-3.0	3.5	-1.9
Togo	0.2	-2.8	9.8	-0.8	0.2	-2.8
Uganda	0.6	-3.0	0.0	0.0	2.1	-0.3
United Rep. Tanzania	0.0	-2.5	1.4	-1.0	0.0	-2.4
Zaire	0.1	-2.4	0.0	-0.5	1.3	-1.1
Zambia	0.5	-2.9	0.0	-0.6	1.4	-1.4
Zimbabwe	0.2	-3.3	1.2	-1.0	4.0	-1.0
<b>MEMO ITEM</b>						
Taiwan, China	7.5	4.0	2.2	-2.2	6.8	0.7
Republic of Korea	7.8	4.2	2.5	-2.2	7.1	0.7

\*These values show the preferential tariff margin (in points) that the African country has over all other suppliers of the same goods. A negative value indicates the country pays a lower average tariff than other exporters. The United States does not extend GSP tariffs to Taiwan (China), the Republic of Korea, or to OPEC members.

Source: World Bank-UNCTAD SMART Database

Table 5 shows the average EU tariff facing Africa typically ranges from zero to five-tenths of a percent with Uganda recording a high of 0.6 percent -- due mostly to a tariff of 18 percent on its exports of fresh grapes. The average preference margins African countries receive are in the two to four percentage point range, and reach a high of 4.9 points for Swaziland.<sup>16</sup> Although the margins vary, all African countries faced average tariffs that are below those paid by other exporters. For some tariff line level products these preferential tariff margins were 20 percentage points or more below prevailing MFN tariffs. This situation is markedly different from that of the Asian NICs. For example, Taiwan (China) paid an average tariff of 7.5 percent on its exports -- a rate that was 4.0 percentage points **higher** than that facing other exporters of the same items. EU tariffs facing Korea average 7.8 percent - 4.2 points higher than that facing other exporters (many of which receive preferences).

The situation in the US and Japan differs in several respects. First, the average pre-Uruguay Round United States and Japanese tariff facing Africa is often higher than in Europe (i.e., an average 9.8 percent duty is paid on Togo's exports to Japan; the tariffs on Mauritius' exports to the United States average 6.4 percent and 9 percent for the Central African Republic) and the margins of preference are often lower. The high Japanese average was largely due to a MFN tariff of 25 percent on Togo's exports of prepared and preserved tomatoes, while the results for Mauritius were due to US MFN tariffs of up to 35 percent on a number of textile and clothing products including men and boys shirts, babies blouses, and sweaters. In several cases where Canada and Israel had a high volume of exports to the US, FTAs resulted in zero tariff being applied to competitors' products with the result that African exporters paid

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<sup>16</sup>Swaziland exports mandarin and other oranges to the European Union and pays a full MFN duty of 4 percent on these shipments -- as it does on exports of a several fresh agricultural products including asparagus, lemons and other citrus. Outside the agricultural sector, Swaziland faces a MFN tariff of 8.5 percent on coal exports to the EU of about \$1.6 million.

a higher-than-average duty.<sup>17</sup> However, aside from these special situations Africa receives considerably more favorable treatment, on average, than other exporters. In other words, there is no evidence from Figure 1 or Table 5 that OECD tariffs caused the general loss of competitive position reflected in Africa's declining market shares. Rather, the evidence suggests that the tariff treatment which was provided enhanced Africa's position *vis-a-vis* other exporters.<sup>18</sup>

### B. Pre-Uruguay Round NTBs Facing Africa

If tariffs were not a factor in Africa's diminishing role in global trade, could OECD countries' nontariff barriers have played a role? Utilizing the World Bank-UNCTAD records, Table 6 shows the share of OECD imports from: (i) other OECD members, (ii) developing countries, and (iii) all sub-Saharan African countries that encounter NTBs.<sup>19</sup> As indicated, industrial countries' nontariff measures affect a notably higher share of imports from non-OECD countries than they do for OECD intra-trade. Approximately 17 percent of developing countries' exports (excluding petroleum) encounter NTBs, while the corresponding share for OECD intra-trade is under 10 percent. An even greater difference in NTB coverage ratios exists for several product groups. Approximately 53 percent of all developing countries'

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<sup>17</sup>Adverse African tariff differentials are largest for Gabon and Nigeria because US customs regulations preclude the extension of GSP treatment to OPEC members. In addition, the United States does not provide GSP treatment for textile and clothing products. As a result, textile and clothing exports from developing countries face a U.S. MFN duty of over 20 percent. Ethiopia previously had GSP treatment withdrawn due to US opposition to the government's national policies.

<sup>18</sup>In a related study, Amjadi and Yeats (1995) show that higher than average nominal freight costs on Africa's exports often more than offset the positive impact of these preferential tariffs. The authors indicate that anti-competitive effects the cargo reservation policies which have been adopted by most African governments probably played a major role in elevating freight costs. Under these reservation schemes a certain share of national trade (often 40 percent) is reserved for the domestic fleet which, in Africa, is often far less efficient than non-flag carriers. The reservation policies shield national carriers from foreign competition so excess prices can be charged.

<sup>19</sup>Laird and Yeats (1990, Chapter 4) describe how this inventory of nontariff measures was constructed and discuss its utility for research and policy studies. In particular, they note that trade coverage ratios are a rough approximation of the importance of NTBs in that they provide no indication of the restrictiveness of the measures. Low coverage ratios, for example, could be associated with highly restrictive NTBs. Laird and Yeats also provide extensive empirical information on the results of NTB inventory studies for industrial countries.



**Table 6. Nontariff Measure Coverage Ratios for OECD Imports from Developed, Developing and Sub-Saharan African Countries**

Product Group (SITC)	1992 Import (\$million)			NTB Coverage Ratios		
	Developed Countries	Developing Countries	Sub-Saharan Africa	Developed Countries	Developing Countries	Sub-Saharan Africa
ALL NON-FUEL ITEMS (0 TO 9-3)	1,900,481	540,783	25,137	9.7	16.6	10.8
All Foods (0+1+22+4)	190,602	79,053	8,022	24.6	17.1	23.4
Food and Live Animals (0)	152,772	69,241	7,044	28.1	18.2	24.5
Oil Seeds and Nuts (22)	5,849	2,509	72	1.3	3.6	6.3
Animal & Vegetable Oils (4)	5,046	2,841	171	5.7	5.7	0.1
Agricultural Materials (2-22-27-28)	53,386	20,303	2,719	1.3	1.3	0.3
Ores and Metals (27+28+67+68)	116,438	42,227	7,521	13.6	10.1	5.7
Ferrous Metals (67)	55,326	11,294	1,097	38.2	35.9	38.6
Non-Ferrous Metals (68)	37,753	15,192	3,677	0.0	0.0	0.0
Mineral Fuels (3)	86,298	164,851	19,654	21.5	16.4	17.4
All Manufactures (5 to 8 - 68)	1,499,800	383,871	6,524	8.5	18.8	5.6
Chemicals (5)	216,755	22,039	769	6.0	3.9	0.2
Other Manufactures (6 to 8-67-68)	1,283,045	361,832	5,755	8.8	19.9	6.4
Leather (61)	5,004	3,749	237	3.0	1.2	0.0
Textile Yarn & Fabric (65)	49,545	19,485	275	4.4	52.5	18.7
Clothing (84)	43,250	79,659	1,019	3.4	62.5	44.8
Footwear (85)	12,142	15,864	17	12.2	32.0	1.3
ALL ITEMS (0 to 9)	1,986,779	705,634	44,791	10.2	16.6	13.1

Note: The following measures were included in the computation of the nontariff barrier coverage ratio: tariff quotas; increased duties, safeguard duties, retaliatory duties and customs surcharges; variable levies and flexible import fees; non-automatic licensing and discretionary licensing; quotas and prohibitions; voluntary export restraints, MFA quotas and other restraints including textile restraint agreements, orderly marketing arrangements; other quantitative restrictions; other restrictions imposed under the Multifiber Arrangement; minimum, reference or other import price controls; voluntary export price restraints; state monopoly of imports; and local content regulations.

Source: World Bank-UNCTAD SMART Data Base. The statistics in this and the tables that follow reflect nontariff barriers which are applied in all OECD markets with the exception of Iceland and Turkey. Developed countries are defined as all OECD members less Turkey while developing countries are all countries less the OECD plus Turkey. The countries included in the sub-Saharan group are listed in Table 1.

textile exports face restrictions while the coverage ratio for clothing is about 63 percent. In contrast, under 5 percent of OECD intra-trade in these goods encounter restrictions (mainly goods shipped from Japan). The Multifiber Arrangement, special textile quotas, bilateral quotas, and voluntary export restraints account for these major differences. Nontariff barrier coverage ratios for developing countries' footwear exports are about 20 points higher than on OECD intra-trade of these goods. "Voluntary" export restraints imposed by the EU and EFTA largely account for these differentials.<sup>20</sup>

Table 6 indicates the profile of nontariff protection against sub-Saharan African exports differs somewhat from other developing countries. First, only about 11 percent of African non-fuel exports face NTBs as opposed to the 17 percent average for all developing countries. The lower NTB coverage ratio is largely accounted for by the fact that most African countries' textile and clothing products are not affected by MFA restrictions. Mauritius is a noteworthy exception with \$116 million, or 88 percent of its textile and clothing exports to the United States, covered by quotas -- similar restrictions were recently placed on Kenya. Only 19 percent of African textile exports face NTBs, as opposed to 53 percent for all developing countries combined, while the African coverage ratio for clothing is about 18 points below the 63 percent developing country average. This pattern is reversed, however, for several food and feed product groups where African countries encounter a higher incidence of NTBs than all developing countries. If coffee were excluded from the tabulations the African food trade coverage ratios would be considerably lower than those for developed and developing countries as a group. Coffee exports are subject to quantitative controls (voluntary export restraints) imposed under the International Coffee Agreement. Special taxes are also applied to coffee imports in several European markets.

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<sup>20</sup>Evidence shows that textile and footwear restrictions have major distorting effects on the exports of developing countries who face the measures. For example, the US International Trade Commission estimates of tariff plus NTB protection for 54 broad classes of textile and clothing products. The estimates range to over 100 percent with the nontariff barrier component of total protection generally being far higher than that of tariffs. It is generally held that levels of nontariff protection against textiles and clothing in Europe are of a similar magnitude to that of the United States,

## V. The Potential for African Structural Adjustment Policies

Considerable evidence shows that trade policy reforms in developing countries can make an important contribution to industrialization and growth (see Nash and Thomas 1991 for a discussion and empirical evidence). Trade restrictions and domestic policy interventions frequently create a bias against exports that prevents the achievement of otherwise attainable rates of growth.<sup>21</sup> Given that the previous analysis showed external barriers do not account for Africa's diminished role in world trade, this raises the question of whether the regions own trade policies were a factor. Although it previously would have been difficult to analyze this question empirically (due to a lack of detailed statistics on African and other developing countries' trade barriers) several initiatives by UNCTAD (1987) and UNCTAD and the World Bank (1995) provide data that allow one to address the issue.<sup>22</sup>

Table 7 utilizes these data sources for cross-country comparisons of trade barriers. The table shows: (i) the average tariff rate; (ii) the average incidence of tariffs and all other import charges; and (iii) the nontariff barrier coverage ratio on imports into Africa and several other country groups or countries. Specifically, the table provides this information for those developing countries that achieved 1962-64 to 1992-94 compound annual growth rates for non-oil exports that were at least one percentage point greater than the corresponding rate of growth in world trade. These "fast growing exporters" trade

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<sup>21</sup>For example, Sachs and Warner (1995) found that countries with open trade policy regimes over 1971-89 had average per-capita GDP growth rates 2.5 percent a year higher than countries with closed ones, and also had a much higher degree of success in shifting their exports from primary commodities to manufactures. The World Bank (1996, Chapter 2) provides extensive empirical information showing that countries with liberal trade regimes experience superior export and economic growth rates.

<sup>22</sup>The UNCTAD (1987) report provides detailed statistics for the mid- to late 1980s (generally down to the five-digit SITC level) on 89 developing countries trade and trade barriers, 24 of which were in sub-Saharan Africa. In recognition of the value of such information for research and policy purposes, the World Bank commissioned UNCTAD (UNCTAD and the World Bank 1995) to compile similar up-to-date information on trade barriers in 19 sub-Saharan countries. This information is maintained in a computerized format in both organizations. The reader should note that the discussion in this section is based on data for African countries for which trade barrier information was available (see Table 8 for a listing). However, there is no reason to believe that the missing countries had protectionist profiles that differed substantially from those that were included.

**Table 7. African Trade Barriers Compared with those in Non-OECD Countries with the Highest Non-Oil Export Growth Rates.**

Exporting Countries*	1992-94 OECD Imports (\$million)	1962-64 to 1992-94 OECD Import Growth Rate (%)**	Exporting Country's Trade Barriers (unweighted averages for tariffs)		
			Tariff Level (%)	All Import Charges (%)	NTB Coverage Ratio
ALL SUB-SAHARAN AFRICA	15,146	5.41	26.8	33.4	34.1
Low Income Africa	11,433	5.21	28.6	34.3	40.6
Middle Income Africa	3,713	6.08	20.9	30.1	12.5
FAST GROWING EXPORTERS	271,157	16.77	8.7	11.1	3.7
of which:					
Republic of Korea	44,839	24.61	11.1	12.3	2.6
Singapore	28,064	22.66	0.4	0.4	0.3
Saudi Arabia	2,239	22.17	12.1	12.1	3.9
Bahrain	471	20.62	7.1	7.1	1.5
Taiwan, China	56,046	20.47	9.7	9.7	11.2
Thailand	25,171	16.74	8.5	8.5	5.5
Qatar	130	16.30	4.2	4.2	1.3
Malaysia	26,336	16.26	12.8	17.6	2.1
Indonesia	17,689	14.97	17.0	20.1	2.7
Jordan	184	14.23	13.8	28.0	12.9
Mexico	42,635	13.83	13.4	16.9	3.9
Hong Kong	26,178	13.65	0.0	0.0	0.5
Kuwait	179	12.93	4.2	4.2	3.5
Papua New Guinea	996	12.50	7.0	14.2	2.6
HIGH-INCOME NON-OECD	105,364	18.83	3.4	3.4	4.0
OECD COUNTRIES***	1,394,252	12.39	6.1	6.1	3.8

\* Several small island countries like St. Pierre, Malta, and the Comoros achieved export growth rates in excess of 13 percent per annum but were excluded from the above list since it was felt their special characteristics did not provide a useful basis for comparisons with other countries. The Peoples Republic of China achieved an annual growth rate of 20.37 but was excluded for two reasons: (i) the US export ban against China in the earlier period which greatly depressed the 1962-64 trade base, and (ii) under its state planning system tariffs and NTBs are not of paramount importance as import controls. This latter point invalidates comparisons with the other countries.

\*\* Over the 1962-64 to 1992-94 period world trade in all non-oil products, measured in current prices, grew at a compound annual rate of 11.57 percent.

\*\*\* The 3.8 percent NTB coverage ratio is reported in Low and Yeats (1995) and reflects the dismantling of OECD countries nontariff barriers achieved in the Uruguay Round.

Source: UNCTAD, *Directory of Import Regimes 1994*, and *Handbook of Trade Control Measures of Developing Countries, 1987* (Geneva: United Nations). Also, GATT/WTO, *Trade Policy Review Mechanism Reports*, various issues and various dates.

expanded at annual rates ranging from 12.5 percent (Papua New Guinea) to almost 25 percent in the case of the Republic of Korea, i.e., from 2.3 to 4.6 times the average African growth rate. Given these countries superior export performance there is an obvious interest in determining whether their protectionist profiles differed markedly from those of sub-Saharan Africa. Finally, the table also provides similar information for two groups of countries whose export growth rates were also well above Africa's, namely, the high income non-OECD countries and the OECD members. The authors will forward detailed information of individual African countries' trade barriers along with those in other developing countries.

It is clearly evident from Table 7 that trade barriers in Africa are far more restrictive than in any of the other groups. Sub-Saharan Africa's tariffs average 26.8 percent which is more than three times higher than those of the fast growing exporters, and are more than four times the OECD average (6.1 percent). A point to note is that OECD countries reduced their tariffs by almost 40 percent in the recent Uruguay Round (to about 3.9 percent) and many of the fast growing exporters also made important concessions on trade barriers. In contrast, Africa's trade barriers were virtually unchanged by the Round. As a result, the current spread between Africa's tariffs (as well as tariffs plus other import charges combined) and those in the other countries has widened.

While there are clearly major differences between the level of tariff protection in Africa and other countries, the divergence in the use of nontariff protection is even sharper. Over one-third of all African imports encounters some form of these restrictions (over 40 percent in the case of the low income African countries) which is almost *nine times higher* the corresponding average (3.9 percent) for the fast growing exporters and *thirteen times greater* than the high income non-OECD countries. It should be noted that there is reason to believe the detrimental impact of these NTBs is considerably greater than that of African tariffs. Specifically, if foreign producers become increasing efficient relative to domestic African suppliers they may be able to erode a tariffs protective effects over time. This would increase African

nationals' access to lower cost foreign products, which would improve living standards and the regions ability to compete in foreign markets. Under nontariff barriers like quotas, however, no such beneficial adjustment is possible as the volume of goods that can be imported are subject to fixed ceilings. Instead of potentially narrowing, as in the case of tariffs, the gap between Africa's standard of living and production efficiency would further worsen relative of other countries.

Table 8 provides another perspective on how African trade barriers adversely influence exports and economic growth. Shown here are average import duties on broad groups of production equipment and other goods that are often employed as key inputs in agricultural or manufacturing activity.<sup>23</sup> These tariffs reflect additional direct costs a potential African exporter (who used these items as inputs) would have to absorb to compete in foreign markets. They may also produce substantial indirect costs to the extent that they inflate output prices of sectors like transport or utilities which generally have strong linkages to the export sector. To help assess the implications of this information the table also shows the average tariff facing these goods in the fast growing developing countries.

The key point that emerges from Table 8 is that African tariffs on these production inputs are often very high and place domestic producers at a substantial direct cost disadvantage *vis-a-vis* the fast growing exporters. For the eleven product groups listed in Table 8 the greatest discrepancy between Africa's tariffs and those of the fast growing exporters occur for the agricultural raw materials and the crude fertilizer groups. In the former, African duties average 23.6 percent which is more than 3.2 times their corresponding level in the fast growing countries while duties for crude fertilizers are 3.6 times higher. This undoubtedly has major adverse implications for Africa's trade and growth prospects.

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<sup>23</sup>An effort was made to match these goods as closely as possible to an "intermediate" good classification scheme developed by Balassa (1965) for analysis of the structure of trade barriers on effective rates of protection. It should be noted that some countries employ "duty drawback" schemes to offset the influence of tariffs on intermediate goods used in the production of exports. Under these programs duties these goods are refunded to the manufacturer after shipment of the final product. However, these systems do not appear to be used extensively, or administered efficiently, in Africa. Also, duty drawback schemes will not offset the cost raising impact on products which constitute indirect inputs for the export industry.

Table 8. The Average Level of African Tariffs on Goods Often Employed as Production Inputs for Export Products (unweighted averages in percent)

Country/Group	Primary Products		Processed Products and Manufactures				Machinery and Equipment Subgroups			Professional Equipment	All Items*
	Agricultural Materials	Crude Fertilizers & Ores	All Chemicals	Manufactured Fertilizers	Iron and Steel	All Machinery & Equipment	Non-Electric Machinery	Electric Machinery	Transport Equipment		
Angola	8.2	9.4	9.2	1.4	8.3	6.6	3.3	17.4	6.2	8.6	11.6
Benin	33.4	35.9	35.8	2.0	40.0	21.2	15.3	28.7	34.1	44.5	37.4
Burkina Faso	49.8	60.8	61.8	0.0	58.8	48.4	45.7	57.8	42.8	52.7	60.8
Burundi	35.4	23.3	22.4	15.0	19.5	21.5	16.4	32.5	24.4	28.4	36.9
Cameroon	25.7	9.6	12.7	10.2	11.7	16.5	12.2	18.4	15.9	17.6	18.8
Central African Rep.	34.0	27.3	29.1	0.0	29.0	25.1	22.9	34.5	17.9	35.5	32.0
Congo	34.0	27.3	29.1	0.0	29.0	25.1	22.9	34.5	17.9	35.5	32.0
Cote d'Ivoire	9.3	18.0	20.7	19.8	20.6	16.4	12.6	25.4	17.4	30.6	23.3
Ethiopia	16.5	13.6	15.5	0.0	5.7	14.3	9.0	27.2	14.6	21.8	29.6
Ghana	30.0	29.7	29.7	25.0	30.0	30.7	29.7	34.4	28.5	30.0	29.6
Guinea	10.0	9.5	9.4	5.0	10.0	7.0	7.0	7.0	7.0	7.4	8.9
Kenya	33.2	27.7	30.5	0.0	23.8	25.9	23.4	32.1	25.4	33.1	43.7
Madagascar	0.9	0.4	0.8	0.0	4.2	7.5	8.2	6.6	6.1	8.4	6.1
Malawi	3.9	0.3	9.7	0.0	9.3	15.0	13.0	23.8	7.8	18.3	15.2
Mauritius	5.8	1.5	13.6	0.0	10.4	31.5	20.1	57.9	34.8	44.5	27.6
Mozambique	16.2	9.5	10.3	4.9	9.6	6.9	18.1	11.5	16.2	15.6	15.6
Nigeria	25.0	16.9	22.2	10.0	19.8	20.1	15.0	31.4	22.7	21.2	32.8
Senegal	39.9	2.1	7.7	0.0	15.0	14.5	14.8	14.6	14.0	14.7	12.3
Sierra Leone	26.8	12.6	23.6	0.0	13.9	21.4	18.4	32.4	14.6	30.5	25.8
Somalia	27.2	3.0	18.7	0.0	9.3	20.5	13.9	40.6	13.5	28.9	30.8
Sudan	50.3	38.3	31.4	10.0	53.5	42.1	36.4	57.6	39.3	59.5	56.6
Tanzania	29.6	22.5	22.2	0.0	24.0	20.7	19.5	27.5	13.7	20.4	29.8
Uganda	26.1	10.0	12.3	10.3	12.7	14.9	11.6	17.8	14.3	16.3	17.1
Zaire	15.9	14.2	11.6	10.0	13.2	14.2	10.7	21.4	17.4	25.2	20.7
Zambia	25.1	17.5	20.3	7.1	16.2	19.6	14.4	33.4	17.4	28.5	29.9
Zimbabwe	1.4	0.2	3.7	0.6	6.1	7.6	4.3	15.4	7.8	10.3	10.1
All Sub-Saharan Africa	23.6	17.0	19.8	5.1	19.4	19.8	16.9	28.5	18.9	26.5	26.7
Low Income Africa	24.5	18.7	21.1	5.0	20.4	20.2	17.6	28.7	19.3	26.8	28.5
Middle Income Africa	20.9	11.3	15.5	5.2	15.8	18.4	14.3	28.0	17.7	25.3	20.9
Fast Growing Exporters	7.3	4.7	8.2	5.3	6.7	10.0	8.4	13.4	9.7	10.2	10.8
Memo Item: Ratio of SSA to Fast Growing Exporters	3.2	3.6	2.4	1.0	2.9	2.0	2.0	2.1	2.0	2.6	2.5

\* Includes all imports and not just the production and intermediate input products.

Agricultural raw materials, like fibers, are key inputs for many labor intensive industries like textiles and clothing where Africa should have a comparative advantage in production and export. The cost raising impact on major inputs must constitute an important disincentive to local production for export.<sup>24</sup> Second, it is widely recognized that one of Africa's most pressing social problems concerns the extent and level of rural poverty in Africa, and how it can be alleviated. Import barriers, like high tariffs and other trade control measures on products like fertilizers, pesticides and other agricultural chemicals clearly have the potential to act as a major constraint to the expansion of agricultural output which could improve living conditions and income in Africa.

## VI. Summary and Policy Implications

In the mid-1950s sub-Saharan Africa accounted for 3.1 percent of global exports, yet by 1990 this share had fallen to 1.2 percent. From a policy perspective the reasons for this decline are of major importance. Some views hold that external protection in OECD markets was an important contributing factor. If so, the solution to Africa's trade problems requires a liberalization of industrial countries' trade barriers. An alternative view is that Africa's marginalization was primarily due to inappropriate domestic policies that reduced the region's ability to compete internationally. If true, changes in Africa's own policies are of paramount importance if the adverse trade trends are to be reversed.

This study finds that a major and extensive loss of Africa's international competitiveness played a key role in its decline in world trade. If Africa had merely retained its 1962-64 OECD market shares its exports now would be 75 percent (\$11 billion) higher. Africa's marginalization in world trade is also

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<sup>24</sup>Empirical evidence clearly shows that structural adjustment and trade policy reforms can make a significant improvement in African countries ability to compete internationally. For example, the World Bank (1994, Box Table 1.3 lists sub-Saharan African countries that implemented trade reforms in the 1980s and early 1990s. As a result of these policy changes the reformers were able to re-coup some of their lost market shares. By 1993 the imports shares of the non-reforming African countries were 64 percent below their 1962-64 levels while those for the reformers were 46 percent lower.



due to the fact that global demand for the region's major exports grew at a considerably slower pace than that for most other goods. *Africa, therefore, suffered from a two pronged problem -- it experienced declining market shares for its major export products which, in turn, were of declining relative importance in world trade.* In addition, an inability to diversify its export base had major adverse consequences. Specifically, Africa is now among the regions which are most highly dependent on a relatively few export products and, unlike all other regions, this trade dependence has *increased sharply* over the last three decades. The implications of this finding are that measures (including more liberal import policies) to broaden the export base should be afforded the highest priority.

Empirical evidence developed in this study provides little support for the proposition that external protection caused Africa's marginalization in global trade. The share of African exports subject to nontariff barriers is far lower than that of other developing countries which launched successful sustained export oriented industrialization drives. In addition, tariff preferences extended under the European Union's Lome Convention, or under OECD members' Generalized System of Preferences, provide Africa with more favorable terms of market access than that for many other exporters of similar products.

Considerable evidence has accumulated which shows a strong positive association exists between national trade policy reform and economic growth. Trade restrictions and domestic policy interventions often create a bias against tradeables, especially exports, that prevents the achievement of otherwise attainable rates of growth. This study shows that import barriers in Africa are far higher than in those developing countries that achieved the highest export growth rates, and appear to be biased against potential export products. The implications of these findings are that, if Africa is to reverse its unfavorable export trends, the region must adopt appropriate trade and structural adjustment policies in order to enhance its international competitiveness, and to permit African exporters to capitalize on opportunities in foreign markets. *In short, the future of African economies will be determined by Africans themselves and not by outsiders.*

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Appendix 1  
A Hypothetical Example of the Export Demand, Competition and Diversification Indices

Assume a given country (j) exported three products (textiles, leather and oilseeds) in 1993, and it only exported the first two items in 1963. The following tabulations indicate the value and share of the country's exports of these goods in the two periods, while the two rightmost columns report global trade values for the products.

Product	Country j Exports (\$million)		Country j's Global Market Share (%)		World Trade (\$ million)	
	1963	1993	1963	1993	1963	1993
Textiles	10	10	10%	5%	100	200
Leather	20	90	5%	15%	400	600
Oilseeds	0	10	0%	20%	50	50
Total	30	110			550	850

In 1963, country j's exports accounted for 10 percent of world textile trade and 5 percent of trade in leather. From 1963 to 1993 global trade in these goods grew from \$100 to \$200 million, and from \$400 to \$600 million respectively. If j just maintained its 1963 export shares expanded world demand would have increased the country's exports by \$20 million annually. That is,

$$\begin{aligned} \text{Demand factor} &= .10\{ \$200 - \$100 \} + .05\{ \$600 - \$400 \} \\ &= \quad \quad \quad +\$20 \end{aligned}$$

However, j's market share for the two products changed. Its share for textiles declined by 5 percentage points while its market share for leather rose from 5 to 15 percent. As a result, country j's textile exports were \$10 million lower than they would have been if the 1963 trade share were maintained and \$60 million higher due to the market share increase for leather. In other words, the competitive factor is,

$$\begin{aligned} \text{Competitive Factor} &= [.05 - .10]\$200 + [.15 - .05]\$600 \\ &= \quad \quad \quad +\$50 \end{aligned}$$

In the above tabulations, the demand factor increased j's exports by \$20 million while the competitive factor resulted in an increase of \$50 million (a combined increase of \$70 million). The difference between this subtotal and actual change in all exports (\$80 less \$70 million) represents the diversification factor (i.e., the amount that new products contributed to export revenues). The diversification increase is due to the development of a new export product (oilseeds) between 1963 and 1993 and equals,

$$\begin{aligned} \text{Diversification Factor} &= \text{Actual Change} - \text{Demand and Competitive Factors} \\ &= (\$110 - \$30) - \$20 - \$50 = \$10 \end{aligned}$$

The above tabulations show that the demand factor alone would have increased country j's exports by 66.7 percent above their 1963 level while the competitive factor resulted in a further increase of 100 percent above the demand induced change.

Table A.1: Average Tariff Levels /a and Total Import Charges /b by Primary Products for 80 Developing Countries (%)

Country /c	All Primary		Food		Agric Raw Matl.		Mineral Ores		Mineral Fuels		Non Fer. Metals	
	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total
Algeria	18.6	20.8	29.1	31.9	9.8	12.7	8.3	9.6	3.2	4.7	13.6	14.6
Angola **	10.6	19.6	14.1	23.1	8.2	17.2	9.4	18.4	7.0	16.0	2.0	11.0
Argentina	5.2	14.0	5.0	17.6	6.5	16.5	3.3	10.5	0.3	1.7	8.9	18.5
Bahamas **	30.3	31.8	27.0	28.5	32.9	34.4	32.9	34.4	31.2	32.7	34.4	35.9
Bahrain **	7.5	7.6	10.2	10.4	5.3	5.3	4.8	4.8	5.0	5.0	5.3	5.3
Bangladesh	73.3	75.3	83.2	85.2	74.2	76.2	45.2	47.2	55.1	57.1	74.3	76.3
Benin **	35.0	46.8	36.7	48.4	33.4	45.3	35.9	47.8	19.1	30.4	39.8	51.8
Bolivia	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
Brazil	7.2	9.4	11.1	13.3	5.9	8.1	0.2	2.4	1.1	3.3	5.4	7.6
Burkina Faso **	68.6	84.7	83.3	100.6	49.8	65.5	60.8	76.9	53.2	63.3	63.5	80.0
Burundi	50.5	51.5	75.1	76.1	35.4	36.4	23.3	24.3	16.2	17.2	25.9	26.9
Cameroon **	28.9	34.7	26.1	31.2	34.0	39.0	27.3	30.1	23.7	31.0	35.6	48.3
Centr Afr Rep **	28.9	33.9	26.1	32.4	34.0	36.1	27.3	30.0	23.7	26.2	35.6	45.6
Chile	11.0	20.5	11.0	20.9	11.0	19.9	11.0	19.7	11.0	19.0	11.0	21.8
China	31.7	31.7	44.8	44.8	26.0	26.0	15.6	15.6	15.8	15.8	15.8	15.8
Colombia	11.3	11.3	15.4	15.4	9.0	9.0	5.3	5.3	7.5	7.5	7.7	7.7
Congo **	28.9	29.5	26.1	26.9	34.0	34.1	27.3	27.3	23.7	26.4	35.6	35.6
Costa Rica **	20.4	64.3	33.4	80.0	9.8	43.2	6.7	90.3	12.6	64.0	7.0	7.0
Cote d'Ivoire **	18.8	19.7	23.2	24.0	9.3	10.6	18.0	18.9	17.5	18.6	20.9	21.5
Cyprus **	10.3	16.3	16.5	22.5	7.9	13.9	1.9	7.9	1.0	7.0	6.1	12.1
Ecuador	8.5	10.5	12.7	14.7	5.9	7.9	2.5	4.5	4.7	6.7	4.6	6.6
Egypt	50.4	50.4	98.6	98.6	9.9	9.9	8.0	8.0	7.4	7.4	11.5	11.5
El Salvador **	19.9	19.9	32.9	32.9	9.8	9.8	6.6	6.6	9.5	9.5	7.0	7.0
Ethiopia	26.8	28.5	39.8	41.4	16.5	18.2	13.6	15.3	5.3	7.0	18.8	20.5
Ghana **	28.1	32.4	26.0	26.0	30.0	48.0	29.7	29.7	29.9	29.9	30.0	30.0
Guatemala **	20.9	20.9	33.3	33.3	9.8	9.8	6.6	6.6	9.2	9.2	7.0	7.0
Guinea **	9.2	9.2	9.0	9.0	10.0	10.0	9.5	9.5	10.0	10.0	7.9	7.9
Guyana **	11.6	11.7	18.9	19.0	4.2	4.3	4.3	4.4	10.3	10.4	6.9	7.0
Haiti **	14.5	19.8	21.6	26.4	8.5	15.3	7.2	12.8	4.9	5.1	11.4	17.7
Hong Kong	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
India	44.9	83.8	45.1	85.4	42.6	80.5	49.9	88.9	26.1	50.1	55.6	100.2
Indonesia	13.6	17.1	20.8	25.2	8.9	11.4	4.3	6.8	4.9	7.9	9.0	11.7
Iran **	16.8	81.5	21.4	119.3	16.7	57.2	10.0	41.5	7.9	27.5	10.2	51.8
Jamaica **	11.6	11.8	18.9	19.2	4.2	4.6	4.3	4.3	10.3	10.3	6.9	6.9
Jordan **	7.2	19.6	11.2	25.2	2.9	13.2	3.8	14.1	4.8	16.1	5.9	19.9
Kenya	46.3	47.3	64.6	65.6	33.2	34.2	27.7	28.7	21.6	22.6	29.3	30.3
Korea	12.9	14.5	20.9	21.7	6.5	6.5	3.2	4.3	5.5	20.2	8.3	8.3
Kuwait	2.9	2.9	1.5	1.5	3.9	3.9	4.1	4.1	4.4	4.4	3.8	3.8
Libya **	14.2	29.5	17.2	31.5	15.4	31.9	9.3	25.2	9.1	25.0	8.2	24.0
Madagascar	3.7	38.9	6.8	51.1	0.9	36.2	0.4	19.9	0.1	26.4	2.6	22.2
Malawi	10.6	10.6	17.8	17.8	3.9	3.9	0.3	0.3	2.9	2.9	9.6	9.6
Malaysia	7.3	8.7	9.4	11.5	6.6	7.3	3.5	3.8	5.0	5.6	7.2	9.5
Mauritius	16.6	51.7	27.7	65.8	5.8	38.7	1.5	33.9	25.7	54.9	4.8	38.8
Mexico	11.8	15.3	14.3	17.8	9.9	13.3	8.6	12.0	9.1	12.5	10.8	14.3
Morocco **	18.2	30.9	27.7	40.2	9.5	22.8	8.4	20.9	10.3	22.8	11.9	24.4
Mozambique **	16.3	26.3	19.3	29.3	16.2	26.2	9.5	19.5	13.2	23.2	11.9	21.9
Nepal	8.9	8.9	12.6	12.6	4.0	4.0	3.6	3.6	6.6	6.6	11.1	11.1
Nicaragua **	20.3	22.7	33.4	35.9	9.8	12.3	6.6	9.1	10.6	12.9	6.8	9.3
Nigeria	29.0	36.0	35.6	42.6	25.0	32.0	16.9	23.9	16.1	23.1	30.3	37.3
Oman **	2.0	2.0	2.2	2.2	1.9	1.9	1.9	1.9	1.4	1.4	2.0	2.0
Pakistan	54.1	65.7	69.9	81.2	34.6	46.1	38.5	49.3	47.6	58.5	45.9	60.1
Papua N Guinea **	4.5	11.8	3.3	10.2	8.4	15.9	2.1	9.6	0.8	8.3	5.7	13.2
Paraguay	14.7	14.7	20.3	20.3	16.8	16.8	4.1	4.1	2.1	2.1	6.9	6.9
Peru **	36.1	53.2	42.7	59.3	37.8	55.3	17.8	35.3	18.7	35.6	37.9	55.4
Philippines **	26.9	31.9	35.8	40.8	22.7	27.7	12.6	17.6	16.0	21.0	21.4	26.4
Qatar **	4.9	4.9	5.9	5.9	4.0	4.0	4.0	4.0	4.0	4.0	3.9	3.9
Romania **	13.8	13.8	23.4	23.4	8.3	8.3	4.3	4.3	3.8	3.8	1.5	1.5
Saudi Arabia	12.0	12.0	11.9	11.9	12.0	12.0	12.1	12.1	12.3	12.3	11.8	11.8
Senegal **	38.9	38.9	43.9	43.9	33.4	33.4	36.4	36.4	31.3	31.3	36.9	36.9
Sierra Leone **	19.4	19.4	18.2	18.2	26.8	26.8	12.6	12.6	18.7	18.7	17.5	17.5
Singapore	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.0	3.4	3.4	0.0	0.0
Somalia **	29.8	30.6	46.0	47.5	27.2	27.4	3.0	3.0	9.7	9.7	10.4	10.4
Sri Lanka	26.7	29.9	41.3	47.1	17.0	18.8	13.2	14.1	13.4	13.7	11.4	11.6
Sudan **	56.6	56.6	70.9	70.9	50.3	50.3	38.3	38.3	25.4	25.4	54.2	54.2
Syria **	13.1	25.1	20.4	34.8	7.7	17.7	5.9	15.5	8.8	19.7	6.2	16.2
Taiwan, China	6.1	6.1	7.5	7.5	3.0	3.0	0.5	0.5	2.5	2.5	2.8	2.8
Tanzania	33.9	33.9	44.4	44.4	29.6	29.6	22.5	22.5	11.5	11.5	25.0	25.0
Thailand	26.2	26.2	38.1	38.1	26.8	26.8	14.3	14.3	24.1	24.1	19.7	19.7
Trinidad & Tob. **	11.6	34.2	18.9	36.2	4.2	31.1	4.3	31.3	10.3	37.3	6.9	33.9
Tunisia	25.7	28.7	32.6	36.2	19.7	22.1	19.5	22.2	13.5	15.5	23.9	26.6
Turkey	8.2	25.2	11.8	38.5	4.4	17.5	4.1	15.5	4.6	20.8	7.3	15.0
Uganda **	25.2	25.2	35.9	35.9	20.5	20.5	12.0	12.0	14.8	14.8	10.6	10.6
United Arab Em. **	3.2	3.2	0.8	0.8	5.6	5.6	4.9	4.9	5.8	5.8	5.2	5.2
Uruguay **	25.6	26.6	30.3	31.3	21.9	22.9	18.3	19.3	29.8	30.8	19.1	20.1

Table A.1: Continue

Country /c	All Primary		Food		Agric Raw Matl.		Mineral Ores		Mineral Fuels		Non Fer. Metals	
	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total
Venezuela	14.3	15.3	19.2	20.2	12.0	13.0	7.4	8.4	7.8	8.8	9.1	10.1
Yemen **	17.9	25.0	26.4	34.5	10.2	16.9	9.5	16.7	14.0	22.3	9.4	12.8
Yugoslavia	7.0	7.2	8.1	8.6	5.9	5.9	4.5	4.5	5.6	5.6	8.3	8.3
Zaire	20.7	20.7	27.6	27.6	15.9	15.9	14.2	14.2	10.5	10.5	17.5	17.5
Zambia **	31.9	31.9	44.7	44.7	25.1	25.1	17.5	17.5	21.7	21.7	16.1	16.1
Zimbabwe	5.6	25.7	10.4	30.8	1.4	21.4	0.2	20.2	5.1	25.1	1.2	21.2

Notes: /a Unweighted averages of MFN or applied tariff rates.

/b Total import charges include all para-tariffs and other additional surcharges, but exclude internal taxes.

/c Most country data are covered from 1990-93, but countries with \*\* are referred to mid-1980s data.

Sources: UNCTAD, Directory of Trade Regimes, 1994 and Handbook of Trade Control Measures of developing Countries, 1987.

Table A.2: Average Tariff Levels /a and Total Import Charges /b by Manufactured Product for 80 Developing Countries (%)

Country /c	All Manufactures		Chemicals		Iron & Steel		Mach & Equipment		Other Manuf.		All Products	
	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total	Tariff /d	Total
Algeria	24.6	26.6	14.2	15.3	12.3	13.3	16.3	18.6	34.9	37.1	22.9	24.9
Angola **	11.9	20.8	9.2	17.9	8.3	17.3	6.6	15.6	19.7	28.7	11.6	20.6
Argentina	12.7	21.5	7.7	15.6	10.1	20.2	14.5	20.0	14.4	25.0	10.6	19.4
Bahamas **	33.1	34.6	31.9	33.4	35.0	36.5	35.3	36.8	32.3	33.8	32.3	33.8
Bahrain **	7.0	7.0	4.8	4.8	5.0	5.0	8.4	8.4	7.5	7.5	7.1	7.1
Bangladesh	84.5	86.5	71.7	73.7	82.2	84.2	75.2	77.2	95.2	97.2	81.2 (50.0)	83.2
Benin **	38.3	50.3	35.8	47.7	40.0	52.0	21.2	32.6	47.8	60.1	37.4	49.4
Bolivia	16.5	16.5	17.0	17.0	16.8	16.8	15.2	15.2	17.0	17.0	16.7 ( 9.8)	16.7
Brazil	15.6	17.8	10.8	13.0	11.0	13.2	19.4	21.6	16.3	18.5	13.2	15.4
Burkina Faso **	57.9	73.8	61.8	77.6	58.8	75.1	48.4	63.7	60.8	77.1	60.8	76.8
Burundi	31.6	32.6	22.4	23.4	19.5	20.5	21.5	22.5	42.2	43.2	36.9	37.9
Cameroon **	33.1	44.9	29.1	35.1	29.0	41.8	25.5	39.4	39.2	52.4	32.0 (18.8)	42.2
Centr Afr Rep **	33.0	41.2	29.1	32.3	29.0	32.6	25.1	34.2	39.2	49.6	32.0	39.3
Chile	10.9	19.7	11.0	19.2	11.0	19.0	10.7	19.2	11.0	20.3	10.9	19.9
China	39.7	39.7	25.2	25.2	13.7	13.7	30.0	30.0	54.1	54.1	37.5	37.5
Colombia	12.0	12.0	8.7	8.7	8.3	8.3	9.6	9.6	15.2	15.2	11.8 (11.5)	11.8
Congo **	33.0	34.4	29.1	30.1	29.0	29.3	25.1	26.3	39.2	41.1	32.0	33.2
Costa Rica **	21.5	60.9	10.7	12.1	7.4	15.4	10.8	14.0	33.2	111.2	21.1 (15.0)	61.7
Cote d'Ivoire **	25.0	27.4	20.7	22.0	20.6	21.2	16.4	17.1	31.8	35.8	23.3 (22.0)	25.3
Cyprus **	20.3	26.3	8.6	14.6	3.1	9.1	11.7	17.7	30.9	36.9	17.5 (10.1)	23.5
Ecuador	9.5	11.5	6.1	8.1	4.7	6.7	6.4	8.4	13.3	15.3	9.3	11.2
Egypt	27.1	27.1	10.2	10.2	9.8	9.8	18.1	18.1	40.2	40.2	33.5	33.5
El Salvador **	21.5	21.5	10.6	10.6	7.4	7.4	10.3	10.3	33.6	33.6	21.1 (13.1)	21.1
Ethiopia	30.6	32.2	15.5	17.0	5.7	7.1	14.3	15.9	47.2	48.9	29.6	31.2
Ghana **	30.1	33.3	29.7	29.7	30.0	30.0	30.7	30.7	30.1	36.5	29.6 (17.0)	33.0
Guatemala **	23.5	23.5	10.6	10.6	7.4	7.4	11.0	11.0	37.4	37.4	22.8 (16.0)	22.8
Guinea **	8.8	8.8	9.4	9.4	10.0	10.0	7.0	7.0	9.2	9.2	8.9	8.9
Guyana **	19.4	19.5	7.5	7.6	9.2	9.3	15.5	15.6	27.8	27.9	17.4	17.5
Haiti **	10.5	15.6	7.9	10.4	5.9	11.9	6.7	12.1	14.0	20.2	11.6	16.8
Hong Kong	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
India	56.1	99.4	60.5	104.8	56.9	101.2	43.9	87.6	60.2	102.8	53.0 (47.8)	95.2
Indonesia	18.3	21.4	10.3	13.2	7.5	11.9	14.5	17.9	25.2	27.9	17.0	20.1
Iran **	22.2	108.2	15.4	44.4	11.9	37.8	12.3	54.7	31.3	171.2	20.7	100.9
Jamaica **	19.3	19.4	7.5	7.5	9.2	9.2	15.1	15.5	27.8	27.9	17.3	17.5
Jordan **	16.2	31.1	8.0	21.5	6.4	21.7	13.6	26.4	22.3	38.8	13.8	28.0
Kenya	42.9	43.9	30.5	31.5	23.8	24.8	25.9	26.9	59.4	60.4	43.7 (33.6)	44.7
Korea	10.5	11.5	10.4	10.4	9.0	9.0	10.2	12.1	10.9	12.0	11.1 ( 7.9)	12.3
Kuwait	4.7	4.7	5.2	5.2	4.1	4.1	4.1	4.1	4.8	4.8	4.2	4.2
Libya **	19.7	36.5	6.8	22.3	1.7	16.8	19.4	36.1	27.7	45.4	18.3	34.7
Madagascar	7.0	40.5	0.8	30.1	4.2	22.0	7.5	32.2	9.8	51.5	6.1	40.1
Malawi	16.9	16.9	9.7	9.7	9.3	9.3	15.0	15.0	22.1	22.1	15.2	15.2
Malaysia	14.7	20.8	9.3	11.5	7.3	7.9	10.0	16.0	20.2	28.5	12.8	17.6
Mauritius	31.6	63.4	13.6	44.7	10.4	44.4	31.5	65.0	42.2	73.1	27.6	60.3
Mexico	13.9	17.5	11.2	14.6	10.2	13.6	13.6	17.1	15.8	19.4	13.4	16.9
Morocco **	25.6	38.2	18.7	31.2	8.3	20.8	20.8	33.3	33.2	45.9	23.5 (22.8)	36.1
Mozambique **	15.3	25.3	10.3	20.3	19.6	29.6	9.6	19.6	21.8	31.8	15.6	25.6
Nepal	18.5	18.5	9.6	9.6	12.4	12.4	17.6	17.6	23.7	23.7	16.1	16.1
Nicaragua **	22.9	25.3	10.6	13.1	7.3	9.8	10.8	13.3	36.1	38.6	22.1 ( 8.0)	24.6
Nigeria	34.2	41.2	22.2	29.2	19.8	26.8	20.1	27.1	48.3	55.3	32.8	39.8
Oman **	3.3	3.3	7.8	7.8	2.0	2.0	2.0	2.0	2.1	2.1	2.9	2.9
Pakistan	63.6	76.1	53.8	65.8	66.3	78.4	44.1	58.8	77.4	89.1	61.1 (50.0)	73.3
Papua N Guinea **	7.7	14.8	4.6	11.9	0.2	7.7	4.6	11.9	11.6	18.5	7.0	14.2
Paraguay	15.5	15.5	5.8	5.8	8.6	8.6	11.9	11.9	22.4	22.4	15.4	15.4
Peru **	54.0	71.5	38.5	55.6	29.7	46.3	42.9	60.4	69.3	87.1	48.9 (16.3)	66.3
Philippines **	28.5	33.5	18.4	23.4	14.3	19.3	23.7	28.7	37.1	42.1	28.1 (22.6)	33.1
Qatar **	4.0	4.0	4.1	4.1	4.0	4.0	4.1	4.1	3.9	3.9	4.2	4.2
Romania **	18.0	18.0	9.8	9.8	3.6	3.6	16.9	16.9	23.8	23.8	16.7 (12.3)	16.7
Saudi Arabia	12.2	12.2	11.9	11.9	13.2	13.2	11.8	11.8	12.4	12.4	12.1	12.1
Senegal **	32.3	32.3	11.0	11.0	36.9	36.9	28.5	28.5	43.1	43.2	34.2 (12.3)	34.2
Sierra Leone **	28.0	28.0	23.6	23.6	13.9	13.9	21.4	21.4	35.0	35.0	25.8	25.8
Singapore	0.4	0.4	0.0	0.0	0.0	0.0	0.4	0.4	0.7	0.7	0.4	0.4
Somalia **	31.0	31.1	18.7	18.7	9.3	9.3	20.5	20.5	44.4	44.4	30.8	31.0
Sri Lanka	26.0	29.1	13.2	14.1	11.7	12.0	15.6	16.6	38.7	44.0	26.1	29.2
Sudan **	56.4	56.4	31.4	31.4	53.5	53.5	42.1	42.1	75.1	75.1	56.6 (43.0)	56.6
Syria **	15.5	28.5	7.3	17.6	3.8	12.6	11.5	23.1	22.7	38.1	14.8 (11.0)	27.5
Taiwan, China	10.7	10.7	5.2	5.2	7.3	7.3	8.8	8.8	5.0	5.0	9.7 ( 4.0)	9.7
Tanzania	28.3	28.3	22.2	22.2	24.0	24.0	20.7	20.7	35.4	35.4	29.8 (27.5)	29.8
Thailand	41.8	41.8	29.9	29.9	19.6	19.6	35.3	35.3	52.5	52.5	37.8 ( 8.5)	37.8
Trinidad & To **	19.3	46.2	7.5	34.2	9.2	36.2	15.1	42.1	27.8	54.8	17.3	43.1
Tunisia	28.2	31.3	23.1	25.6	18.5	20.8	24.2	26.9	33.7	37.4	27.5	30.6
Turkey	9.3	24.6	8.2	24.1	6.9	12.7	8.0	17.8	10.8	29.9	9.0	24.7
Uganda **	17.9	17.9	12.3	12.3	14.0	14.0	10.7	10.7	24.6	24.6	19.9 (17.1)	19.9
United Arab Em. **	4.9	4.9	4.4	4.4	5.0	5.0	5.0	5.0	5.5	5.5	4.5	4.5
Uruguay **	28.2	29.2	20.7	21.7	20.1	21.1	23.0	24.0	35.2	36.2	27.5 (17.0)	28.5

Table A.2: Continue

Country /c	All Manufactures		Chemicals		Iron & Steel		Mach & Equipment		Other Manuf.		All Products	
	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total	Tariff /d	Total
Venezuela	17.2	18.2	10.5	11.5	7.9	8.9	12.3	13.4	23.7	24.7	16.4 (15.7)	17.4
Yemen **	15.6	20.9	10.0	18.2	12.1	15.3	12.0	15.4	20.4	25.5	16.2	22.0
Yugoslavia	13.7	13.8	9.5	9.6	12.7	12.7	13.7	13.7	15.6	15.9	11.8	12.0
Zaire	20.7	20.7	11.6	11.6	13.2	13.2	14.2	14.2	29.1	29.1	20.7	20.7
Zambia **	29.1	29.1	20.3	20.3	16.2	16.2	19.6	19.6	39.3	39.3	29.9	29.9
Zimbabwe	11.8	31.8	3.7	23.7	6.1	26.1	7.6	27.6	18.2	38.2	10.1	30.1

Notes: /a Unweighted averages of MFN or applied tariff rates.

/b Total import charges include all para-tariffs and other additional surcharges, but exclude internal taxes on imports.

/c Most country data are covered from 1990-93, but countries with \*\* are referred to mid-1980s data.

/d Figures in parentheses are the most recent tariff data.

Sources: UNCTAD, Directory of Trade Regimes, 1994 and Handbook of Trade Control Measures of developing Countries, 1987.



Table A.3: Average Non-Tariff Measures Coverage Ratio by Sector for 80 Developing Countries (Unweighted in %) /a

Country /b	All Primary	Food	Agr Raw Matl.	Min. Ores	Min. Fuels	Non Fer Metals	All Manuf.	Chemicals	Iron & Steel	Mach & Equip.	Other Manuf.	All Goods
Algeria	26.8	57.2	0.0	0.0	0.0	0.0	2.8	1.2	0.0	0.2	5.2	9.5
Angola **	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.4	0.0	0.5	1.1	0.7
Argentina	0.1	0.0	0.5	0.0	0.0	0.0	0.3	0.1	0.0	1.0	0.0	0.2
Bahamas **	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.1
Bahrain **	2.0	3.9	0.8	0.0	0.0	0.0	1.3	2.0	0.0	3.5	0.0	1.5
Bangladesh **	55.2	73.9	52.3	20.3	66.7	13.6	46.8	30.7	39.3	30.7	63.0	49.4
Benin **	24.3	41.4	12.3	0.0	30.6	0.0	14.2	6.2	0.0	26.4	13.2	17.0
Bolivia	1.6	3.4	0.0	0.0	0.0	0.0	1.8	2.9	0.0	3.4	0.7	2.0
Brazil	4.1	0.5	0.5	1.6	47.3	1.9	0.4	2.1	0.0	0.0	0.0	1.5
Burkina Faso **	48.6	32.5	69.5	23.9	97.2	73.6	93.2	94.7	100.0	96.6	90.1	80.6
Burundi	0.2	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3	0.6	0.3
Cameroon **	13.2	8.1	37.7	5.5	0.0	1.9	23.4	10.1	4.4	8.1	39.3	20.7
Centr Afr Rep **	9.3	12.7	1.3	0.7	41.7	0.0	3.1	2.8	0.9	0.6	4.8	5.1
Chile	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
China	11.5	3.4	38.4	3.2	12.3	0.2	11.3	3.1	74.6	9.9	8.1	11.3
Colombia	1.0	1.2	1.9	0.0	0.0	0.0	1.6	5.5	0.0	0.3	0.7	1.7
Congo **	2.8	5.0	0.9	2.2	0.0	0.0	4.9	4.2	1.8	2.4	6.8	4.6
Costa Rica **	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	4.1	0.0	0.8
Cote d'Ivoire **	12.5	21.1	1.0	4.5	25.0	0.0	4.4	6.7	0.8	6.1	3.0	6.6
Cyprus **	40.8	68.4	15.8	9.0	48.1	5.7	28.6	30.3	23.3	47.0	19.3	32.2
Ecuador	67.5	91.4	54.1	19.2	84.6	38.7	61.8	42.1	27.1	39.9	85.7	63.6
Egypt	43.8	70.1	10.5	10.4	78.6	16.4	45.6	55.9	17.3	29.5	52.5	45.2
El Salvador **	17.7	33.9	0.9	3.0	0.0	11.3	19.7	0.7	0.8	10.3	35.1	19.2
Ethiopia	42.9	69.7	35.2	11.2	1.4	7.5	14.7	0.9	1.8	7.2	26.1	22.5
Ghana **	63.9	76.8	64.5	69.4	19.4	28.3	42.0	14.6	52.7	19.2	64.4	48.4
Guatemala **	12.5	20.6	9.2	6.0	0.0	0.0	5.0	13.3	0.0	4.2	2.2	7.4
Guinea **	46.9	76.5	38.6	2.2	1.4	19.3	35.1	6.7	25.3	37.8	47.5	38.2
Guyana **	18.0	37.6	0.0	3.0	0.0	0.0	15.3	53.2	18.7	1.8	4.9	16.0
Haiti **	34.5	51.3	39.5	0.7	16.7	2.8	29.7	8.9	6.7	24.7	44.1	30.8
Hong Kong	0.8	1.7	0.0	0.0	0.0	0.0	0.3	1.4	0.5	0.0	0.0	0.5
India	71.7	88.4	47.6	68.3	85.3	43.7	58.9	53.3	50.6	36.3	73.8	62.6
Indonesia	4.6	8.7	0.0	1.0	4.2	0.8	2.0	1.4	16.1	2.3	0.4	2.7
Iran **	99.0	97.9	100.0	100.0	100.0	100.0	99.4	97.2	100.0	100.0	100.0	99.3
Jamaica **	10.3	20.3	1.9	3.0	0.0	0.0	4.8	13.4	0.0	5.6	1.1	6.6
Jordan **	37.0	77.3	0.9	4.5	0.0	0.0	3.6	9.8	0.0	2.2	2.1	12.9
Kenya	37.0	68.3	14.7	7.5	2.8	5.2	38.3	5.4	24.4	16.1	65.8	37.8
Korea	9.0	17.6	1.8	0.7	2.8	0.0	0.2	0.2	0.0	0.0	0.3	2.6
Kuwait	6.8	10.2	0.0	5.2	0.0	13.2	1.8	2.2	1.3	1.1	2.1	3.5
Libya **	15.0	29.2	4.8	2.2	0.0	0.0	8.4	1.6	1.3	6.7	13.2	10.3
Madagascar	0.8	0.0	0.0	1.5	0.0	5.9	1.6	1.4	0.0	0.9	2.1	1.7
Malawi	84.8	76.1	99.6	84.3	74.3	100.0	93.8	86.3	87.3	100.0	94.7	91.3
Malaysia	1.2	2.0	0.0	2.2	0.0	0.0	2.4	3.6	8.5	2.2	1.2	2.1
Mauritius	30.8	42.0	12.3	16.4	12.9	50.0	36.9	17.8	53.5	46.1	38.8	35.2
Mexico	8.5	12.9	6.1	0.0	15.8	0.0	1.8	1.1	13.1	1.4	1.0	3.9
Morocco **	43.0	73.9	13.6	4.5	65.0	0.9	21.8	13.0	3.1	11.8	33.0	27.6
Mozambique **	42.2	25.9	48.2	35.1	58.3	100.0	62.7	69.1	100.0	43.7	65.1	56.9
Nepal	1.0	0.0	0.0	2.2	0.0	6.6	0.5	0.0	0.0	0.3	0.8	0.7
Nicaragua **	25.6	52.2	3.5	0.7	1.4	1.9	28.5	7.0	2.0	16.1	47.5	27.8
Nigeria	22.7	38.9	17.5	1.5	0.0	0.0	3.1	0.5	0.0	0.0	6.2	8.8
Oman **	2.2	2.9	0.9	4.5	0.0	0.0	3.8	7.8	0.0	3.3	2.8	3.6
Pakistan	6.8	8.6	3.3	3.0	22.1	0.0	17.3	13.6	0.0	4.1	27.6	14.5
Papua N Guinea **	9.4	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Paraguay	6.4	12.5	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.8
Peru **	73.0	99.9	67.4	20.9	38.9	52.8	45.8	24.9	100.0	14.4	64.6	53.4
Philippines **	40.5	60.0	24.2	12.7	75.0	0.0	46.3	47.7	20.1	87.6	28.0	44.9
Qatar **	2.4	5.0	0.0	0.0	0.0	0.0	0.6	1.4	0.0	0.0	0.6	1.3
Romania **	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saudi Arabia	4.4	8.9	0.8	0.0	0.0	0.0	3.4	5.6	4.0	5.0	1.4	3.9
Senegal **	8.4	13.1	2.3	3.0	16.7	1.9	6.1	8.2	10.7	3.1	6.2	7.2
Sierra Leone **	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Singapore	1.2	1.7	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Somalia **	13.6	6.7	0.0	47.8	38.9	13.2	2.8	5.0	0.0	1.4	2.9	6.3
Sri Lanka	2.8	4.5	0.0	4.0	0.0	1.9	4.0	10.6	0.0	5.8	0.6	3.8
Sudan **	12.0	25.1	0.0	0.7	0.0	0.9	9.4	3.3	0.0	3.8	15.9	10.0
Syria **	30.7	44.4	31.1	14.9	11.8	1.1	38.7	32.1	25.3	28.9	48.3	36.6
Taiwan, China	58.0	94.2	38.9	18.7	100.0	18.5	28.8	35.8	22.4	27.2	30.2	35.9
Tanzania	64.3	65.7	62.3	57.5	63.6	71.7	85.9	96.7	97.3	77.5	83.9	79.7
Thailand	8.8	12.7	3.8	7.8	8.3	3.6	4.2	0.9	0.6	3.6	6.3	5.5
Trinidad & Tob. **	30.8	61.6	0.0	2.1	20.8	2.2	20.5	5.9	10.0	13.4	31.9	23.4
Tunisia	37.3	62.3	9.4	17.1	26.7	17.4	30.5	14.5	8.5	18.8	46.1	32.7
Turkey	93.9	92.2	99.3	98.5	70.6	100.0	97.3	92.3	100.0	99.1	98.3	96.4
Uganda **	13.8	26.1	0.0	0.0	0.0	15.1	14.1	0.0	3.3	38.2	9.4	13.9
United Arab Em. **	2.9	5.3	0.0	3.0	0.0	0.0	0.3	1.4	0.0	0.0	0.0	1.0
Uruguay **	10.0	3.8	3.9	5.0	94.4	0.2	15.5	16.7	2.2	3.5	22.7	14.1

Table A.3: Continue

Country /b	All Primary	Food	Agr Raw Matl.	Min. Ores	Min. Non Fer Fuels	Metals	All Manuf.	Chem- icals	Iron & Steel	Mach & Equip.	Other Manuf.	All Goods
Venezuela	3.0	3.6	1.0	1.5	9.7	1.9	1.7	6.1	0.0	0.3	0.7	2.4
Yemen **	25.2	19.8	38.9	2.6	97.2	0.0	30.2	0.9	0.0	45.2	39.4	28.7
Yugoslavia	36.6	39.8	39.4	21.8	25.3	42.9	25.9	10.9	81.9	21.5	28.2	29.2
Zaire	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Zambia **	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Zimbabwe	99.7	100.0	99.9	100.0	98.8	98.1	91.2	94.5	100.0	97.5	85.5	93.6

Notes: /a Non-tariff measures include quantitative restrictions in the form of all types of licences and import authorizations, quotas, import prohibitions, advance import deposits, foreign exchange restrictions, that is affected by an NTM applied to a tariff line item.

/b Most country data are covered from 1990-93, but countries with \*\* are referred to mid-1980s data.

Sources: UNCTAD, Directory of Trade Regimes, 1994, and Handbook of Trade Control Measures of Developing Countries, 1987.

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