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# What Can Be Expected from African Regional Trade Arrangements?

## Some Empirical Evidence

*Alexander J. Yeats*

Sub-Saharan Africa must adopt appropriate trade and structural adjustment policies to become more competitive internationally and to capitalize on opportunities in foreign markets. The exchange of regional preferences alone cannot reverse Africa's unfavorable export trends. A far more promising policy approach would be broad-based reductions in African trade barriers, on a most-favored-nation basis.



## Summary findings

For over three decades, Sub-Saharan African countries have had an interest in regional integration initiatives to accelerate their industrialization and growth.

With the help of a more comprehensive database on intra-African trade than was previously available, Yeats examines a proposal to exchange trade preferences among Sub-Saharan African countries. The data suggest that problems with African regional trade arrangements are more daunting than is generally recognized.

Africa's non-oil exports are concentrated in a few products, none of them important regional imports. There is relatively little intra-African trade and the noncomplementarity problem in African trade cannot be resolved quickly. Moreover, intra-African trade is highly concentrated, geographically, with almost no trade between East and West Africa.

This finding makes less compelling the arguments that regional trade can help overcome problems of small domestic markets.

The range of processed products African countries export competitively is extremely narrow and many have a comparative advantage in the same items. Excluding refined petroleum, one or more African countries have a

comparative advantage in products that account for about 5 percent of regional imports.

In short, regional trade agreements seem to present Africa with a "lose-lose" situation.

If Africa does not develop export capacity in key machinery and transport equipment, the region will continue to depend heavily on third countries for those exports. Dependence on non-African suppliers would seemingly reduce the likelihood of regional arrangements succeeding. However, machinery and transport equipment are normally manufactured using capital-intensive production techniques and Africa has no comparative advantage in those goods. If Africa tries to develop an export capacity in this sector, the goods will be relatively high in cost and probably less reliable than similar products from "efficient" suppliers. Attempts to use such equipment would undercut the competitive position of Sub-Saharan African exporters in global markets.

Trade reform on a most-favored-nation basis is a more promising option. Evidence shows a strong positive association between lower trade barriers and economic growth.

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This paper — a product of Trade, Development Research Group — is part of a larger effort in the group to accelerate the trade and growth of developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Lili Tabada, room MC3-333, telephone 202-473-6896, fax 202-522-1159, Internet address [ltabada@worldbank.org](mailto:ltabada@worldbank.org). The author may be contacted at [ayeats@worldbank.org](mailto:ayeats@worldbank.org). November 1998. (107 pages)

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# **WHAT CAN BE EXPECTED FROM AFRICAN REGIONAL TRADE ARRANGEMENTS?**

Some Empirical Evidence

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### Summary

For over three decades Sub-Saharan African (SSA) countries have had an interest in regional integration initiatives to accelerate their industrialization and growth. The projects proposed to foster integration encompass a broad range of initiatives such as: (i) the development of regional ports to help African countries effectively utilize modern shipping technologies, and realize economies of scale in transport; (ii) construction of regional road and rail systems to facilitate the transfer of goods and peoples across national frontiers; (iii) the use of joint tenders to secure imports at more favorable prices; or (iv) cooperation on monetary and financial matters (including export credit guarantee facilities) to encourage domestic and foreign investment. Many of these initiatives could have a positive impact on Africa's industrialization and growth prospects. However, a proper assessment of their likely influence requires a thorough analysis of their costs and benefits which has generally been lacking.

This report examines one proposal advanced to foster regional integration, that is, the exchange of trade preferences among Sub-Saharan countries. To assist in this assessment, a database on intra-African trade was developed that is more detailed and comprehensive than information previously available. These data indicate problems associated with African regional trade arrangements are more daunting than is generally recognized. Africa's non-oil exports are highly concentrated in a very few products - none of which are important in regional imports. Sub-Saharan African countries appear to have relatively little to trade with each other. An analysis of historical changes in the other countries' exports indicates the "non-complementarity" problem in African trade cannot be resolved quickly. African intra-trade is also highly concentrated within sub-regional geographic groups with almost no trade occurring between East and West Africa. This finding makes arguments that regional trade can help overcome problems associated with the small size of domestic markets less compelling.

Indices of "revealed" comparative advantage (RCA) show the range of processed products African countries export competitively is extremely narrow. Many have a common comparative advantage in the same items - sugar preparations and refined petroleum products appear frequently in the RCA profiles of individual SSA countries. Excluding refined petroleum, one or more African countries have a comparative advantage in products accounting for about 5 percent of total regional imports. These findings indicate Africa faces what appears to be a "lose-lose" situation concerning policies toward regional trade arrangements. If Africa does not develop an export capacity in the key machinery and transport equipment group, the region will continue to be highly dependent on third countries for these imports. This dependency on non-African suppliers would seemingly reduce prospects for the success of regional arrangements. However, machinery and transport equipment are normally manufactured using capital intensive production techniques and Africa does not have a comparative advantage in these goods. If Africa attempts to develop an export capacity in this sector, the goods would be relatively high cost and, in all likelihood, less reliable than similar products from "efficient" suppliers. Attempts to utilize such equipment would undercut the competitive position of SSA exporters in global markets.

Trade reforms along a Most-Favored-Nation (MFN) basis are a far more promising option for Africa. Evidence shows a strong positive association exists between the level of trade barriers and economic growth. Trade restrictions, and domestic policy interventions, often create a bias against tradeables that prevents the achievement of otherwise attainable rates of growth. Import barriers in Africa are often considerably higher than in those developing countries that achieved the highest export growth rates. The implications are that, if Africa is to reverse its unfavorable export trends, the region must adopt appropriate trade and structural adjustment policies to enhance its international competitiveness, and to permit African exporters to capitalize on opportunities in foreign markets. The exchange of regional preferences alone cannot achieve this key objective. Broad based reductions in African trade barriers on a MFN basis is a far more promising policy approach.

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# WHAT CAN BE EXPECTED FROM AFRICAN REGIONAL TRADE ARRANGEMENTS?

## Some Empirical Evidence

Alexander J. Yeats\*

The past three decades witnessed a growing interest in regional integration initiatives within Sub-Saharan Africa. In part, the relatively small size of these countries' markets contributed to the appeal of regional integration. Taken together, the combined 1993 gross domestic product of the 48 Sub-Saharan African (SSA) countries was about \$155 billion -- a total which was \$20 billion below the GDP of Turkey. Excluding the four major oil exporting countries (Angola, Congo, Gabon and Nigeria) the total 1993 SSA exports (\$19.8 billion) were approximately one-half those of Thailand, and only \$4 billion more than those of Israel. In addition, Sub-Saharan Africa's economic performance lagged far behind that of almost all other developed and developing countries. From 1970 to 1993, real per capita domestic product in the region actually fell at an annual rate of one-half percent yet, during the same interval, countries like China, Hong Kong, Republic of Korea, Singapore and Taiwan (China) had corresponding growth rates exceeding six percent. Africa's own trade performance was dismal as the region experienced a long-term decline in its ability to compete internationally. One study estimated that the reductions in Africa's market shares for its major commodity exports over the last three decades caused annual revenue losses of about \$11 billion in current prices (Ng and Yeats 1996). Sub-Saharan African countries hope that regional integration efforts can help to counter many of these unfavorable economic trends.<sup>1</sup>

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<sup>1</sup>See Abegunrin (1990), Berg (1988), Mansoor (1989) or Robson (1983) for discussions of the problems, prospects and potential benefits of regional economic integration initiatives in Africa. Foroutan (1992) provides a useful historical discussion of factors leading to the formation of existing regional arrangements and also analysis the available statistics on intra-trade.

This report does not address the veracity of the claims that have been made in support of regional integration arrangements and their potential impact on SSA countries. These may encompass a broad range of products such as: (i) the development of regional ports to help African countries effectively utilize modern shipping technologies, and realize economies of scale in transport; (ii) construction of regional road and rail systems to facilitate the transfer of goods and peoples across national frontiers; (iii) the use of joint tenders to secure imports at more favorable prices; or (iv) cooperation on monetary and financial matters (including export credit guarantee facilities) to encourage domestic and foreign investment. Rather it largely deals with proposals for regional trade arrangements (RTAs) among the poorer less industrialized Sub-Saharan African countries (often exclusive of the South African Customs Union (SACU)) in an attempt to determine how important a role they might have in stimulating industrialization and growth.<sup>2</sup> Very little is known about the level, composition, and trends in intra-African trade, or how complementary are the export and import profiles of the African countries, and this report is intended to fill this informational gap. In short, the key questions addressed here are what are Africans' trading with each other, how important is this trade, and what does the nature of this exchange imply for the success or failure of efforts to further promote intra-regional trade?

The report proceeds in four parts. First, it assesses the utility of several sources of statistics that are available for analyzing characteristics of African intra-trade, and it also discusses the major limitations and omissions in this information. Next, the study employs the available International Monetary Fund statistics to determine the approximate level, share, and trends in total Sub-Saharan countries' intra-trade.

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<sup>2</sup>The South African Customs Union generally is not included in the main focus of the present study since it does not face many of the pressing problems associated with limited market size and concentrated export structures that confront the smaller SSA countries. A key issue that is addressed in this study is just what can be expected from regional trade arrangements among the latter. The South African Custom Union's exports are about 25 percent larger than those of all the other non-oil exporting African countries combined (the oil exporters are Angola, Congo, Gabon and Nigeria) and are also far more diversified in terms of the nature and number of items traded. However, in several places this report examines South Africa's import and export statistics to help assess the suitability of regional trade arrangements between SACU and other Sub-Saharan African countries.

This section also examines the relative importance of individual African countries in this exchange, both as exporters and as importers, and assesses the influence of established African regional trade arrangements - like the Southern African Development Community (SADC) - in promoting intra-trade. It then utilizes more detailed, but less complete in terms of country coverage, United Nations COMTRADE data to analyze the product composition of this exchange. Since much of this information has not previously been available to individuals conducting research on intra-African trade, the report provides quite detailed statistics on this exchange in several appendices and annexes. In Chapter 3, the study then employs statistical indices which measure trade complementarity, intra-industry trade, or national comparative advantage to determine how well African exports and imports could support regional trade arrangements. Current trade profiles of African countries are compared with those of countries in other regions that were either successful, or unsuccessful, in attempts to form viable RTAs. The objective here is to determine what other countries experiences with regional trade arrangements imply for Africa. The paper closes with an overall evaluation of the problems and prospects for efforts to increase African intra-trade, and also provides an assessment of the appropriate role for regional and multilateral policies for achieving Africa's development objectives.

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## II. DATA SOURCES ON AFRICAN INTRA-TRADE

### Major Message

*The design of successful regional trade policies requires accurate and reliable trade statistics. However, the reporting practices of most Sub-Saharan African countries to UN COMTRADE - the most detailed and comprehensive database on international trade - have been woefully inadequate compared to other United Nations members. Policy makers are, therefore, forced to work with incomplete, missing, or even contradictory trade data. African countries must quickly develop the capacity to compile and report reliable trade data so effective policy measures can be implemented.*

Accurate information on the level and composition of trade flows is essential to the formulation of trade policy reforms, or the design of regional trade arrangements. Several alternative sources of statistics are available for assessing the characteristics of SSA countries intra-trade, but all have major limitations. The broadest statistical database, in terms of country coverage, is that compiled by the International Monetary Fund and published regularly in this organization's Direction of Trade (DOT) Yearbook. This annual report provides information on the origin and destination of imports and exports for 41 Sub-Saharan African countries. Although the DOT database has many useful features, its major limitation is that it only reports total imports and exports so it cannot be used to determine what goods African countries are trading with each other - even at very aggregate levels.

The most detailed source of internationally comparable statistics on trade, tabulated both in terms of product composition and direction, is the COMTRADE data base maintained by the United Nations Statistical Office (UNSO) in New York.<sup>1</sup> Since these records contain detailed trade statistics for each UN member, with imports and exports reported by-country and by-product, generally down to the five-digit level of the Standard International Trade Classification (SITC) system, they should constitute a very useful source for analyzing intra-African trade. However, a major deficiency of the COMTRADE

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<sup>1</sup>In addition, the United Nations annual publication Yearbook of International Trade Statistics shows detailed statistics on products (identified in terms of SITC codes) many African countries' export and import, but no indication is given as to the origins or destinations of this trade. The United Nations Food and Agricultural Organization's Trade Yearbook (published annually) provides some details on intra-African trade in foods, agricultural and forestry products, fertilizers, and agricultural machinery, but gives little information on trade in manufactured products.

records is associated with the very erratic and uneven reporting practices of many Sub-Saharan African countries (see Table 2.1 for the latest year trade data were available for each SSA country as of October 1996), while the Annex to this chapter provides a record of their historical reporting practices. Due to extensive "holes", or missing years and countries, in the available data one can not tabulate comprehensive trade flow information for many individual African countries, or for the region as a whole. Rather, any analysis of regional trade will have to draw data for the countries that supplied statistics to the United Nations, and the assumption made that these reporters were "representative" of the "nonreporting" African countries.<sup>2</sup>

A second related problem is that the African countries which have reported to the UNSO often have not done so for common years. As an example, 1994 was the most recent year for which data for Mauritius was available when this study was initiated, while the most recent years for Kenya and Ghana were 1993 and 1992 respectively (see the Annex). As such, in order to construct a profile of intra-African trade one has to "pool" annual information for several contiguous years. The rule followed here was to pool data for the most recent years available in the 1990s. For example, this approach combined 1994 trade data for Mauritius and Madagascar, with 1993 data for Kenya, along with 1990 data for the Cameroons, etc. to produce an estimated "aggregate 1990s" trade profile for Sub-Saharan Africa. Given the interest in changes in intra-trade, a similar procedure was used to tabulate African statistics for contiguous years in the early 1980s, and also in the 1970s. This procedure has important limitations and there is a pressing need for SSA countries to improve the quality and availability of their trade data, and to improve their reporting practices. Box 2.1 outlines several initiatives which were proposed in a recent World Bank study (Yeats 1997) that could rectify many of these problems.

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<sup>2</sup>The Cote d'Ivoire has not reported national trade statistics to the United Nations since 1985 and this appears to be of major importance for attempts to analyze African intra-trade. Aggregate IMF Direction of Trade data suggest the Cote d'Ivoire originates about one-quarter of all intra-regional exports, and receives about 16 percent of all goods exported by other SSA countries to the region.

**Table 2.1 The Most Recent Year For Which Individual Sub-Saharan African Countries' Trade Data Were Available.**

African Country and Years of Latest Available UN COMTRADE Trade Statistics	African Country and Years of Latest Available UN COMTRADE Trade Statistics
Angola (1991)	Madagascar (1994)
Benin (1982)	Malawi (1991)
Burkina Faso (1983)	Mali (1990)
Burundi (1976)	Mauritania (1972)
Cameroon (1990)	Mauritius (1994)
Cape Verde (1984)	Mozambique (1994) <sup>d</sup>
Central African Republic (1989) <sup>a</sup>	Niger (1981)
Chad (1975)	Nigeria (1991)
Comoros (1962)	Rwanda (none available)
Congo (1994)	Sao Tome and Principe (none available)
Djibouti (1992)	Senegal (1993)
Ethiopia (1993)	Seychelles (1994)
Equatorial Guinea (none available)	Sierra Leone (1984)
Gabon (1994) <sup>b</sup>	Somalia (1982)
Gambia (1980)	Sudan (1985)
Ghana (1992) <sup>c</sup>	Tanzania (1987) <sup>e</sup>
Guinea (none available)	Togo (1991)
Guinea Bissau (1976)	Uganda (1976)
Cote d'Ivoire (1985)	Zaire (1978)
Kenya (1993)	Zambia (1979)
Liberia (1984)	Zimbabwe (1994)

<sup>a</sup>No trade statistics were reported for the 1981-1988 period.

<sup>b</sup>Gabon did not report trade data for the 1984-92 period.

<sup>c</sup>Ghana did not report trade data for the 1985-1990 period.

<sup>d</sup>Prior to 1994 no trade data are available for Mozambique.

<sup>e</sup>Tanzania did not report trade data for the 1982-1986 period.

Source: Data availability tabulations made from UN COMTRADE records.



**Box 2.1****Proposals for Upgrading and Improving the Quality and Availability of  
Sub-Saharan African Trade Statistics**

African countries should make a concerted effort to report all available, present and past, trade data to the United Nations Statistical Office in New York for inclusion in the COMTRADE database. The very irregular patterns reflected in African COMTRADE records, in which several years of missing data are "sandwiched" between years for which statistics are available, suggest that a simple failure to report may have caused gaps in some records. Making the COMTRADE database as complete as possible has a high priority since this information is needed both to help determine the characteristics of African intra-trade, and for further use identifying errors in the national trade statistics.

Once the available African COMTRADE statistics have been extended as far as possible, empirical analyses should be undertaken to assess the quality and reliability of the data. These tests might utilize the partner country approach employed by the OECD (1985) and national governments to identify problems in trade data and to help formulate appropriate corrective action. Previous analyses of partner country data have helped rectify numerous technical problems in trade data including: (i) the existence of purposeful under or over-invoicing of customs vouchers which produced major errors in some official statistics; (ii) accurate identification of the final destination of exports, which can be a major problem where transit trade is involved; (iii) reconciliation of inter-country differences in the classification of specific goods; or (iv) efforts to resolve variations in valuation practices employed by different countries.

In connection with the above, African countries, in cooperation with appropriate international organizations, should work closely to formulate and implement a program of technical assistance that would upgrade their ability to compile and maintain accurate and reliable trade statistics. This upgrade program should consider the extent to which automated trade monitoring systems, like ASYCUDA, could contribute to the improvement of data quality. In addition, African countries should specifically seek the cooperation of private and public organizations like UNCTAD, the United Nations Statistical Office, or the World Trade Organization where relevant expertise exists.

However, it must be recognized that the formulation, adoption, and continuation of initiatives to upgrade the information content of these key statistics will require a strong and lasting commitment on the part of the African governments themselves. Without such a commitment African countries will be faced with the continuing situation in which trade and industrialization strategies are formulated in what often essentially amounts to an informational vacuum.

Using the approach which pooled available data, it was possible to tabulate statistics on intra-trade for 17 Sub-Saharan countries, both in total and down to the four-digit level of the SITC (Revision 1) system.<sup>3</sup> While this represents about 40 percent of the countries in the region, those with available data generally were among those most important as traders. Specifically, statistics published by UNCTAD (1995, Table 1.1) indicate the 17 reporting countries accounted for about three-quarters of the total exports (to all destinations) coming from the region in the early 1990s. As previously noted, the IMF statistics suggest that the Cote d'Ivoire, which has not reported to COMTRADE since the mid-1980s, is the major missing country.

Before proceeding, it should be acknowledged that there are several reasons why the available African trade data must be interpreted with caution. It is generally recognized that high African trade barriers and restrictive exchange controls provide incentives to falsify customs vouchers - which are used for the tabulation of trade statistics. Also, it is generally acknowledged that some African trade goes through "unofficial" channels - which may involve smuggling - and is not recorded in the available statistics. While it obviously is not possible to determine the magnitude of this exchange, several studies conclude it may be quite substantial.<sup>4</sup> Another problem is the fact that Yeats (1990) shows that there may be logical inconsistencies in some of the African trade data. These are reflected in a number of quality control problems such as a failure of lower level statistics to sum to products defined at

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<sup>3</sup>Although COMTRADE includes some African countries' trade statistics down to the five-digit SITC level there were a few cases where data below the four-digit level were not reported. As such, this analysis is largely based on four-digit SITC data in order to achieve a common level of detail in the cross-country comparisons.

<sup>4</sup>After reviewing these investigations Hardy (1992) concluded; (i) the share of unrecorded trade in the total trade of the ECOWAS region may be between 20 and 35 percent; (ii) the unrecorded trade between Togo and Ghana is several times the amount of official trade. (iii) over 60 percent of Ghana's imports of essential commodities is smuggled away. (iv) more than half of Uganda's exports take place outside of official channels. (v). thirty to sixty percent of Zaire's coffee production is smuggled out annually. Burfisher and Missiaen (1990) also provide estimates of the size of the informal economy and illicit trade in West Africa that is roughly in agreement with these assertions. It should be noted, that although large volumes of unrecorded trade will bias any analyses of the level of this exchange it need not do for investigations of the structure of trade if the share of goods entering the formal and informal economy are roughly equivalent.

corresponding higher levels of aggregation, or large discrepancies in matched partner country trade data. As such, a higher than normal degree of caution is recommended for any attempts to utilize the African countries trade statistics.

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**Annex 2-1**  
**UN COMTRADE DATA AVAILABILITY FOR SUB-SAHARAN AFRICA**

As indicated, data limitations severely restrict efforts to undertake objective analyses of intra-African trade performance or prospects. Although the International Monetary Funds Direction of Trade statistics provides reasonably complete data on the overall level of exports and imports in African intra-trade, or trade with other countries, no details are given on the product composition of this exchange. Information on the types of goods exported or imported to/from different partners is often of key importance for many empirical analyses of trade policy issues.

The COMTRADE database maintained by the UN Statistical Office (UNSO) in New York was established with the intention of making such detailed trade data generally available for research and policy purposes. United Nations member countries agreed to provide the UNSO with detailed and timely statistics on their imports and exports, reported by-product and by-country, which would be stored by the UN for easy access in some version of the Standard International Trade Classification (SITC) system or the newer Harmonized System. Although most UN member countries have fulfilled commitments to supply the trade information, the reporting practices of most Sub-Saharan African countries have clearly been well below par. While there are some procedures that can be used to compensate for the major gaps that exist in African trade data (that is, partner country *import* statistics can be used to analyze changes in African *exports*) the approach breaks down for the intra-trade of African countries when both reporter and partner country statistics are unavailable.

The current situation concerning availability of United Nations COMTRADE data for Africa is summarized in the following annex tables. These report data availability for individual Sub-Saharan African countries from 1962, the year that the COMTRADE records begin, to 1995. If COMTRADE data are available for a country in a specific year a value, which represents total exports to all other Sub-Saharan African countries is shown (similar statistics could also be tabulated for any other partner country

group). In these cases the reader may assume that corresponding import records are also available and that both the export and import data are reported down to at least the four-digit level of the SITC. If an N.A. (not available) is shown this means that the African country failed to report trade data to the UN in that specific year. Box 2.2 provides similar information on trade data availability for the South African Customs Union (SACU) along with some statistics on the latter's recent exports to, and imports from, other Sub-Saharan African countries.<sup>5</sup>

The annex table illustrates the major problems posed by the very incomplete and inconsistent reporting practices of the African countries. The table incorporate the possibility that data for 1,428 country-years could have been recorded (42 African countries times 34 years), yet records are available for only about 49 percent of these potential entries. A further important point is that the reporting practices have varied considerably across countries. Some, like Ethiopia, Kenya and Madagascar have provided trade data on a fairly complete and timely basis. Others, like Burundi, Comoros, Mozambique or Zaire have only reported trade sporadically, or not at all.

It should be noted that the African reporting practices stand in marked contrast to those of most other United Nations member countries. For example, from 1962 to the present there are no gaps in the trade data for the OECD countries. For the most part, non-African developing countries reporting practices do not differ substantially from those of developed countries, although their statistics may be somewhat less current. Significant problems do exist, however, in records for the states of the former Soviet Union which have not yet established administrative procedures for the collection and reporting of trade data in a manner that they can be allocated to established SITC codes. However, the key point that follows from any objective analysis of the contents of COMTRADE is that the deficient reporting practices of the African countries has greatly reduced the capacity for empirical analysis of trade policy

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<sup>5</sup>Trade statistics reported to the United Nations are for the combined imports and exports of the South African Customs Union which includes the Republic of South Africa, Botswana, Lesotho, Namibia and Swaziland.

### Box 2.2

#### Implications of Recent Trade Statistics Provided by the South African Customs Union

Comparisons of official trade statistics for the other non-oil exporting SSA countries with those recently provided by the South African Customs Union accents the potentially important role the latter could have in regional trade arrangements. This point may have been missed since SACU failed to report any trade statistics to the United Nations since 1974. However, in 1992 it resumed reporting to the UNSO and presently provides trade statistics in all three revisions of the SITC as well as the Harmonized System.

The following statistics show SACU's exports to, and imports from, the world and other Sub-Saharan countries from 1992 to 1995. Exports from the Customs Union to the region in 1995 were about \$3.4 billion which made it by far the largest regional trader (see Table 3.3 which follows) while its total exports (over \$27 billion) were more than double those the IMF DOTs reported for Nigeria, and more than six times the Cote d' Ivoire's total exports. Although size alone makes SACU a potentially important factor in regional trade initiatives its attraction as a partner is further enhanced by its capacity to competitively export many of the types of products which are prominent in other Sub-Saharan countries imports.

Year	South African Custom Union's Exports			South African Customs Union's Imports		
	World (\$million)	Sub-Saharan Africa (\$million)	SSA Share (%)	World (\$million)	Sub-Saharan Africa (\$million)	SSA Share (%)
1992	23,512	1,991	8.4	18,371	416	2.2
1993	23,907	2,214	9.3	18,024	452	2.5
1994	18,438	2,088	11.3	21,285	578	2.7
1995	27,209	3,417	12.6	27,733	634	2.3

As is the case with other Sub-Saharan African countries, SACU's regional trade is highly concentrated with partners with which it has a close proximity (see Table 3.5 on this point). Transport, communication and other logistical constraints clearly influence the geographic pattern of this exchange. About one-third of SACU's regional exports go to Zimbabwe (about \$1.2 billion) while the latter supplies over 40 percent of its regional imports. Combined, the five SSA countries listed below account for more than 70 percent of the SACU's exports to, and imports from, Sub-Saharan Africa.

1995 South African Custom Union Regional Exports			1995 South African Custom Union Regional Imports		
Destination	Value (\$million)	Share (%)	Origin	Value (\$million)	Share (%)
All SSA Countries	3,417	100.0	All SSA Countries	634	100.0
Zimbabwe	1,169	34.2	Zimbabwe	274	43.2
Mozambique	507	14.8	Zaire	100	15.7
Zambia	359	10.5	Mozambique	34	5.3
Kenya	219	6.4	Kenya	31	4.8
Zaire	191	5.6	Zambia	26	4.1

issues that are of major concern to the region. This lack of data adversely effects the ability of countries to design and implement effective national economic policies. Also, the uncertainty created by the lack of reliable statistics (on trade as well as general economic conditions) may adversely impact on the adoption of international policies toward Africa - such as those designed to provide debt relief.





Annex Table 2.1 Continued

Year	Comoros	Cote d'Ivoire	Djibouti	Equatorial Guinea	Ethiopia	Gabon	Gambia	Ghana	Guinea
1962	160.4	788.3	328.3	N.A.	4,999.6	2,385.8	N.A.	5,434.4	N.A.
1963	N.A.	7,920.5	N.A.	N.A.	N.A.	2,478.2	N.A.	3,741.1	N.A.
1964	N.A.	11,391.2	N.A.	N.A.	N.A.	3,562.7	86.4	3,055.5	N.A.
1965	N.A.	15,017.4	N.A.	N.A.	N.A.	4,628.1	N.A.	3,027.1	N.A.
1966	N.A.	16,845.5	N.A.	N.A.	N.A.	5,259.1	N.A.	2,821.5	N.A.
1967	N.A.	21,654.6	N.A.	N.A.	3,912.8	6,340.4	N.A.	4,498.8	N.A.
1968	N.A.	24,071.2	N.A.	N.A.	N.A.	8,306.5	N.A.	1,590.4	N.A.
1969	N.A.	27,157.9	N.A.	N.A.	8,933.7	11,196.7	N.A.	1,532.1	N.A.
1970	N.A.	29,773.7	N.A.	N.A.	6,908.9	9,148.6	97.8	885.1	N.A.
1971	N.A.	29,279.0	N.A.	N.A.	9,031.9	15,039.8	94.9	2,742.0	N.A.
1972	N.A.	51,145.2	N.A.	N.A.	12,037.1	N.A.	515.2	1,962.5	N.A.
1973	N.A.	68,616.8	N.A.	N.A.	20,062.1	N.A.	274.3	3,321.5	N.A.
1974	N.A.	121,674.7	N.A.	N.A.	24,351.6	N.A.	400.6	6,301.6	N.A.
1975	N.A.	161,618.5	N.A.	N.A.	21,361.5	11,174.3	1,319.0	12,528.7	N.A.
1976	N.A.	155,544.3	N.A.	N.A.	26,566.1	14,249.1	2,250.7	10,302.9	N.A.
1977	N.A.	176,942.1	N.A.	N.A.	17,742.3	20,491.8	3,391.1	12,755.6	N.A.
1978	N.A.	184,085.9	N.A.	N.A.	17,139.9	7,892.5	2,257.6	8,268.8	N.A.
1979	N.A.	235,483.1	N.A.	N.A.	31,685.1	1,691.3	1,940.1	6,725.2	N.A.
1980	N.A.	N.A.	N.A.	N.A.	54,813.2	74.4	3,200.7	3,410.4	N.A.
1981	N.A.	338,544.4	N.A.	N.A.	22,524.3	57,172.1	N.A.	10,850.6	N.A.
1982	N.A.	378,103.7	N.A.	N.A.	39,583.1	34,267.7	N.A.	11,832.5	N.A.
1983	N.A.	355,398.8	N.A.	N.A.	34,038.3	30,945.7	N.A.	82,625.1	N.A.
1984	N.A.	N.A.	N.A.	N.A.	36,289.2	N.A.	N.A.	16,709.5	N.A.
1985	N.A.	387,543.2	N.A.	N.A.	18,959.1	N.A.	N.A.	N.A.	N.A.
1986	N.A.	N.A.	2,103.5	N.A.	20,280.8	N.A.	N.A.	N.A.	N.A.
1987	N.A.	N.A.	4,274.8	N.A.	32,718.2	N.A.	N.A.	N.A.	N.A.
1988	N.A.	N.A.	1,558.7	N.A.	22,290.9	N.A.	N.A.	N.A.	N.A.
1989	N.A.	N.A.	1,562.6	N.A.	28,912.9	N.A.	N.A.	N.A.	N.A.
1990	N.A.	N.A.	1,237.7	N.A.	37,385.9	N.A.	N.A.	N.A.	N.A.
1991	N.A.	N.A.	1,340.0	N.A.	8,168.9	N.A.	N.A.	25,604.3	N.A.
1992	N.A.	N.A.	1,260.4	N.A.	13,602.7	N.A.	N.A.	205,704.5	N.A.
1993	N.A.	N.A.	N.A.	N.A.	27,079.1	43,355.3	N.A.	N.A.	N.A.
1994	N.A.	N.A.	N.A.	N.A.	N.A.	19,445.6	N.A.	N.A.	N.A.

Annex Table 2.1 Continued

Year	Guinea Bissau	Kenya	Liberia	Madagascar	Malawi	Mali	Mauritania	Mauritius	Mozambique
1962	N.A.	N.A.	N.A.	4,886.8	N.A.	4,288.3	893.7	N.A.	N.A.
1963	N.A.	N.A.	274.0	3,707.7	N.A.	6,571.7	1,242.2	N.A.	N.A.
1964	N.A.	N.A.	N.A.	5,800.4	N.A.	8,101.4	1,383.5	N.A.	N.A.
1965	N.A.	N.A.	N.A.	3,156.5	N.A.	13,673.5	2,080.0	N.A.	N.A.
1966	N.A.	N.A.	N.A.	5,123.2	7,265.6	12,018.8	1,592.0	N.A.	N.A.
1967	N.A.	N.A.	2,415.0	10,967.9	6,408.2	13,642.5	2,111.1	N.A.	N.A.
1968	N.A.	N.A.	N.A.	10,160.3	5,554.2	5,820.0	2,941.7	N.A.	N.A.
1969	N.A.	N.A.	N.A.	9,857.5	9,434.1	12,107.9	N.A.	N.A.	N.A.
1970	104.6	21,137.7	2,726.9	9,700.0	9,182.5	21,719.2	5,367.1	301.5	N.A.
1971	183.5	40,061.9	2,569.6	6,943.7	12,921.8	18,303.2	3,365.4	1,796.5	N.A.
1972	178.0	29,317.7	3,779.3	8,048.9	12,312.1	18,926.4	3,960.8	560.0	N.A.
1973	N.A.	44,202.3	3,520.6	9,403.3	15,410.2	N.A.	N.A.	867.6	N.A.
1974	N.A.	60,619.2	4,628.5	8,712.4	21,989.6	22,375.9	N.A.	11,290.7	N.A.
1975	897.4	59,850.1	4,880.6	6,522.0	19,437.3	17,306.1	N.A.	2,229.7	N.A.
1976	831.0	190,119.4	4,990.5	6,467.3	16,360.2	19,708.7	N.A.	1,952.0	N.A.
1977	N.A.	209,172.8	4,166.2	5,275.2	18,985.6	24,059.6	N.A.	3,111.9	N.A.
1978	N.A.	179,925.9	6,830.9	4,103.4	18,271.6	25,438.3	N.A.	4,770.8	N.A.
1979	N.A.	205,349.0	9,672.4	7,633.3	17,633.9	25,695.5	N.A.	N.A.	N.A.
1980	N.A.	313,456.8	11,190.0	5,450.6	36,130.1	53,674.6	N.A.	2,324.5	N.A.
1981	N.A.	310,236.2	10,665.5	4,728.9	39,598.2	N.A.	N.A.	1,267.6	N.A.
1982	N.A.	233,088.5	9,655.9	2,507.5	31,007.5	130,861.1	N.A.	2,044.5	N.A.
1983	N.A.	238,996.0	8,682.9	3,442.1	51,791.5	N.A.	N.A.	1,916.3	N.A.
1984	N.A.	227,365.2	11,732.3	2,734.7	37,182.4	N.A.	N.A.	N.A.	N.A.
1985	N.A.	212,620.4	N.A.	2,297.0	25,861.7	N.A.	N.A.	1,049.9	N.A.
1986	N.A.	230,894.0	N.A.	3,287.9	29,232.4	N.A.	N.A.	2,035.5	N.A.
1987	N.A.	226,314.8	N.A.	N.A.	14,482.9	121,086.8	N.A.	N.A.	N.A.
1988	N.A.	239,168.6	N.A.	N.A.	18,812.1	N.A.	N.A.	4,522.7	N.A.
1989	N.A.	N.A.	N.A.	N.A.	13,214.9	94,054.3	N.A.	7,016.0	N.A.
1990	N.A.	415,820.6	N.A.	19,298.0	22,255.7	240,768.4	N.A.	19,770.4	N.A.
1991	N.A.	226,270.9	N.A.	12,233.5	13,340.2	N.A.	N.A.	30,988.0	N.A.
1992	N.A.	224,300.6	N.A.	13,061.9	N.A.	N.A.	N.A.	31,728.0	N.A.
1993	N.A.	378,727.9	N.A.	12,828.1	N.A.	N.A.	N.A.	55,837.5	N.A.
1994	N.A.	N.A.	N.A.	9,180.9	N.A.	N.A.	N.A.	50,378.2	8,954.0

Annex Table 2.1 Continued

Year	Niger	Nigeria	Rwanda	Sao Tome	Senegal	Seychelles	Sierra Leone	Somalia	Sudan
1962	5,732.0	6,531.9	N.A.	N.A.	3,927.6	N.A.	N.A.	287.4	N.A.
1963	5,439.6	9,559.1	N.A.	N.A.	5,042.4	N.A.	110.1	N.A.	1,235.5
1964	6,777.3	13,577.1	N.A.	N.A.	5,459.2	N.A.	413.2	N.A.	1,737.3
1965	8,220.3	6,914.4	N.A.	N.A.	5,914.9	N.A.	N.A.	N.A.	2,509.0
1966	8,760.2	10,124.8	N.A.	N.A.	9,296.6	N.A.	N.A.	877.2	1,028.5
1967	7,238.6	6,283.7	N.A.	N.A.	6,667.3	N.A.	N.A.	N.A.	130.4
1968	8,489.3	4,888.0	N.A.	N.A.	16,986.4	N.A.	N.A.	N.A.	861.9
1969	6,822.3	7,865.8	N.A.	N.A.	20,888.2	N.A.	N.A.	N.A.	337.9
1970	10,764.3	7,944.1	N.A.	N.A.	34,111.0	N.A.	N.A.	773.8	672.0
1971	13,569.1	26,318.7	N.A.	N.A.	33,927.2	93.9	N.A.	1,096.1	2,616.2
1972	19,030.1	30,280.3	N.A.	N.A.	432,62.7	300.6	655.5	691.5	829.0
1973	20,830.5	50,692.6	N.A.	N.A.	53,361.1	564.0	779.3	2,030.8	2,073.0
1974	17,799.3	157,318.1	N.A.	N.A.	66,118.4	104.8	495.5	1,018.5	7,587.3
1975	26,961.8	150,559.9	N.A.	N.A.	79,936.7	205.5	749.3	2,675.9	6,363.0
1976	35,110.1	194,812.4	N.A.	N.A.	N.A.	269.4	826.8	1,246.4	2,488.6
1977	30,541.4	271,904.6	N.A.	N.A.	138,060.7	268.7	N.A.	1,570.8	N.A.
1978	38,604.6	244,141.5	N.A.	N.A.	107,807.0	287.3	N.A.	775.0	1,673.5
1979	39,555.6	281,946.7	N.A.	N.A.	93,687.6	379.6	N.A.	567.2	591.0
1980	72,224.2	N.A.	N.A.	N.A.	144,250.4	477.3	N.A.	1,487.2	1,451.2
1981	81,471.8	501,649.2	N.A.	N.A.	187,414.5	163.0	N.A.	1,621.5	2,791.6
1982	N.A.	N.A.	N.A.	N.A.	N.A.	156.9	N.A.	658.2	1,464.4
1983	N.A.	292,771.3	N.A.	N.A.	N.A.	49.7	1,664.8	N.A.	N.A.
1984	N.A.	547,121.7	N.A.	N.A.	N.A.	2,456.2	2,650.5	N.A.	711.5
1985	N.A.	44,1506	N.A.	N.A.	N.A.	119.8	N.A.	N.A.	284.9
1986	N.A.	239,191.3	N.A.	N.A.	114,052.3	18.1	N.A.	N.A.	N.A.
1987	N.A.	446,230.6	N.A.	N.A.	111,746.9	25.6	N.A.	N.A.	N.A.
1988	N.A.	N.A.	N.A.	N.A.	N.A.	63.3	N.A.	N.A.	N.A.
1989	N.A.	N.A.	N.A.	N.A.	166,008.1	35.9	N.A.	N.A.	N.A.
1990	N.A.	N.A.	N.A.	N.A.	152,629.1	104.8	N.A.	N.A.	N.A.
1991	N.A.	663,517.8	N.A.	N.A.	91,822.4	473.3	N.A.	N.A.	N.A.
1992	N.A.	N.A.	N.A.	N.A.	132,491.2	1,430.9	N.A.	N.A.	N.A.
1993	N.A.	N.A.	N.A.	N.A.	134,944.6	105.6	N.A.	N.A.	N.A.
1994	N.A.	N.A.	N.A.	N.A.	N.A.	342.3	N.A.	N.A.	N.A.

Annex Table 2.1 Continued

Year	Tanzania	Togo	Uganda	Zaire	Zambia	Zimbabwe
1962	N.A.	1,017.8	N.A.	7,954.3	N.A.	N.A.
1963	N.A.	914.0	N.A.	N.A.	N.A.	N.A.
1964	N.A.	971.8	N.A.	N.A.	N.A.	N.A.
1965	N.A.	901.2	N.A.	5,522.4	N.A.	N.A.
1966	N.A.	1,334.6	N.A.	N.A.	16,188.2	N.A.
1967	N.A.	1,678.6	N.A.	N.A.	13,432.6	N.A.
1968	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1969	N.A.	1,600.3	N.A.	N.A.	N.A.	N.A.
1970	21,228.6	1,616.8	8,350.0	172,850.2	7,548.9	N.A.
1971	26,249.8	2,545.7	6,700.7	N.A.	9,485.8	N.A.
1972	32,380.2	1,586.9	5,145.9	81,783.4	11,208.0	N.A.
1973	16,084.5	2,640.8	9,845.6	92,492	18,512.0	N.A.
1974	13,290.6	4,800.3	8,496.4	153,856.4	37,650.9	N.A.
1975	17,090.3	7,393.4	7,202.2	22,498.4	17,898.9	N.A.
1976	47,496.4	7,052.4	8,844.5	9,083.3	20,677.7	N.A.
1977	21,037.4	7,350.9	N.A.	21,846.9	24,299.9	N.A.
1978	29,229.2	27,956.0	N.A.	11,745.8	36,472.0	N.A.
1979	58,567.4	27,257.6	N.A.	N.A.	30,894.1	N.A.
1980	56,355.1	87,792.3	N.A.	N.A.	N.A.	N.A.
1981	32,542.0	32,837.0	N.A.	N.A.	N.A.	N.A.
1982	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1983	N.A.	41,405.1	N.A.	N.A.	N.A.	N.A.
1984	N.A.	N.A.	N.A.	N.A.	N.A.	93,094.3
1985	N.A.	N.A.	N.A.	N.A.	N.A.	105,176.9
1986	N.A.	14,288.5	N.A.	N.A.	N.A.	116,994.8
1987	21,748.4	24,974.1	N.A.	N.A.	N.A.	N.A.
1988	N.A.	22,875.6	N.A.	N.A.	N.A.	N.A.
1989	N.A.	30,250.8	N.A.	N.A.	N.A.	N.A.
1990	N.A.	39,042.8	N.A.	N.A.	N.A.	247,640.4
1991	N.A.	40,038.2	N.A.	N.A.	N.A.	168,151.1
1992	N.A.	N.A.	N.A.	N.A.	N.A.	173,502.0
1993	N.A.	N.A.	N.A.	N.A.	N.A.	203,961.5
1994	N.A.	N.A.	N.A.	N.A.	N.A.	294,074.8

Source: UN COMTRADE. Data availability as of March 1997.

### III. KEY FEATURES OF AFRICAN INTRA-TRADE

#### Major Message

*Sub-Saharan African Intra-Trade accounts for about 12 percent of the region's total exports - up from about 8 percent in 1989. This chapter identifies five major characteristics of this exchange. First, established regional arrangements have not contributed to this increase as their share of intra-trade was at best static. Second, the relative importance of intra-trade experiences significant changes from year-to-year due to unstable political conditions, factors that adversely affected supply (like droughts and related crop failures), and volatile petroleum and other commodity prices. Third, a relatively few countries dominate this exchange - five (Cote d'Ivoire, Nigeria, Kenya, Zimbabwe and Ghana) originate about three-quarters of all intra-African exports. Fourth, a few primary commodities are of key importance in intra-trade - petroleum alone accounts for about one-third of this exchange and cotton, live animals, maize and cocoa add a further 18 percent. Fifth, growing volumes of intra-industry trade is generally associated with regional integration, but very little of this type of exchange occurs within Africa.*

Given the interest of Sub-Saharan African countries in regional integration, it is surprising that there have been so few objective analyses as to whether trade between these countries could support such initiatives. Clearly, one reason that this issue has not been addressed relates to the major gaps and related problems with African trade statistics. In spite of these data problems, this chapter utilizes the available information - after modifications to maximize its informational content (see Chapter II) - to address key questions concerning the level, trends, direction and composition of intra-African trade. Readers who wish to initiate other research topics on African regional or global trade, but who do not have access to official statistics, may have a special interest in the detailed statistics that are given in the Annex to this chapter.

### A. The Relative Level and Importance of African Intra-Trade

#### Message

*Although Sub-Saharan Africa only accounts for about one percent of world imports, approximately 12 percent of all SSA exports go to other countries in the region. Trade intensity indices, which utilize such statistics, indicate the level of African intra-trade is not lower than what should be expected. Intra-trade expanded in the first half of the 1990s, but the established regional groups were not responsible for this increase. The relative importance of some countries' African intra-trade is highly unstable and the share of this exchange in total imports or exports may vary markedly from year-to-year. Since some economists argue trade instability has a negative effect on prospects for industrialization and growth it is important to determine why these sizeable short-term changes occur.*

Table 3.1 utilizes the International Monetary Fund's DOT statistics to examine the level and share of Sub-Saharan African intra-trade over 1989-95. The top half of the table shows the value of this exchange in each year - export and import statistics are shown separately to check the consistency of the data - while the bottom half of the table shows the share of African intra-trade in these countries' total exports and imports.<sup>1</sup> Although the import statistics are about 10 to 13 percent higher than the export totals, differences of this magnitude are consistent with the fact that transport and insurance costs are included in the former, but are excluded from the export numbers.

The IMF statistics show 1995 intra-trade totalled about \$5.1 billion, or roughly 12 percent of all SSA countries' global exports. However, when data for the African oil exporters (namely, Angola, Congo, Gabon and Nigeria) and all other regional countries are examined separately a somewhat different

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<sup>1</sup>There is an important inter-relation between Africa's export performance and its capacity to sustain regional imports that should be noted - particularly in view of the fact that Africa has experienced massive losses in market share for many of its key exports (Ng and Yeats, 1996). That is, the sluggish export performance of most SSA countries has caused major problems. Imports have been compressed and, given their composition (mainly industrial and investment goods, intermediate products and fuels), capacity utilization and growth have declined notably (Helleiner 1986, Svedberg 1991). This, in turn, has affected the export sector negatively; a vicious circle has been established. To finance imports, most SSA countries have become heavily dependent on official foreign aid. Tied aid and other restrictions placed on this financing often may not allow African countries to source imports from the region.

picture emerges. Intra-African trade of the petroleum exporting countries accounted for only about 5



Table 3.1. The Value and Share of Sub-Saharan African Intra-Trade: 1989 to 1995

Country Group	Trade Flow	1989	1990	1991	1992	1993	1994	1995
		Value of Intra-Trade (\$million)						
All Sub-Saharan Africa	Exports	2,522	3,426	2,967	3,437	3,779	4,229	5,141
Sub-Saharan Oil Exporters		650	764	801	923	968	949	1,054
Sub-Saharan Africa Excluding Oil Exporters		1,872	2,662	2,166	2,514	2,811	3,280	4,087
All Sub-Saharan Africa	Imports	2,942	4,039	3,089	4,392	4,286	4,760	5,740
Sub-Saharan Oil Exporters		133	187	296	394	402	400	461
Sub-Saharan Africa Excluding Oil Exporters		2,809	3,852	2,793	3,998	3,884	4,360	5,279
		Share of Intra-Trade in Total Exports or Imports (%)						
All Sub-Saharan Africa	Exports	8.63	9.81	9.63	9.33	10.93	11.45	12.12
Sub-Saharan Oil Exporters		5.27	4.80	6.15	5.09	5.77	5.70	5.93
Sub-Saharan Africa Excluding Oil Exporters		11.10	13.99	12.19	13.45	15.79	16.19	16.57
All Sub-Saharan Africa	Imports	9.57	11.52	9.22	10.42	11.46	13.10	12.94
Sub-Saharan Oil Exporters		2.15	2.45	3.29	2.92	3.77	4.92	4.96
Sub-Saharan Africa Excluding Oil Exporters		11.44	14.05	11.40	13.96	14.53	15.46	15.06

\*The oil exporting countries are Angola, Congo, Gabon and Nigeria

Source: International Monetary Fund Direction of Trade Statistics

percent of their total exports while the corresponding share was almost three times higher (16.57 percent) for the non-oil exporting countries.

Over the seven year period covered by Table 3.1 the relative importance of regional intra-trade rose by about three and one-half percentage points, from 8.6 to 12.1 percent as measured by exports, with the increase mainly attributable to the non-oil exporters.<sup>2</sup> At these levels is intra-SSA trade significantly lower, or higher, than what should be expected on the basis of some objective standard? There is some indication that the levels of intra-African trade are not below normal levels. For example, Foroutan and Pritchett (1993) employed a gravity flow model to predict the level of trade that should occur based on African countries distance from each other, the relative size of their economies as measured by gross domestic product, and other economic characteristics. For the 19 Sub-Saharan countries in their sample, the median Sub-Saharan African share of intra-trade in imports and exports was an average (median) of 8.1 percent while the gravity flow model predicted a slightly *lower* median of 7.5 percent. Trade intensity indices also indicate that African intra-trade is somewhat higher than what should be expected. That is, the fact that SSA countries account for about one to two percent of global imports - yet 12 percent of African exports are destined for the region - are consistent with Foroutan and Pritchett's conclusion that the level of intra-trade is not lower than what should be expected.<sup>3</sup>

Have the established regional economic groups been a significant factor behind the trade changes which occurred? This is potentially a very important question. Some African regional groups have been

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<sup>2</sup>Amjadi, Reincke and Yeats (1996, Table 1) provide details on the geographic destinations of Sub-Saharan African exports, both for the region as a whole and for individual SSA countries. Overall, 80 percent of African exports go to OECD countries - 51 percent go to the European Union while the United States and Canada account for an additional 24 percent.

<sup>3</sup>The trade intensity index takes the ratio of the share of a given country's exports to a partner to the share of the partner in global imports. If this ratio exceeds unity the countries are said to have an above average tendency to trade with each other (see Braga, Safadi and Yeats (1994) for an application within the context of regional trade arrangements). The fact that 12 percent of SSA exports go to the region, while the latter account for about one percent of global imports suggests intra-trade is higher than what should be expected.

in existence for as long as two decades. If they have had a measurable positive impact on intra-trade this finding may support further initiatives for regional trade arrangements. If not, it calls into question why the RTAs have had no impact and whether further efforts to extend these arrangements are warranted.

In spite of the considerable time and effort that went into their design and implementation, Table 3.2 shows the eight major established African regional groups (i.e., Economic Community of West African States (ECOWAS), Central African Customs Union (UDEAC), etc. - see the notes to Table 3.2 for the full official names of these arrangements) have not contributed to this expansion as the share of intra-trade within these arrangements has basically been static or has even declined. Furthermore, the share of intra-trade within all the regional groups is below the 12 percent average for SSA as a whole with CEPGL, ECCAS, MRU and UDEAC all recording intra-trade shares of under 5 percent.<sup>4</sup>

The incentives to join, and the eventual success or failure of a regional trade arrangement, may be influenced by the relative importance of the intra-trade of perspective partners. For example, if a country's major trading partners are not part of the arrangement it may be forced to pursue monetary, transport, communications, and other policies that support this exchange - possibly to the detriment of trade with other members. The available statistics on individual African countries' intra-trade show major differences exist in the relative importance of this exchange as a share of total (global) exports, and its share in exports may vary markedly from year-to-year. For example, Table 3.3 shows intra-trade accounted for less than 2 percent of Ghana's total exports in 1989 yet, in this same year, its share in Djibouti's exports exceeded 55 percent. In 1995, 15 of the 41 SSA countries reported intra-trade

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<sup>4</sup>Several useful studies examined the impact of African regional arrangements on member countries' intra-trade, and also discussed the reasons why they have had so little influence. Lipumba and Kasekende (1991) determined that any observed increases in intra-Preferential Area for Eastern and Southern Africa (PTA) trade between 1980 and 1988 did not arise because of the implementation of the PTA program but were attributable to other factors. Furthermore, Ariyo and Raheem (1991) argued that ECOWAS major failure was its inability to increase the volume of intra-member trade noting that "member states still actively engaged in trade with developed countries in Europe and America, even in commodities that could be supplied within the sub-region." Roelfson (1989) also noted a failure for intra-PTA trade to increase in products that could be supplied by member countries.

Table 3.2. The Value and Share of Intra-Trade in Regional Sub-Saharan African Groups.

Regional Group*	1970	1980	1985	1990	1992	1993
	Value of intra-trade in US\$ millions					
CEPGL	3	2	9	7	12	14
ECCAS	29	98	118	168	156	169
ECOWAS	86	693	1,026	1,539	1,501	1,699
MRU	1	7	4	3	1	1
PTA	306	693	407	837	676	746
SADC	100	107	198	356	299	338
UDEAC	22	84	85	139	120	129
UEMOA	54	476	431	625	502	578
	Intra-trade as a percentage of total exports of the group (%)					
CEPGL	0.4	0.1	0.8	0.5	0.7	1.1
ECCAS	2.4	1.5	2.1	2.2	2.1	2.5
ECOWAS	3.0	10.2	5.3	7.9	7.4	8.6
MRU	0.2	0.8	0.4	0.1	0.0	0.0
PTA	9.6	12.1	5.5	7.6	6.0	7.0
SADC	5.2	5.1	4.7	5.2	4.2	5.1
UDEAC	4.9	1.8	1.9	2.3	2.1	2.3
UEMOA	6.4	9.9	8.7	12.0	9.3	10.4

\*CEPGL - Economic Community of the Great Lakes Countries (Burundi, Rwanda and Zaire)

ECCAS - Economic Community of Central African States (Burundi, Cameroon, Central African Republic, Chad, Congo, Equatorial Guinea, Gabon, Rwanda, Sao Tome and Principe, Zaire).

ECOWAS - Economic Community of West African States (Benin, Burkina Faso, Cape Verde, Cote d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo).

MRU (Mano River Union) - Guinea, Liberia, Sierra Leone).

PTA - Preferential Trade Area (Angola, Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Somalia, Sudan, Swaziland, Uganda, Tanzania, Zambia, Zimbabwe -- data for Namibia and Swaziland are unavailable).

SADC - Southern African Development Community (Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, Swaziland, South Africa, Tanzania, Zambia, Zimbabwe - data were unavailable for Botswana, Lesotho and Swaziland)

UDEAC - Central African Customs and Economic Union (Cameroon, Central African Republic, Chad, Congo, Equatorial Guinea, Gabon)

UEMOA - West African Economic and Monetary Union (Benin, Burkina Faso, Cote d'Ivoire, Mali, Niger, Senegal, Togo).

Source: Compiled from IMF, *Direction of Trade* and United Nations, *Yearbook of International Trade Statistics*, (various issues)

accounted for less than 5 percent of their total exports (Equatorial Guinea and the Comoros actually reported no intra-trade), while in 7 cases this share exceeded 20 percent - and reached a high of 77 percent in the case of Djibouti (COMTRADE records show these latter shipments largely consisted of exports of textile waste to Ethiopia and of rice to Somalia). Wide swings in the data are also evident over fairly short time periods. For example, Table 3.3 shows intra-trade accounted for less than 2 percent of Ghana's exports in 1989, but this share rose to over 20 percent only six years later. Similarly, the share of Cape Verde's intra-trade fell from 57 to 14 percent over the same period, and from 15 to about 1 percent in the case of Gabon.<sup>5</sup> As might be expected, the special situation of the ten land-locked African countries (identified in Table 3.3 with an asterisk) causes their intra-trade shares to be somewhat higher - about two and one half percentage points above average for all Sub-Saharan Africa.<sup>6</sup>

Similar patterns emerge from the corresponding import statistics (see Appendix Table 3.1) although the average intra-trade share for the land-locked countries is reported to be about 5 percentage points higher than average. As was the case with exports, there is a rather wide range in the importance of this trade to individual countries. Zimbabwe, for example, reports that only 4 percent of all imports originated in other SSA countries while over one-half of Tanzanian and Mali's imports originate in other

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<sup>5</sup>Appendix Table 3.1 shows the share of intra-trade in some individual African countries' imports is just as volatile as that on the export side. For example, in 1989 Benin obtained about 23 percent of its total exports from other African countries, as opposed to less than 3 percent in 1995. Over the same period the share of intra-trade in Senegal's imports fell from 20 to about 5 percent, while the corresponding shares for Somalia rose from 7 to 44 percent. Since it has been argued that "instability in exports (or imports) may be detrimental to developing countries industrialization and growth - see UNCTAD (1976), Maizels (1976) or Massel (1970) - it is important to determine what factors are responsible for these wide short-term changes.

<sup>6</sup>There is reason to believe land-locked African countries have higher intra-trade shares for two reasons. First, problems in accessing international ports due to difficult inland transportation may force them to rely more heavily on direct trade with neighboring states. Second, land-locked countries may not know the final destination of some of their exports, or the true source of their imports, and record the country(s) of transit as the importer. Livingston (1986) provides a useful analysis of the nature and level of transport costs of land-locked African countries.

Table 3.3. The Value and Share of Intra-Trade in Individual African Countries' Exports: Selected Years

Exporter	Value of Total Exports (\$million)				Share of Intra-Trade in Total Exports (%)			
	1989	1991	1993	1995	1989	1991	1993	1995
Angola	2,881	3,097	2,978	3,324	1.6	0.1	0.1	0.2
Benin	77	46	136	214	22.1	13.0	6.6	15.0
Burkina Faso*	97	106	176	203	23.7	18.9	18.2	22.2
Burundi	78	92	152	242	14.1	13.0	7.9	7.4
Cameroon	1,282	1,909	1,683	2,138	15.4	8.7	12.3	15.4
Cape Vert	7	5	12	14	57.1	20.0	8.3	14.3
Cent. African Rep.*	125	109	110	187	0.8	4.6	4.5	4.3
Chad*	69	94	67	140	2.9	3.2	13.4	2.9
Comoros	26	28	54	11	0.0	3.6	0.0	0.0
Congo	910	1,118	1,240	1,360	1.8	1.4	1.5	1.5
Cote d'Ivoire	2,807	2,777	3,164	4,541	18.7	29.7	30.0	28.2
Djibouti	48	95	110	108	56.3	45.3	51.8	76.9
Equatorial Guinea	34	37	36	92	0.0	0.0	0.0	0.0
Ethiopia*	458	167	243	452	6.6	5.4	4.5	5.3
Gabon	409	697	917	1,416	14.7	5.6	3.2	1.3
Gambia	138	166	153	65	5.1	5.4	7.8	16.9
Ghana	1,035	617	1,203	1,662	1.8	4.2	20.0	20.1
Guinea	573	653	704	800	6.1	5.7	5.5	5.8
Guinea-Bissau	8	31	29	95	25.0	6.5	10.3	4.2
Kenya	970	1,015	1,275	1,932	24.5	16.5	30.2	29.6
Madagascar	316	305	253	572	10.8	10.8	11.1	7.5
Malawi*	276	468	378	439	8.3	6.8	7.4	10.9
Mali*	192	267	227	243	7.8	4.5	7.9	6.6
Mauritania	451	521	424	591	8.9	7.5	13.4	14.2
Mauritius	986	1,195	1,303	1,452	2.9	4.3	3.4	4.0
Mozambique	219	395	199	241	2.7	3.0	4.5	7.1
Niger*	289	228	234	161	2.4	7.0	6.4	12.4
Nigeria	8,145	8,112	11,632	11,664	6.5	9.2	7.9	8.7
Reunion	144	131	150	178	5.6	8.4	6.7	5.6
Rwanda	95	91	100	154	3.2	1.1	5.0	0.6
Senegal	794	651	530	577	16.4	12.4	22.5	19.8
Seychelles	117	125	79	113	31.6	33.6	29.1	35.4
Sierra Leone	115	163	102	102	0.9	1.2	2.9	4.9
Somalia	120	98	121	155	0.8	1.0	1.7	1.3
Sudan	603	362	352	507	0.2	0.3	0.0	0.4
Tanzania	257	413	494	719	3.1	10.7	14.0	12.7
Togo	247	267	204	360	12.7	15.7	22.1	15.6
Uganda*	275	175	135	482	1.8	1.1	5.9	11.8
Zaire	1,539	1,607	998	1,471	1.8	1.7	2.1	1.8
Zambia*	663	1,076	891	1,128	9.2	11.7	5.2	8.1
Zimbabwe*	1,340	1,288	1,327	2,129	19.8	20.0	21.9	24.1
All Above	29,213	30,797	34,575	42,434	8.6	9.6	10.9	12.1
<b>Memo Item</b>								
All Land-Locked Countries	3,784	3,978	3,788	5,564	11.4	12.1	12.2	14.8

\* Indicates the country is land-locked.

Source: International Monetary Fund, Direction of Trade Statistics

African countries. Part of the explanation seemingly involves the export potentials of neighboring countries. Zimbabwe relies heavily of the South African Customs Union for imports while Kenya - which has one of the broadest export bases of the African countries - is a major supplier of Tanzania's imports.

One additional point should be noted concerning the implications of the wide variation that exists in the share of individual country's imports that come from regional suppliers. Many African governments rely heavily on tariffs and other trade taxes for their operating revenues and have expressed concerns that their liberalization, on a regional or general basis, would cause major fiscal problems. The fact regional import shares vary so widely for the countries in Appendix Table 3.1 suggests the initial fiscal impact of any regional exchange of preferences would have quite different national impacts. The consequences for countries like Angola, Benin, or the Congo - where less than 5 percent of all imports originate in other SSA countries - would in all likelihood be minor. However, for Mali, the Seychelles, or Tanzania, where 50 percent or more of all imports come from the region, the consequences would probably be far more important.

#### B. The Origins and Destinations of Intra-Trade

##### Message

*The origins of exports in African intra-trade are highly concentrated. The Coté d' Ivoire alone accounts for one-quarter of all exports, while Nigeria originates about one-fifth of this exchange. On the import side, the importance of intra-regional trade varies markedly across countries - it accounts for less than 2 percent of Kenya's imports to over 50 percent in the case of the Seychelles. The fact that very little or no intra-trade occurs between countries that are "geographically distant" (like those of the East as opposed to the West Coast of Africa) may indicate that transport and other logistical barriers to intra-trade are more important than is often acknowledged.*

Table 3.4 provides a different perspective on the origins of African intra-trade by showing the value of individual SSA country's exports to other regional countries and the share of these shipments

Table 3.4. The Origins of Exports in Sub-Saharan Countries Intra-Trade

Exporter	1989-91 Average Exports (\$million)	Share of Total (%)	Cumulative Share (%)	1993-95 Average Exports (\$million)	Share of Total (%)	Cumulative Share (%)
Cote d' Ivoire	732.0	24.6	24.6	1,094.3	25.0	25.0
Nigeria	646.7	21.8	46.4	945.3	21.6	46.6
Kenya	275.0	9.3	55.6	473.3	10.8	57.4
Zimbabwe*	288.0	9.7	65.3	407.3	9.3	66.7
Ghana	25.3	0.9	66.2	283.0	6.5	73.1
Cameroon	182.7	6.1	72.3	263.0	6.0	79.1
Senegal	123.0	4.1	76.4	109.3	2.5	81.6
Tanzania	29.0	1.0	77.4	78.3	1.8	83.4
Zambia*	75.7	2.5	80.0	71.0	1.6	85.0
Mauritania	35.0	1.2	81.1	70.0	1.6	86.6
Djibouti	35.0	1.2	82.3	69.0	1.6	88.2
Mauritius	41.0	1.4	83.7	50.0	1.1	89.3
Togo	38.7	1.3	85.0	49.3	1.1	90.5
Guinea	41.0	1.4	86.4	42.0	1.0	91.4
Malawi*	32.3	1.1	87.5	38.3	0.9	92.3
Burkina Faso	25.7	0.9	88.3	38.0	0.9	93.2
Seychelles	36.3	1.2	89.6	35.7	0.8	94.0
Madagascar	34.3	1.2	90.7	35.0	0.8	94.8
Uganda*	3.7	0.1	90.8	24.7	0.6	95.3
Zaire	53.3	1.8	92.6	22.3	0.5	95.8
Gabon	55.0	1.9	94.5	21.7	0.5	96.3
Congo	15.0	0.5	95.0	18.3	0.4	96.8
Niger*	12.3	0.4	95.4	17.3	0.4	97.1
Benin	20.3	0.7	96.1	16.3	0.4	97.5
Ethiopia*	25.3	0.9	96.9	16.0	0.4	97.9
Mali	17.7	0.6	97.5	15.7	0.4	98.2
Burundi	9.7	0.3	97.9	14.7	0.3	98.6
Mozambique	8.0	0.3	98.1	13.0	0.3	98.9
Gambia	9.3	0.3	98.4	10.7	0.2	99.1
Reunion	9.7	0.3	98.8	9.3	0.2	99.3
Cent. African Rep.*	2.7	0.1	98.9	5.7	0.1	99.5
Chad*	2.0	0.1	98.9	5.7	0.1	99.6
Angola	21.7	0.7	99.7	5.0	0.1	99.7
Sierra Leone	1.3	0.0	99.7	4.0	0.1	99.8
Guinea Bissau	1.7	0.1	99.8	3.3	0.1	99.9
Rwanda	2.0	0.1	99.8	2.3	0.1	99.9
Somalia	1.0	0.0	99.9	2.0	0.0	100.0
Cape Vert	1.7	0.1	99.9	1.7	0.0	100.0
Sudan	1.0	0.0	99.9	1.0	0.0	100.0
Comoros	0.3	0.0	100.0	0.0	0.0	100.0
Equatorial Guinea	0.3	0.0	100.0	0.0	0.0	100.0
All Above	2,971.7	100.0	100.0	4,383.0	100.0	100.0

\* Indicates the country is land-locked.

Source: Compiled from IMF. **Direction of Trade Statistics.**



in all regional exports. These data are ranked on the basis of each country's average 1993-95 export values, while similar 1989-91 data are presented for comparison. One important point reflected in these statistics concerns the very high degree of concentration that exists in the origins of intra-African exports.<sup>7</sup> In the 1993-95 period, five countries (Cote d'Ivoire, Nigeria, Kenya, Zimbabwe and Ghana) originated almost three-quarters of all exports and their combined shares increased by almost 7 percentage points from their 1989-91 levels. The Cote d'Ivoire alone accounted for one-quarter of all regional exports while Nigeria originating more than one-fifth of the total. In contrast, over one-half of all the African countries individually accounted for less than one-half of one percent of total intra-trade. Box 3.1 presents similar data on the origins and destinations of the South African Custom Union's trade.

If one examines the corresponding statistics on African imports a somewhat different pattern is observed (see Appendix Table 3.2). Although the Cote d'Ivoire again is the leader in this exchange accounting for about 16 percent of all intra-regional imports, it is not as prominent as in the case of exports. The overall country-import profile for SSA intra-trade is much less concentrated. That is, although five countries originated three-quarters of all exports, the 16 largest importers account for a similar share. Furthermore, the composition of the major exporters and importers is considerably different as only Cote d'Ivoire appears in the top five countries in both lists. Nigeria, which is the second largest exporter in intra-trade, ranks eleventh as an import market. The IMF data shows Mali is the second largest importer accounting for about 10 percent of all intra-African imports, but is in 26th place among the exporters with only four-tenths of a percent of this exchange.

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<sup>7</sup>Related tests with UN COMTRADE statistics revealed one disturbing point - African countries may not know who their partners really are in some intra-trade. Specifically, when the available UN export data were matched with similar statistics for the (purported) partners imports major discrepancies were noted. In roughly one quarter of the cases where exporters were reporting shipments to a specific African country the partner failed to report any corresponding imports. These tests accent the need for improving the quality of the African trade data which was stressed in Chapter 2.

**Box 3.1**  
**The Relative Importance of the Republic of South Africa in the Regional Exports and Imports of Selected Sub-Saharan African Countries**

In 1995 the South Africa Customs Union exported approximately \$3.4 billion to other SSA countries which made it the largest regional trader (see Chapter 2). The sheer size of both its global and regional trade indicates that SACU has a potentially important role to play in regional trade initiatives. An examination of the relative importance of the Union in the total regional trade of individual African countries provides further evidence relating to this point.

The following tabulations, which are based on the IMF's *Direction of Trade Statistics*, show the total 1995 regional exports and imports of selected SSA countries as well as the share of this exchange that involves the South African Customs Union. One should bear in mind an important historical point concerning SACU's trade with other African countries. Prior to the early 1990s, trade with South Africa was subject to a United Nations sponsored embargo that prevented the development of contacts between SACU and other African and non-regional countries. Such contacts and the identification of opportunities for trade, as well as the development of the necessary infra-structure for its support, will require time to evolve fully. While trade between SACU and the region has expanded rapidly since the embargo was lifted, it should be expected that additional opportunities will be identified as African countries become more familiar with mutual export potentials and import needs.

Sub-Saharan African Country	All Exports to the Region (\$million)	SACU's Share (%)	All Imports from the Region (\$million)	SACU's Share (%)
Zimbabwe	799	35.9	901	90.7
Kenya	581	1.7	310	81.6
Mozambique	49	65.3	665	80.6
Mauritius	63	7.9	267	77.2
Angola	12	50.0	169	70.4
Zambia	110	17.3	279	69.2
Malawi	112	57.1	372	63.7
Zaire	148	82.4	343	39.8
Sudan	3	33.3	73	26.0
Tanzania	96	5.2	305	23.0
Congo	20	5.0	51	21.6
Burundi	18	5.6	60	15.0
Ghana	342	2.3	512	6.1
Ethiopia	16	0.0	102	5.9
Cameroon	278	0.7	117	4.3

Given these caveats, the available data show that South Africa has already become an important supplier of some countries regional imports and, to a lesser extent, the destination of their exports. Zimbabwe, Kenya, Mozambique, Mauritius and Angola now source 70 percent or more of all regional imports from SACU while over one-half of Mozambique's, Malawi and Zaire's exports go to the Union. A further notable point is the high share (82 percent) of Kenya's regional imports that originate in South Africa. Since African statistics show intra-trade is generally concentrated among neighboring countries, the reasons why these "geographically distant" partners have been able to expand trade contacts to this extent warrants further analysis.

The implications of these statistical comparisons are that substantial imbalances exist in the intra-trade of many African countries. Cote d'Ivoire exported \$1.1 billion to the region in the 1990s, but reported imports of less than one-half this amount. Similarly, Nigeria reported regional exports of \$660 million, but its corresponding imports were only about one-sixth this level. Such disparities may indicate that the tariff revenue losses associated with an exchange of regional trade preferences could fall very unevenly on participating countries. One recent study, for example, that such wide differences would occur in the customs revenue losses for Kenya, Tanzania and Uganda that an attempt to revive the previously failed East African Common Market did not appear to be politically feasible (Yeats 1997c).

Table 3.5 provides a different perspective on intra-African trade by showing what the UN COMTRADE data report as both the origins and destinations of this exchange in the 1990s. United Nations statistics were used for these tabulations since they identify smaller individual trading partners (which may be aggregated to one "all other" entry in the IMF data).<sup>8</sup> The top row in this table shows the value of each country's exports to all of Sub-Saharan Africa, while the entries under these totals indicate the shares going to individual African importers. For example, Cameroon exported a total of \$168 million to other African countries, with 21 percent of this total going to Nigeria, and 18 percent destined for Gabon. The Congo exported \$20 million to all other SSA countries - almost one-half these shipments went to Angola. Given the generally poor access many African countries have to "distant" markets trade which involves cross-border movements of goods is identified with as asterisk. Appendix Table 3.3 provides similar information on the reported origins of individual African countries' imports.

Two points emerge from the statistics in Table 3.5. First, although exceptions exist, cross-border trade generally accounts for a high share of intra-African exports. This exchange involves 70 percent, or more, of the exports of the Cameroon, Kenya and Zimbabwe and actually exceeds 80 percent

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<sup>8</sup>The statistics in Table 3.5 are for the latest year in the 1990s that each individual country reported to UN COMTRADE. See Chapter II for a description of how this information was tabulated.

Table 3.5. The Destination of Sub-Saharan African Countries' Intra-Regional Exports in the 1990s

Partner	Value of exports to Sub-Saharan Africa (\$000)								
	Angola	Cameroon	Congo	Djibouti	Ethiopia	Gabori	Ghana	Kenya	Madagascar
Sub-Saharan Africa	38,089	168,016	20,275	1,260	27,079	18,713	205,705	378,728	9,181
	Share of total intra-trade (%)								
Angola	--	0.03	48.70	0.00	0.00	10.62	2.36	0.01	0.01
Benin	0.00	0.07	0.58	0.00	0.00	7.12	0.03	0.00	0.03
Burkina Faso	0.00	0.36	0.05	0.00	0.00	0.11	0.03*	0.02	0.20
Burundi	0.00	0.00	0.00	0.00	0.00	0.00	0.00*	1.99	0.19
Cameroon	23.18	--	0.05*	0.00	0.00	3.20*	0.02	0.03	0.00
Cape Verde	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cent. Afr. Rep.	0.00	17.47*	0.12*	0.00	0.00	0.00	0.00	0.00	0.00
Chad	0.00	6.81*	0.98	0.00	0.30	0.00	0.00	0.00	0.00
Comoros	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41	16.02
Congo	0.00	9.26*	--	0.00	0.00	0.81*	0.02	0.01	0.05
Djibouti	0.00	0.00	0.00	--	89.91*	0.00	0.00	0.91	0.26
Ethiopia	0.00	0.00	0.00	41.52*	--	0.00	0.24	7.84*	0.17
Eq. Guinea	0.00	17.96*	0.00	0.00	0.00	1.86*	0.00	0.01	0.00
Gabon	0.00	18.19*	0.57*	0.00	0.00	--	0.06	0.00	1.42
Gambia	0.00	0.01	0.00	0.00	0.00	4.17	0.01	0.01	0.00
Ghana	0.00	0.33	0.35	0.00	0.00	0.11	--	0.11	0.00
Guinea	0.00	1.21	3.38	0.00	0.00	21.13	0.00	0.00	0.00
Guinea Bissau	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Cote D'Ivoire	0.00	2.23	0.73	0.00	0.00	1.28	32.79*	0.04	0.48
Kenya	0.00	0.00	0.00	5.81	0.06*	0.03	0.04	--	1.35
Liberia	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.06	0.00
Madagascar	0.00	0.00	0.18	0.00	0.00	0.59	0.00	0.14	--
Malawi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.11
Mali	0.00	0.02	0.17	0.00	0.00	0.12	0.00	0.02	0.03
Mauritania	0.00	0.13	0.57	0.00	0.00	0.00	0.00	0.16	0.00
Mauritius	0.00	0.01	0.00	0.00	0.00	0.00	0.00	2.56	69.16
Mozambique	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	1.81
Niger	0.00	0.08	0.05	0.00	0.00	0.03	0.00	0.00	0.16
Nigeria	47.59	20.77*	0.63	0.00	0.00	0.46	20.44	9.60	0.63
Rwanda	0.00	0.00	0.00	0.00	0.00	0.11	0.00	6.15	0.00
Sao Tome & Prn.	2.96	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Senegal	0.00	2.52	0.42	0.00	0.00	1.80	0.00	0.00	0.38
Seychelles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	6.97
Sierra Leone	0.00	0.03	0.00	0.00	0.00	2.47	0.02	0.02	0.00
Somalia	0.00	0.00	0.00	52.68*	0.00	0.03	0.00	10.51*	0.01
Sudan	0.00	0.00	0.00	0.00	9.71	0.00	0.00	7.59*	0.00
Tanzania	23.99	0.26	0.00	0.00	0.00	0.00	0.00	23.70*	0.34
Togo	0.00	0.54	1.18	0.00	0.00	14.88	43.77	0.02	0.08
Uganda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.38*	0.00
Zaire	2.28*	1.61	40.54*	0.00	0.00	29.05	0.00	2.65	0.10
Zambia	0.00*	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00
Zimbabwe	0.00	0.00	0.75	0.00	0.01	0.00	0.15	1.04	0.04

\*The two countries share a common land border

Source: UN COMTRADE Statistics

Table 3.5. Continued

Partner	Value of exports to Sub-Saharan Africa (\$000)								
	Malawi	Mali	Mauritius	Nigeria	Senegal	Seychelles	Togo	Zimbabwe	All SSA
Sub-Saharan Africa	13,340	240,768	50,378	663,518	134,945	342	40,038	294,075	2,304,459
	Share of total intra-trade (%)								
Angola	2.04	0.00	0.03	0.02	0.10	0.00	0.00	3.62	1.22
Benin	0.00	0.00	0.00	0.19*	7.58	0.00	12.75*	0.01	0.79
Burkina Faso	0.00	0.55*	0.08	0.02	2.80	0.00	14.24*	0.00	0.51
Burundi	14.77	0.00	4.37	0.00	0.00	0.00	0.00	1.16	0.66
Cameroon	0.44	0.00	0.12	11.79*	5.37	0.00	0.08	0.02	4.13
Cape Verde	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.02	0.01
Cent. Afr. Rep.	0.00	0.00	0.02	0.00	0.91	0.00	0.15	0.00	1.33
Chad	0.00	0.00	0.00	1.25*	1.08	0.00	0.02	0.00	0.93
Comoros	0.00	0.00	4.84	0.02	0.00	0.00	0.00	0.00	0.41
Congo	0.15	0.00	0.09	0.03	4.35	0.00	2.31	0.00	0.99
Djibouti	0.00	0.00	0.08	0.00	0.02	0.00	0.00	0.00	1.21
Ethiopia	0.06	0.00	0.00	0.00	4.54	0.00	0.00	0.06	1.61
Eq. Guinea	0.00	0.00	0.00	0.16	0.03*	0.00	0.03	0.00	1.37
Gabon	1.39	0.01	0.01	3.09	3.01	0.00	1.33	0.00	2.44
Gambia	0.00	0.00	0.00	0.06	9.31*	0.00	0.00	0.01	0.60
Ghana	0.00	0.02	0.00	28.63	0.29	0.00	7.17*	0.82	8.54
Guinea	1.18	0.49*	0.01	1.94	8.75*	0.00	0.47	0.00	1.43
Guinea Bissau	0.00	0.00	0.00	0.00	2.28	0.00	0.00	0.00	0.14
Cote D'Ivoire	0.12	72.94*	0.01	44.92	9.90	0.00	1.40	0.01	24.28
Kenya	1.56	0.00	4.03	0.30	0.44	1.26	0.00	4.90	0.85
Liberia	0.00	0.00	0.00	0.10	0.62	0.00	0.16	0.00	0.08
Madagascar	0.00	0.00	61.91	0.04	0.07	0.03	0.00	0.00	1.40
Malawi	0.00	0.00	2.38	0.00	0.00	0.00	0.00	26.62	3.54
Mali	0.00	0.00	0.00	0.05	23.22*	0.00	1.89	0.01	1.41
Mauritania	0.00	0.00*	0.00	0.00	9.19*	0.00	0.00	0.00	0.58
Mauritius	0.71	0.00	0.00	0.00	0.00	98.57	0.00	1.96	0.97
Mozambique	7.28*	0.00	2.04	0.00	0.00	0.00	0.16	20.69*	2.76
Niger	0.00	0.08*	0.02	0.38*	0.22	0.00	8.28	0.01	0.28
Nigeria	1.28	0.00	0.06	0.00	2.81	0.00	48.50	0.23	5.28
Rwanda	3.40	0.00	2.19	0.03	0.00	0.00	0.00	0.53	1.16
Sao Tome & Prn.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.07
Senegal	0.73	25.90*	0.07	0.02	0.00	0.00	0.64	0.02	2.94
Seychelles	0.00	0.00	5.72	0.00	0.00	0.00	0.00	0.15	0.27
Sierra Leone	0.00	0.00	0.00	0.89	1.59	0.00	0.17	0.01	0.38
Somalia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76
Sudan	0.05	0.00	0.00	0.03	0.00	0.15	0.23	0.16	1.40
Tanzania	14.76*	0.00	0.29	0.00	0.03	0.00	0.00	8.58	5.50
Togo	0.00	0.01	0.01	0.32	1.20	0.00	0.00	0.00	4.24
Uganda	0.48	0.00	1.32	0.00	0.01	0.00	0.90	1.76	5.25
Zaire	6.87	0.00	0.04	5.69	0.23	0.00	0.01	6.23	3.67
Zambia	20.86*	0.00	1.20	0.00	0.00	0.00	0.00	22.33*	3.12
Zimbabwe	21.88	0.00	9.06	0.02	0.00	0.00	0.00	0.00	0.52

\*The two countries share a common land border

Source: UN COMTRADE Statistics

for Djibouti, Ethiopia and Kenya.<sup>9</sup> (All bilateral trade flows which involve African countries sharing a common border is identified in the table with an asterisk.) Proximity also appears to be a factor behind the geographic pattern of trade reflected in the figures. For example, none of Zimbabwe's exports go to "distant" countries like Chad, Central African Republic, Liberia, or Somalia. Similarly, none of Ghana's exports go to Mauritius, Mozambique, Tanzania or Uganda. The general lack of functional inland transport is no doubt a factor, as is the North-South pattern of established liner routes.<sup>10</sup>

These observations lead to a key question - just how large is the country base for any potential expansion of intra-African trade? This issue is important since one needs to know whether increased trade opportunities from RTAs would likely occur only with neighboring countries, or whether expanded trade might also be expected with those that are "geographically distant." If existing infrastructure and institutional constraints limit expanded trade opportunities to fairly narrowly defined sub-regions and specific groups of countries, the argument that regional arrangements can help Africa overcome problems associated with the small size of domestic markets becomes less compelling.

To provide relevant empirical information several tabulations involving the direction of intra-SSA trade flows were made. First, two groups of African countries were selected - those that bordered the Atlantic Ocean (that is, West Africa) and those that bordered the Indian or Pacific Ocean (East Africa).

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<sup>9</sup>Several anomalies show up in the statistics - such as the high share (48 percent) of Angola's exports destined for Nigeria. The Angolan COMTRADE statistics indicate these shipments consist of crude petroleum - an item in which Nigeria is a major net exporter. However, the Nigerian COMTRADE data fail to record any corresponding imports from Angola. One possibility is that crude petroleum exports from the latter were originally sent to Nigeria for refining, but were diverted to other destinations en route. Such diversions may often occur in crude petroleum trade.

<sup>10</sup>The conflict between African regional integration proposals and the established pattern of liner conference routes, as well as a lack of adequate land transport, is a problem whose magnitude has often been neglected in the policy debate. Liner routes may tie one or more African countries directly to a metropolitan center, a fact which makes intra-trade between (say) East and West Africa very costly and complicated. For goods that cannot be shipped by air freight, the intra-trade of countries not on a common liner route (and which cannot utilize bulk carriers or tramps) may involve shipment to a metropolitan center, like London, where the goods must be "off-loaded" and then re-exported back to Africa. Amjadi and Yeats (1995) show how the inappropriate anti-competitive transport policies adopted by many African countries have inflated their international transport costs which, in turn, adversely influences their export prospects.

Excluded from the two groups were all countries that did not have one of the two coastal borders (that is, countries like Chad, Zimbabwe, and Zambia). Next, the share of all West African regional exports destined for: (i) other West African countries, and (ii) countries in the East African group were tabulated, as were the corresponding data for the East African countries.

These results showed that a surprisingly high level of sub-regional concentration in intra-African trade exists, with some countries in East Africa having little or no trade contacts with the West. The same pattern of geographically concentrated exports occurs for the West African countries. For example, West African countries like Cameroon, Congo, Gabon, Ghana or Togo all send less than three-tenths of one percent of their total SSA exports to East Africa. On average, over three-quarters of their intra-African exports go to other countries which border the Atlantic. Similarly, countries in East Africa - like Djibouti, Ethiopia, and the Seychelles - report no trade with West Africa while the corresponding shares for Kenya and Madagascar are between 1 to 3 percent. The geographic concentration of East African exports is even higher than in the West as over 85 percent of their exports go to countries bordering on the Indian Ocean and the Pacific. Intra-African trade is, therefore, highly concentrated both in terms of its composition and geographic destinations.

Within the sub-regional East and West African groups there is evidence that even more narrowly defined groups exist. For example, when export shares for the former West African French colonies were tabulated for exports going to: (i) other former French colonies, and (ii) all other West African countries, the results showed a higher degree of concentration of trade was occurring between the former. Former English colonies showed an above average tendency for intra-trade to occur although the results were not dramatic as those for the former French associates. (Kleiman (1976) provides an interesting demonstration as to the continuing influence of former colonial status on the direction of African and also develops a useful statistical measure for quantifying the magnitude of these distortions). Although the issue needs further verification, it appears that a lack of required infra-structure (like roads, rail or ocean

transport) may place important constraints on what regional trade arrangements may hope to accomplish in the foreseeable future. An important related issue, which could only be addressed in a careful cost-benefit analysis, is whether and what types of initiatives should be considered to remove or reduce these transport, logistical and related constraints to trade.<sup>11</sup>

### C. What Products Do African Countries Trade With Each Other?

#### Message

*Mineral fuels dominate intra-African trade although their share may range between one-third to one-half of this exchange as a result of unstable petroleum prices. In contrast, African intra-trade in machinery and transport equipment accounts for less than 4 percent of this exchange as opposed to approximately three-quarters of SSA total (global) imports. The available data show that very little intra-trade occurs in non-oil products that are of primary importance in Africa's total imports. One exception occurs for foods and feeds. Opportunities for expanded intra-trade in this sector should be examined carefully since some African countries appear to have a comparative advantage in production and expanded export opportunities could alleviate some of the social problems of the rural poor.*

What products are African countries reporting they trade with each other? Unfortunately, the IMF Direction of Trade Statistics only provides details on the overall level and direction of trade, but gives no information on its composition. As such, any relevant information must be drawn from available UN COMTRADE data which reports trade by-product and by-origin (imports) or by destination (exports). As previously noted, COMTRADE data are available for a limited number of countries which, however, appear to be among the most important African exporters.

Table 3.6 provides summary statistics on the broad composition of Sub-Saharan African intra-

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<sup>11</sup>Some ill conceived policies that were intended to address these types of problems have in fact had major adverse consequences. For example, many African countries adopted "cargo reservation" policies that allocated a certain share of imports and exports to vessels flying the national flag under the assumption national fleets develop and also significantly foreign exchange payments to providers of transport services. Neither of these anticipated benefits materialized, but requiring domestic traders to rely on high cost less efficient locally owned vessels contributed to major market share and revenue losses for many key export products (Amjadi and Yeats 1995).



trade as reflected in the available statistics. Shown here are the total values of these exports from the 17 "reporting" African countries along with the share of this exchange classified in eight broad product groups (i.e., foods and feeds, agricultural materials, mineral fuels, manufactures, etc.). As noted, the irregular African reporting practices do not allow cross country comparisons for any given specific year, so an aggregate profile of intra-African trade was tabulated using available information drawn as early as possible from the 1970s, as late as possible in the 1990s, and for an intermediate period in the 1980s. Box 3.2 presents similar statistics on the South African Custom Union's trade with other SSA countries.

Table 3.6 shows mineral fuels are by far the major component of intra-African trade although considerable variation is evident in their share. In the 1980s, fuels accounted for almost 58 percent of all African regional exports (up almost 35 percentage points from the 1970s level) before dropping to about 36 percent in the 1990s. These major share shifts are largely due to petroleum price changes as the available (1971) COMTRADE statistics for Angola and Nigeria preclude the 1973 OPEC oil price shock. Aside from energy products, only foods and feeds, and the other manufactured product group (SITC 6 plus 8) account for more than 10 percent of intra-trade.

How does the profile of African intra-trade compare with that of the global exports of these countries? Details on the latter are available from statistics published in UNCTAD (1993, 1994) or Amjadi, Reincke and Yeats (1996, Table 2). A comparison of the data in Table 3.6 with these figures shows intra-African trade in foods is relatively more important as these goods share in regional trade (25.2 percent) is about 7 percentage points higher than in Africa's global exports. In contrast, the share of ores, minerals and metals in intra-trade (3.6 percent) is about one-fifth that for Africa's total exports. Very little difference occurs in the relative importance of petroleum as these products account for the same share (36 percent) in intra-trade and in total exports to all destinations.

Table 3.6. The Export Structure of Sub-Saharan Countries' Intra-Trade by Major Product Categories: Selected Years

Exporter	Year	Exports to Africa (\$000)	Share of Product Group in Total Exports (%)							
			Food and Feeds	Agricultural Materials	Mineral Fuels	Ores, Minerals and Metals	Chemicals	Other Manufactures	Machinery & Transport	Misc. Goods
Angola	1971	19,934	71.7	1.6	0.2	2.5	3.2	19.0	1.7	0.1
	1981	11,154	4.2	2.3	85.9	1.4	0.0	2.7	0.0	3.6
	1991	38,089	0.0	0.0	99.8	0.0	0.0	0.1	0.0	0.0
Cameroon	1970	17,336	15.0	1.2	0.1	14.8	5.1	42.4	21.3	0.2
	1980	33,981	18.4	2.9	1.9	45.4	4.0	23.7	3.6	0.0
	1990	168,016	21.8	1.7	1.6	8.1	18.6	32.0	16.1	0.0
Congo	1974	2,155	42.5	1.5	0.0	0.3	39.7	5.0	11.0	0.0
	1984	18,309	8.5	3.5	0.3	0.4	6.8	76.0	4.4	0.0
	1994	20,275	5.5	19.9	11.9	1.3	11.7	21.5	28.2	0.0
Djibouti	1986	2,104	55.0	0.2	1.9	0.4	0.2	6.3	26.1	9.8
	1989	1,563	53.1	0.6	0.0	0.0	2.5	4.5	30.0	9.3
	1992	1,260	33.0	17.9	0.0	0.0	0.0	21.4	21.9	5.8
Ethiopia	1973	20,062	72.0	11.0	7.9	2.6	0.2	5.6	0.6	0.0
	1983	34,038	39.7	41.1	16.3	1.5	0.4	0.9	0.0	0.0
	1993	27,079	23.7	68.2	7.6	0.0	0.4	0.1	0.0	0.0
Gabon	1975	11,174	3.4	0.3	88.0	0.0	0.0	8.3	0.0	0.0
	1983	30,946	2.7	0.0	61.4	2.5	0.9	29.3	3.1	0.0
	1994	18,713	0.1	0.9	87.9	0.5	4.0	4.4	2.3	0.0
Ghana	1972	1,963	14.5	33.6	6.8	0.1	1.1	37.1	5.2	1.7
	1982	11,833	0.3	0.2	95.3	0.1	0.2	2.0	0.2	1.6
	1992	205,705	49.4	0.3	24.1	18.3	0.4	6.4	1.1	0.0
Kenya	1973	44,202	19.4	2.2	34.2	0.1	14.2	27.4	2.4	0.0
	1983	238,996	21.1	0.3	48.8	1.6	10.3	16.4	1.5	0.0
	1993	378,728	20.6	1.1	17.4	3.1	11.9	43.7	2.2	0.0
Madagascar	1974	8,712	72.7	0.2	9.4	0.7	0.7	13.7	2.5	0.0
	1984	2,735	41.4	3.7	1.0	4.2	3.8	8.3	37.6	0.0
	1994	9,181	37.5	5.6	3.7	4.9	0.9	42.6	1.3	3.7

Table 3.6. Continued

Exporter	Year	Exports to Africa (\$000)	Share of Product Group in Total Exports (%)							
			Food and Feeds	Agricultural Materials	Mineral Fuels	Ores, Minerals and Metals	Chemicals	Other Manufactures	Machinery & Transport	Misc. Goods
Malawi	1971	12,922	79.4	9.6	0.3	0.2	1.1	8.1	0.8	0.6
	1981	39,598	53.0	0.8	0.2	0.1	2.1	43.4	0.1	0.3
	1991	13,340	62.2	8.1	0.0	0.3	7.1	15.4	5.8	1.1
Mali	1970	21,719	79.1	4.1	0.1	1.0	0.6	14.4	0.2	0.4
	1980	53,675	95.7	0.8	0.0	0.3	0.0	3.2	0.1	0.0
	1990	240,768	47.0	52.7	0.0	0.1	0.1	0.1	0.0	0.0
Mauritius	1974	11,291	95.6	0.0	0.0	0.0	2.2	1.6	0.5	0.0
	1994	50,378	16.5	0.5	0.1	0.0	8.4	66.6	7.9	0.0
Nigeria	1971	26,319	3.7	0.3	92.3	0.1	1.0	0.8	0.0	1.7
	1981	501,649	0.1	0.0	99.7	0.0	0.0	0.0	0.0	0.2
	1991	663,518	0.3	0.0	92.0	0.1	0.5	3.0	0.3	3.8
Senegal	1973	53,361	27.3	1.0	11.2	4.7	9.0	39.5	7.3	0.0
	1981	187,415	16.3	1.1	35.9	7.7	11.8	21.7	5.4	0.0
	1993	134,945	14.9	0.5	17.8	7.0	29.8	19.7	10.4	0.0
Seychelles	1974	105	39.3	0.1	0.0	59.1	0.0	1.5	0.0	0.0
	1984	2,456	2.7	0.0	93.5	0.0	2.0	0.4	1.3	0.0
	1994	342	98.7	1.1	0.0	0.0	0.0	0.0	0.0	0.2
Togo	1971	2,546	5.4	1.3	0.1	3.5	10.1	56.8	22.7	0.0
	1981	32,837	1.3	4.8	0.5	8.4	0.3	78.5	6.2	0.0
	1991	40,038	51.2	5.1	0.3	11.0	6.8	21.8	3.7	0.0
Zimbabwe	1984	93,094	34.1	0.3	14.0	2.0	14.0	24.8	9.6	1.2
	1990	247,640	48.8	0.4	4.3	2.0	6.0	24.3	13.3	0.9
	1994	294,075	61.1	1.3	3.9	1.9	7.1	17.0	7.2	0.5
All Above	1970s	253,800	40.1	2.8	22.8	2.6	5.8	21.4	4.1	0.3
	1980s	1,294,819	16.3	1.7	57.6	3.1	4.9	13.9	2.3	0.2
	1990s	2,304,450	25.2	7.2	35.7	3.6	6.6	16.6	3.8	1.2

Source: Data compiled from available UN COMTRADE statistics.

### Box 3.2

#### The Composition of South Africa's 1995 Trade with Other SSA Countries

United Nations trade statistics show the composition of South Africa's regional exports and imports differs considerably from that of other regional countries. The most notable difference occurs for manufactured goods which account for 70 percent of SACU's exports to Sub-Saharan Africa - this is about 30 points higher than their corresponding share of SACU's trade with other countries. Roughly two-thirds of the higher manufactures regional trade share is attributable to the machinery and transport equipment (SITC 7) group, and within this category the greatest absolute share difference occurs for nonelectrical machinery. South Africa's regional export performance for machinery and transport equipment contrasts markedly with that of other SSA countries where these goods account for less than 5 percent of total intra-trade.

Product Group	SACU Regional Exports		Share in Nonregional Exports (%)	SACU Regional Imports		Share in Nonregional Imports (%)
	Value (\$million)	Share of Total (%)		Value (\$million)	Share of Total (%)	
ALL ITEMS	3,416.6	100.0	100.0	634.0	100.0	100.0
Foods and Feeds	490.2	14.3	6.9	176.4	27.8	5.1
Agricultural Materials	35.4	1.0	4.5	105.1	16.6	1.6
Mineral Fuels	383.9	11.2	7.6	1.9	0.3	8.9
Ores and Metals	89.2	2.6	11.5	69.8	11.0	1.4
All Manufactures	2,377.5	69.6	41.4	274.9	43.4	65.7
Chemicals	494.2	14.5	6.8	14.7	2.3	10.6
Machinery & Transport	857.1	25.1	6.4	33.9	5.3	37.8
Nonelectrical Machinery	410.9	12.0	2.8	15.4	2.4	17.7
Electrical Machinery	159.0	4.6	1.1	11.1	1.8	9.5
Transport Equipment	287.2	8.4	2.6	7.5	1.2	10.5
Other Manufactures	1,053.8	30.8	28.2	242.8	38.2	17.3

Note: The shares shown for South Africa's non-regional exports have been calculated exclusive of values reported under SITC group 931 (special transactions) since the composition of this exchange could not be determined.

Source: United Nations COMTRADE Statistics

On the import side two specific points are worthy of note. First, the share of foods in SACU's regional imports (27.8 percent) is more than 5 times greater than that in trade with other countries. Second, South Africa's import share for the "other manufactures" group (SITC 6+8 less 68) is almost 40 percent which is more than double that in trade with other countries. This group is largely composed of labor intensive manufactures like textiles, clothing and footwear. Thus, South Africa's regional trade evidences a "symmetry" not generally found among other regional countries. Its regional exports contain a disproportionately high share of machinery and transport equipment while its imports are concentrated in foodstuffs and labor intensive manufactures.

What products are of primary importance in African intra-regional trade and do the nature of these goods provide useful insights on the "base" that exists for a further trade expansion? Table 3.7 identifies the 30 largest three-digit SITC products traded among African countries along with the estimated value and share of this exchange in external exports and intra-trade in the 1980s and 1990s. In addition, the table shows a "regional orientation" index for each item which is defined as,

$$(3.1) \quad R_j = [x_{rj} \div X_{tr}] \div [x_{oj} \div X_{to}] \cdot 100$$

where  $x_{rj}$  and  $x_{oj}$  represent the value of exports of  $j$  in SSA's intra-trade and to third countries respectively, while  $X_{tr}$  and  $X_{to}$  reflect the total value of African exports within and outside the region. Given the relatively large number of established RTAs within Africa (see Table 3.2 for a listing) this index could help identify and associated shifts they produced in the direction of trade. This regional orientation (RO) index takes the ratio of the share of a product in exports to Africa to the share of the product in exports to other countries. The index value ranges between zero and infinity with a value of unity indicating the same tendency to export the good to members and nonmembers, while increasing values indicate a greater tendency to export to regional markets (see Yeats 1997 for a previous application of this index to the exports of Mercosur countries).<sup>12</sup>

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<sup>12</sup>Several points should be noted concerning the properties of this index. First, it conveys only limited information about trade patterns if computed for a single point in time. The geographic orientation of trade is determined by various factors such as comparative advantage, transport costs, or trade barriers in alternative markets. However, inter-temporal comparisons of this index over relatively short periods can provide useful information on the way the geographic pattern of trade is changing. Second, in the short to medium-term, changes in comparative advantage, transport costs, or relative tastes should be minimal so index value changes are likely to be more heavily influenced by factors such as differential changes in trade barriers (such as those which accompanied the formation of established African regional groups). The reader should also note that, if examined in isolation, the percentage changes in exports of different goods within a regional arrangement can be misleading as to the influence of the arrangement since they convey no indication as to how demand for products in third markets was changing. For example, it is possible that products with the highest growth rates within Sub-Saharan Africa could be reorienting away from the region if exports to third markets were growing even faster. The regional orientation index does not suffer from this defect and can convey useful information about changing trade patterns.

Table 3.7. The Thirty Largest Products in 1990/94 Sub-Saharan African Intra-Trade.

Commodity (SITC)	Value of Intra-Trade (\$000)		Share in Intra-Trade (%)		Share in External Exports (%)		Regional Orientation Index	
	1980s	1990s	1980s	1990s	1980s	1990s	1980s	1980s-90s change
Crude Petroleum (331)	507,242	3,114,194	33.68	27.03	76.22	63.51	0.4	0.0
Petroleum Products (332)	256,833	744,253	17.05	6.46	2.82	0.98	6.0	0.6
Cotton (262)	48,608	648,924	3.23	5.63	0.96	0.91	3.3	2.8
Live Animals (001)	71,760	538,770	4.76	4.68	0.04	0.03	109.2	25.5
Maize Unmilled (044)	1,436	486,734	0.10	4.22	0.00	0.20	52.2	-31.0
Cocoa (072)	12	439,468	0.00	3.81	3.48	1.44	0.0	2.6
Cement and Building Products (661)	41,516	318,445	2.76	2.76	0.08	0.05	35.2	17.8
Aluminum (684)	17,161	285,588	1.14	2.48	0.88	0.03	1.3	73.8
Iron Plate and Sheet (674)	2,531	233,457	0.17	2.03	0.01	0.02	19.2	74.4
Cleansing Preparations (554)	23,292	231,083	1.55	2.01	0.00	0.00	327.8	151.3
Electrical Energy (351)	6,904	214,898	0.46	1.87	0.00	0.00	na	na
Cotton Fabrics (652)	52,455	171,064	3.48	1.48	0.07	0.24	47.0	-40.9
Alcoholic Beverages (112)	5,988	165,776	0.40	1.44	0.00	0.01	103.0	44.3
Manufactured Fertilizers (561)	13,259	148,568	0.88	1.29	0.04	0.12	22.3	-11.7
Special Transactions (931)	2,784	128,648	0.18	1.12	0.45	0.23	0.4	4.3
Tobacco Manufactures (122)	7,388	127,079	0.49	1.10	0.00	0.02	107.2	-40.0
Crude Vegetable Material (292)	12,174	122,393	0.81	1.06	0.15	0.41	5.3	-2.7
Tea and Mate (074)	9,918	118,879	0.66	1.03	0.77	1.44	0.9	-0.1
Fresh Fish (031)	22,205	112,098	1.47	0.97	0.32	0.79	4.5	-3.3
Articles of Plastic (893)	4,904	105,583	0.33	0.92	0.00	0.01	163.6	-83.8
Articles of Paper (642)	10,733	102,019	0.71	0.89	0.01	0.03	47.9	-12.6
Other Crude Materials (276)	40,607	100,684	2.70	0.87	0.36	0.38	7.4	-5.1
Sugar and Honey (061)	29,730	99,648	1.97	0.86	1.24	1.80	1.6	-1.1
Machines for Special Industry (718)	4,120	92,829	0.27	0.81	0.02	0.06	13.3	-0.1
Food Preparations nes (099)	1,313	85,000	0.09	0.74	0.00	0.00	31.3	118.8
Textile Yarn (651)	3,726	82,877	0.25	0.72	0.06	0.18	3.8	0.2
Iron and Steel Shapes (673)	6,489	81,573	0.43	0.71	0.04	0.01	9.9	121.6
Medicinal Products (541)	13,862	79,445	0.92	0.69	0.03	0.02	34.4	3.4
Chemicals nes (599)	7,312	75,950	0.49	0.66	0.01	0.01	91.8	-32.0
Wheat Meal or Flour (046)	1,314	75,347	0.09	0.65	0.00	0.00	503.9	-237.2

Source: Data compiled from available UN COMTRADE statistics.

Although their shares have been very volatile - due to largely to price changes - crude and refined petroleum products accounted for over one-third of intra-regional trade in 1990 as opposed to approximately 50 percent in the 1980s. Moving further down the list, four items (cotton, live animals, cocoa and maize) account for a further 18 percent of the goods exchanged within the region. In contrast, the manufactured goods represented in Table 3.7 account for only about 15 percent of the total trade.

Perhaps the most important statistics shown in the table relate to the changes in the regional orientation index since this measure will indicate whether regional trade was growing in relation importance. Unfortunately, no clear pattern is observable in these data as about the same number of products are re-orienting their trade toward SSA countries as are shifting toward third markets. Even for the manufactured products in Table 3.7 an approximately equal number are shifting toward and away from the region. All in all, the pattern reflected in the table suggests basic random changes with no clear shifts in exports toward or away from African markets. This is further evidence that the regional arrangements that have been implemented are having little discernable effect of the direction of trade. The reader may wish to compare these results with those for a similar application of the regional orientation index to Mercosur's data where major structural trade changes toward member countries took place (Yeats 1997a).

#### D. How Important Is African Intra-Industry Trade?

##### Message

*Some theoretical analyses and empirical studies of factors that influence the success or failure of regional arrangements conclude that a high level of intra-industry trade plays an important positive role. Related studies show that cross-country production sharing, which often involves a special type of intra-industry trade, assists participating countries more fully integrate into global and regional markets and may also act as a catalyst to developing countries' industrialization and growth. However, the available statistics indicate that almost no intra-industry trade occurs among Sub-Saharan African countries, or between Africa and developed countries. This implies that an activity that is often associated with regional integration is not taking place.*

Several different summary indices can provide useful insights into the extent of intra-industry trade that is taking place and its implications for regional integration initiatives. One such measure that

has been used in this connection is the intra-industry trade ratio (Braga, Safadi and Yeats 1994). The index ranges between zero and infinity with larger values indicating a greater degree of intra-industry trade. The importance of this measure is reflected in the fact that higher intra-industry trade ratios suggest that there is more scope to realize gains from specialization in differentiated products.<sup>13</sup> A further point is that increased intra-industry trade is viewed as a vehicle supporting regional integration efforts and the integration of individual countries into the global economy.<sup>14</sup>

As an example, a recent World Bank study estimated that global production sharing - a process that largely consists of intra-industry trade - now accounts for approximately 30 percent of world trade in manufactured goods and has become a major factor increasing the interdependence (integration) of countries (Yeats 1997b). Production sharing involves the initiation of part of a manufacturing process for a specific good in one country and the transfer of the activity to another for further processing. For example, electronic components may be produced in the United States, shipped to the Caribbean for further assembly, and then re-exported back to the US or some third country. Published analyses of the consequences of these activities, which are often reflected in high intra-industry trade ratios, indicate the generally convey substantial benefits on all participating countries and may act as an important stimulus

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<sup>13</sup>The index is defined as,

$$(3.2) \quad IIT = 1 - \frac{[\sum_i \sum_j \sum_k | X_{ijk} - M_{ijk} | \sum_i \sum_j \sum_k (X_{ijk} + M_{ijk})]}{[\sum_i \sum_j \sum_k (X_{ijk} + M_{ijk})]}$$

Where  $X_{ijk}$  represents the exports of products from industry  $i$  from country  $j$  to country  $k$  and  $M_{ijk}$  represents the imports of products from industry  $i$  by country  $j$  from country  $k$ . As is common practice, in this study industries are defined at the three digit level of the SITC system. The analysis is also confined to manufactured goods, that is items classified in SITC groups 5 through 8 less nonferrous metals.

<sup>14</sup>Countries have used production sharing to achieve a relatively wide range of policy objectives. For example, one of China's industrialization goals was to achieve a market presence in international trade in high technology goods. In recognition of the fact that it did not have the ability to fully support such operations, China encouraged the importation of high-tech components, which were then assembled domestically and exported, as a way of breaking into these markets. See World Bank (1994).



to industrialization and growth in developing countries (US International Trade Commission 1988).<sup>15</sup>

Are related developments taking place within Africa?

Table 3.8 presents intra-industry ratios for African countries' regional trade in the 1990s. For comparison, the table also shows similar ratios for those countries which recently formed MERCOSUR and NAFTA. The key point clearly evident from the table is that an extremely small base of intra-industry trade exists within Africa as five of the countries (Angola, Ethiopia, Mali, Nigeria and the Seychelles) report that no such exchange is occurring. Zimbabwe records the highest intra-industry trade ratio (0.054), but this is still less than one-tenth that for Mexico and the United States or for Argentina and Brazil. Although several of the countries report relatively high shares of manufactures in regional exports the evidence from Table 3.8 suggests very little of this is intra-industry trade (a similar pattern was observed in intra-industry trade ratios for Africa and the developed countries). Perhaps one of the major reasons for the failure of this type of exchange to develop is that many Sub-Saharan African countries exports are highly concentrated in very similar primary products and their common characteristics preclude gains from their exchange. Geography and logistical problems may also play a role. The few African countries that appear to have established an fledgling industrial base that might support some intra-industry trade (like Kenya and Zimbabwe) are relatively distant from each other and may face important transport, communications, financial and other constraints which work against this trade. In short, production sharing and intra-industry trade can be an important factor promoting integration, but there is no evidence that it is occurring within Africa.

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<sup>15</sup>The Global Coalition for Africa (1997, p. 22) suggests that the establishment of export processing zones (EPZs) may provide a catalyst to this type of activity within Africa. Export producers within EPZs have access to duty and tax free imported inputs, adequate infrastructure and utilities, a favorable and simplified regulatory environment, tax holidays and sometimes preferential financing.

**Table 3.8. Intra-Industry Trade Ratios and the Share of Manufactured Goods in the Intra-Trade of Sub-Saharan African Countries in the 1990s.**

Exporter	Share in African Intra-Trade			Intra-Industry Trade Ratio with Sub-Saharan Africa
	Transport and Machinery	Other Manufactures	All Manufactures	
Angola	0.0	0.1	0.1	0.000
Cameroon	16.1	58.4	74.5	0.037
Congo	28.2	33.2	61.4	0.021
Djibouti	21.9	21.4	43.3	0.006
Ethiopia	0.0	0.5	0.5	0.000
Gabon	2.3	8.4	10.7	0.005
Ghana	1.1	24.8	25.9	0.031
Kenya	2.2	56.9	59.1	0.052
Madagascar	1.3	43.4	44.7	0.013
Malawi	5.7	22.9	28.6	0.011
Mali	0.0	0.2	0.2	0.000
Nigeria	0.3	3.5	3.8	0.000
Senegal	10.3	49.9	60.2	0.032
Seychelles	0.0	0.0	0.0	0.000
Togo	3.7	28.6	32.3	0.021
Zimbabwe	7.2	24.7	31.9	0.044
<b>MEMO ITEM</b>				
Argentina-Brazil	24.3	13.9	38.2	0.606
Uruguay-Brazil	7.1	31.2	28.3	0.318
Mexico-USA	53.1	22.9	76.0	0.582
Canada-Mexico	25.9	22.7	48.5	0.294

Source: African statistics were computed from available UN COMTRADE data. Other indices were taken from Braga, Safadi and Yeats (1994)

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**ANNEX****African Countries Global and Intra-Regional Exports Of Three-Digit SITC Products in the 1990s.**

Some readers of this report may have an interest in more detailed information on the types of goods that African countries export globally and in intra-trade. To provide some "summary" information, COMTRADE records for the 17 African countries that reported to the United Nations in the 1990s were downloaded and the value of all three-digit SITC exports were then ranked in descending order. Next, the share of each product in total world exports and in intra-trade was computed. Based on this procedure, the following tables identify those products which were the largest export items to each of these destinations. That is, Annex Table 3.1a lists those items that collectively accounted for at least 90 percent of global exports while Annex Table 3.2a identifies the goods that accounted for a similar share in African intra-trade.

The global export statistics (Annex Table 3.1a) shows that most African countries exports are extremely concentrated in a few products and would provide a very narrow base for expanding their intra-trade. Crude petroleum or petroleum products figure prominently in 9 of the 17 countries global exports - as do other primary commodities like coffee, cocoa, sugar and metals ores.

A further point that should be noted is that these tabulations produced some results that clearly warrant further investigation of the contributing factors. For example, the author has not been able to determine why 57 percent of Djibouti's world exports are classified in SITC 911 "Mail not Classified by Kind."<sup>16</sup> The relative value of these goods in Djibouti's exports far exceeds that of any other country that reports to COMTRADE. Also, the fact that some African countries are reporting trade in products where they do not appear to have a production capacity (that is, exports of aircraft and parts from Senegal

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<sup>16</sup>An analysis of the UN COMTRADE records showed these "mail" exports went almost exclusively to France (\$8.4 million) with \$157,000 going to Kenya and Reunion. During the same period France reported approximately \$550,000 in imports from Djibouti - about one third of this exchange consisted of crude animal material (SITC 291)

and Djibouti) must be viewed as suspicious. It may be that this trade occurs under some sort of special leasing arrangement, but clearly a further investigation of the nature of this exchange is warranted. The possibility exists that much of this exchange consists of locally produced "parts" and "components." Yeats (1997) documents the major and growing importance of these products in world trade.

Table 3.2a presents similar statistics for the major products which were traded among African countries in the 1990s. Shown here are the goods which cumulatively accounted for at least 90 percent of each country's intra-African trade. As was the case with the global data, the main point that emerges from these data concerns the very concentrated nature of this exchange. For example, four products account for more than 99 percent of Angola's exports to other African countries, while 95 percent of the Seychelles exports consist of fresh and preserved fish.

Annex Table 3.1a Three-Digit SITC Products Accounting for at Least Ninety Percent of Individual African Countries Global Exports in the 1990s.

Exporter/Product/SITC	Total World Exports		Exporter/Product/SITC	Total World Exports	
	Value \$000	Share of Country Exports (%)		Value (\$000)	Share of Country Exports (%)
<b>ANGOLA</b>			<b>ETHIOPIA</b>		
Crude Petroleum (331)	3,120,909	91.5	Coffee (071)	129,177	64.0
Natural Abrasives (275)	165,270	4.8	Hides and Skins (211)	32,698	16.2
Petroleum Products (332)	61,432	1.8	Crude Vegetable Materials (292)	19,600	9.7
Natural Gas (341)	51,102	1.5	Petroleum Products (332)	8,020	4.0
			Sugar and Honey (061)	4,883	2.4
<b>CAMEROON</b>			Fresh Vegetables (054)	2,807	1.4
Crude Petroleum (331)	1,034,769	49.7	<b>GABON</b>		
Coffee (071)	174,643	8.4	Crude Petroleum (331)	2,048,176	85.7
Cocoa (072)	168,519	8.1	Rough Wood (242)	207,844	8.7
Aluminum (684)	139,657	6.7	Nonferrous Metal Ore (283)	81,288	3.4
Rough Wood (242)	132,691	6.4	Petroleum Products (332)	22,482	0.9
Cotton (263)	69,523	3.3			
Shaped Wood (243)	57,440	2.8	<b>GHANA</b>		
Cement and Building Products (661)	29,930	1.4	Cocoa (072)	300,564	42.4
Fresh Fruit (051)	26,543	1.3	Shaped Wood (243)	70,983	10.0
Plywood and Veneers (631)	26,229	1.3	Nonferrous Metal Ore (283)	51,084	7.2
Crude Rubber (231)	24,628	1.2	Aluminum (684)	45,050	6.4
Soaps and Cleaning Preparations (554)	21,367	1.0	Electrical Energy (351)	42,977	6.1
			Rough Wood (242)	28,534	4.0
<b>CONGO</b>			Natural Abrasives (275)	24,272	3.4
Crude Petroleum (331)	771,686	81.4	Petroleum Products (332)	23,209	3.3
Rough Wood (242)	109,582	11.6	Plywood and Veneers (631)	17,958	2.5
Petroleum Products (332)	19,135	2.0	Fresh Vegetables (054)	15,736	2.2
Natural Abrasives (275)	9,866	1.0	Fresh Fish (031)	15,452	2.2
Plywood and Veneers (631)	9,125	1.0	Chocolate and Products (073)	9,822	1.4
Shaped Wood (243)	8,787	0.9	Railway Vehicles (731)	9,310	1.3
			Fresh Fruit and Nuts (051)	8,889	1.3
<b>DJIBOUTI</b>			<b>KENYA</b>		
Mail Not Classified By Kind (911)	9,110	57.2	Tea and Mate (074)	336,867	24.8
Coffee (071)	1,773	11.1	Coffee (071)	194,830	14.3
Rice (042)	726	4.6	Petroleum Products (332)	128,527	9.5
Road Motor Vehicles (732)	585	3.7	Gold and Silver Ware (897)	84,550	6.2
Aircraft (734)	428	2.7	Crude Vegetable Materials (292)	63,998	4.7
Special Transactions (931)	377	2.4	Iron and Steel Plate (674)	44,082	3.2
Live Animals (001)	326	2.1	Preserved Fruit (053)	43,349	3.2
Textile Fabric Waste (267)	298	1.9			
Crude Vegetable Materials (292)	270	1.7			

Annex Table 3.1a Continued

Exporter/Product/SITC	Total World Exports		Exporter/Product/SITC	Total World Exports	
	Value \$000	Share of Country Exports (%)		Value (\$000)	Share of Country Exports (%)
<b>DJIBOUTI (Continued)</b>			<b>KENYA (Continued)</b>	32,479	2.4
Textile Products nes (656)	236	1.5	Cement and Building Products (661)	31,392	2.3
Telecommunications Equipment (724)	174	1.1	Other Crude Materials (276)	30,490	2.2
Preserved Vegetables (055)	163	1.0	Fresh Fish (031)	27,508	2.0
<b>MADAGASCAR</b>			Leather (611)	25,505	1.9
Coffee (071)	79,027	24.2	Fresh Vegetables (054)	24,530	1.8
Spices (075)	67,748	20.7	Alcoholic Beverages (112)	16,118	1.2
Fresh Fish (031)	60,744	18.6	Soaps and Cleaning Preparations (554)	13,999	1.0
Sugar and Honey (061)	13,227	4.0	Fresh Fruit (051)	12,794	0.9
Printed Matter (892)	9,309	2.9	Vegetable Fibers (265)	12,371	0.9
Fresh Fruit and Nuts (051)	8,443	2.6	Preserved Vegetables (055)	10,970	0.8
Clothing Not of Fur (841)	7,725	2.4	Articles of Plastic (893)	10,442	0.8
Other Crude Materials (276)	7,559	2.3	Printed Matter (892)	10,343	0.8
Preserved Fruit (053)	7,325	2.2	Iron and Steel Shapes (673)	9,966	0.7
Woven Cotton Fabrics (652)	6,866	2.1	Tobacco Manufactures (122)	9,181	0.7
Crude Vegetable Materials (292)	6,582	2.0	Nonfur Clothing (841)	8,924	0.7
Fresh Vegetables (054)	4,852	1.5	Footwear (851)	7,904	0.6
Fresh Meat (011)	4,388	1.3	Dyes and Tanning Products (532)	6,895	0.5
Essential Oils (551)	3,881	1.2	Textile Products nes (656)	6,783	0.5
Nonferrous Metal Ore (283)	3,788	1.2	Articles of Paper (642)	6,378	0.5
Cocoa (072)	3,383	1.0	Chemicals nes (599)	5,447	0.4
			Furniture (821)	5,370	0.4
			Aluminum (684)	5,049	0.4
<b>MALAWI</b>			<b>MAURITIUS</b>		
Unmanufactured Tobacco (121)	362,883	76.8	Clothing Not of Fur (841)	718,547	54.2
Tea and Mate (074)	35,577	7.5	Sugar and Honey (061)	322,283	24.3
Sugar and Honey (061)	26,286	5.6	Preserved Fish (032)	28,007	2.1
Cotton (012)	11,042	2.3	Woven Cotton Fabrics (652)	26,166	2.0
Coffee (071)	9,267	2.0	Pearls and Precious Stones (667)	25,468	1.9
Cotton Fabric (652)	6,288	1.3	Watches and Clocks (864)	24,648	1.9
Clothing (841)	3,652	0.8	Gold and Jewelry (897)	22,147	1.7
<b>MALI</b>			Ships and Boats (735)	15,553	1.2
Cotton (263)	204,350	61.9	Meat Tinned (013)	12,089	0.9
Live Animals (001)	100,761	30.5			
Oil Seeds and Nuts (221)	9,091	2.8			



Annex Table 3.1a Continued

Exporter/Product/SITC	Total World Exports		Exporter/Product/SITC	Total World Exports	
	Value \$000	Share of Country Exports (%)		Value (\$000)	Share of Country Exports (%)
<b>NIGERIA</b>			<b>ZIMBABWE</b>		
Crude Petroleum (331)	12,375,923	96.5	Unmanufactured Tobacco (121)	649,005	33.1
Cocoa (072)	143,824	1.1	Maize Unmilled (044)	146,223	7.5
<b>SENEGAL</b>			Pig Iron (671)	115,164	5.9
Petroleum Products (332)	86,781	14.3	Sugar and Honey (061)	96,704	4.9
Fresh Fish (031)	76,752	12.7	Nickel (683)	80,533	4.1
Preserved Fish (032)	66,870	11.1	Clothing Not of Fur (841)	64,047	3.3
Inorganic Elements (513)	56,641	9.4	Other Crude Minerals (276)	61,958	3.2
Crude Fertilizers (271)	51,166	8.5	Cotton (263)	60,445	3.1
Fixed Vegetable Oils (421)	34,283	5.7	Woven Cotton Fabrics (652)	33,507	1.7
Cotton (263)	27,210	4.5	Furniture (821)	31,125	1.6
Manufactured Fertilizers (561)	26,813	4.4	Crude Vegetable Materials (292)	24,944	1.3
Other Crude Materials (276)	13,683	2.3	Textile Yarn (651)	24,596	1.3
Animal Feeds (081)	13,574	2.2	Shaped Wood (243)	20,373	1.0
Metal Tanks (692)	12,672	2.1	Copper (682)	19,511	1.0
Machines for Special Industry (718)	12,416	2.1	Manufactured Tobacco (122)	16,579	0.8
Articles of Paper (642)	11,742	1.9	Gold and Jewelry (897)	16,289	0.8
Fresh Vegetables (054)	8,740	1.4	Metal Household Equipment (697)	16,278	0.8
Aircraft and Parts (734)	8,359	1.4	Printed Matter (892)	15,674	0.8
Iron and Steel Plate (674)	5,773	1.0	Fresh Vegetables (054)	14,841	0.8
Non-Electric Power Machinery (711)	5,621	0.9	Oil Seeds and Nuts (221)	12,989	0.7
Road Motor Vehicles & Parts (732)	5,485	0.9	Coffee (071)	12,453	0.6
Chemicals nes (599)	5,120	0.8	Meat Tinned (013)	12,213	0.6
Articles of Plastic (893)	4,786	0.8	Works of Art (896)	11,811	0.6
Perfumes and Cosmetics (553)	4,738	0.8	Tea and Mate (074)	11,302	0.6
Hides and Skins (211)	3,775	0.6	Live Animals (001)	11,083	0.6
Crude Vegetable Material (292)	3,674	0.6	Leather (611)	10,991	0.6
<b>SEYCHELLES</b>			Textile Products nes (656)	10,928	0.6
Preserved Fish (032)	17,677	74.4	Cement and Building Products (661)	10,744	0.5
Fresh Fish (031)	4,775	20.1	Stone, Sand and Gravel (273)	10,569	0.5
Animal Feeds (081)	460	1.9	Footwear (851)	10,443	0.5
Spices (075)	458	1.9	Iron and Steel Scrap (282)	10,245	0.5
<b>TOGO</b>			Coal and Coke (321)	10,217	0.5
Crude Fertilizers (271)	122,790	48.5	Animal Feeds (081)	9,975	0.5
Cotton (263)	55,447	21.9	Road Motor Vehicles & Parts (732)	9,844	0.5
			Milk and Cream (022)	9,548	0.5
			Hides and Skins (211)	8,200	0.4
			Unmilled Cereals nes (045)	8,192	0.4

Annex Table 3.1a Continued

Exporter/Product/SITC	Total World Exports		Exporter/Product/SITC	Total World Exports	
	Value \$000	Share of Country Exports (%)		Value (\$000)	Share of Country Exports (%)
<b>TOGO (Continued)</b>			<b>ZIMBABWE (Continued)</b>		
Cocoa (072)	10,966	4.3	Fresh Meat (011)	7,922	0.4
Food Preparations nes (099)	9,216	3.6	Dyes and Tanning Products (532)	7,585	0.4
Coffee (071)	9,050	3.6	Non-Wheat Flour	7,389	0.4
Wheat Flour (046)	6,826	2.7	Non-Ferrous Metals nes (689)	7,092	0.4
Petroleum Products (332)	5,825	2.3	Iron and Steel Shapes (673)	7,061	0.4
Synthetic Fibers (266)	3,027	1.2	Soaps and Cleaning Preparations (554)	6,840	0.3
Cement and Building Products (661)	3,008	1.2	Cereal Preparations (048)	6,608	0.3
Animal Feeds (081)	2,329	0.9	Railway Vehicles (731)	6,435	0.3
			Pearls & Precious Stone (667)	6,270	0.3
			Wood Manufactures nes (632)	5,757	0.3

Source: Computed from available UN COMTRADE statistics.

Annex Table 3.2a Three-Digit SITC Products Accounting for at Least 90 Percent of Individual African Countries Total Intra-Regional Exports in the 1990s

Exporter/Product/SITC	Intra-Regional Exports		Exporter/Product/SITC	Intra-Regional Exports	
	Value \$000	Share of Country Exports (%)		Value (\$000)	Share of Country Exports (%)
<b>ANGOLA</b>			<b>DJIBOUTI</b>		
Crude Petroleum (331)	26,955	70.8	Rice (042)	343	27.2
Petroleum Products (332)	11,071	29.1	Waste of Textile Fabrics (267)	225	17.9
<b>CAMEROON</b>			Textile Products nes (656)	191	15.2
Cement and Building Products (661)	29,928	17.8	Telecommunications Equipment (724)	169	13.4
Soaps and Cleaning Preparations (554)	21,367	12.7	Road Motor Vehicles (732)	107	8.5
Aluminum (684)	13,141	7.8	Hand Tools (695)	79	6.3
Machines for Special Industries (718)	8,427	5.0	Preserved Vegetables (055)	73	5.6
Electrical Machinery nes (729)	7,366	4.5	<b>ETHIOPIA</b>		
Alcoholic Beverages (112)	6,820	4.1	Crude Vegetable Materials (292)	18,478	68.2
Fixed Vegetable Oils (422)	6,482	3.9	Sugar and Honey (061)	4,850	17.9
Tea and Mate (074)	6,390	3.8	Petroleum Products (332)	2,060	7.6
Perfume and Cosmetics (553)	5,744	3.4	<b>GABON</b>		
Glassware (665)	4,298	2.6	Petroleum Products (332)	16,455	87.9
Nonelectrical Machinery nes (719)	3,668	2.2	Inorganic Elements and Oxides (513)	729	3.9
Metal Manufactures nes (698)	3,535	2.1	<b>GHANA</b>		
Sugar and Honey (061)	3,108	1.8	Cocoa (072)	87,603	42.6
Woven Cotton Fabrics (652)	2,977	1.8	Electrical Energy (351)	42,977	20.9
Other Manufactured Goods (899)	2,802	1.7	Aluminum (684)	36,836	17.9
Road Motor Vehicles and Parts (732)	2,800	1.7	Fresh Fish (031)	7,127	3.5
Petroleum Products (332)	2,751	1.6	Petroleum Products (332)	6,230	3.0
Food Preparations nes (099)	2,720	1.6	Plywood and Veneers (631)	5,367	2.6
Ships and Boats (735)	2,420	1.4	<b>KENYA</b>		
Pigments and Paints (533)	2,128	1.3	Petroleum Products (332)	65,657	17.3
Wheat Meal or Flour (046)	1,790	1.1	Iron and Steel Plate (674)	44,036	11.6
Sugar Preparations (062)	1,676	1.0	Cement and Building Products (661)	27,836	7.3
Non-Alcoholic Beverages (111)	1,560	0.9	Alcoholic Beverages (112)	23,990	6.3
Articles of Plastic nes (893)	1,526	0.9	Tea and Mate (074)	16,799	4.4
Tobacco Manufactures (122)	1,510	0.9	Soaps and Cleaning Products (554)	16,036	4.2
Crude or Synthetic Rubber (231)	1,433	0.9	Medicinal Products (541)	10,750	2.8
Articles of Paper nes (642)	1,415	0.8	Articles of Plastic nes (893)	10,329	2.7
Cotton (263)	1,411	0.8	Iron and Steel Shapes (673)	9,942	2.6
<b>CONGO</b>			Tobacco Manufactures (122)	9,061	2.4
Rough Wood (242)	4,011	19.8	Footwear (851)	7,722	2.0
Petroleum Products (332)	2,412	11.9	Textile Products nes (656)	6,476	1.7
Nonelectrical Machinery nes (719)	2,335	11.5			
Electrical Machinery nes (729)	2,142	10.6			

Annex Table 3.2a Continued

Exporter/Product/SITC	Intra-Regional Exports		Exporter/Product/SITC	Intra-Regional Exports	
	Value \$000	Share of Country Exports (%)		Value (\$000)	Share of Country Exports (%)
<b>CONGO Continued</b>			<b>KENYA Continued</b>		
Hand Tools (695)	1,731	8.5	Articles of Paper (642)	6,307	1.7
Chemicals nes (599)	1,526	7.5	Other Crude Materials (276)	6,268	1.7
Iron and Steel Tubes (678)	693	3.4	Furniture (821)	5,201	1.4
Machines for Special Industries (718)	636	3.1	Aluminum (684)	5,029	1.3
Scientific Instruments (861)	492	2.4	Chemicals nes (599)	4,984	1.3
Clothing Not of Fur (841)	459	2.3	Processed Animal & Vegetable Oils (431)	4,787	1.3
Manufactured Tobacco (122)	452	2.2	Cereal Preparations (048)	4,252	1.1
Road Motor Vehicles and Parts (732)	286	1.4	Metal Household Equipment (697)	4,130	1.1
Other Inorganic Chemicals (514)	264	1.3	Plastic Materials (581)	3,690	1.0
Other Crude Materials (276)	203	1.0	Crude Vegetable Material nes (292)	3,436	0.9
Inorganic Elements & Oxides (513)	199	1.0	Paper and Paperboard (641)	3,384	0.9
Articles of Plastic nes (893)	187	0.9	Iron and Steel Tubes (678)	3,337	0.9
<b>MADAGASCAR</b>			Metal Manufactures nes (698)	3,335	0.9
Woven Cotton Fabrics (652)	1,870	20.4	Iron and Steel Wire (677)	3,241	0.9
Textile Yarn (651)	1,324	14.4	Sugar Preparations nes (062)	3,191	0.8
Fresh Fish (031)	1,195	13.0	Office Supplies nes (895)	3,088	0.8
Fresh Vegetables (054)	817	8.9	Essential Oils (551)	2,821	0.7
Spices (075)	560	6.1	Glassware (665)	2,813	0.7
Shaped Wood (243)	485	5.3	Road Vehicles Non-Motor (733)	2,753	0.7
Other Crude Minerals (276)	451	4.9	Perfumes and Cosmetics (553)	2,465	0.7
Special Transactions (931)	339	3.7	Rubber Articles nes (629)	2,409	0.6
Petroleum Products (332)	337	3.7	Nonfur Clothing (841)	2,272	0.6
Unmilled Maize (044)	255	2.8	Plywood and Veneers (631)	2,193	0.6
Fresh Meat (011)	212	2.3	Machines for Special Industries (718)	2,024	0.5
Plywood and Veneers (631)	140	1.5	Milk and Cream (022)	1,949	0.5
Animal Feeds (081)	138	1.5	Food Preparations nes (099)	1,857	0.5
Printed Matter (892)	112	1.2	Coffee (071)	1,760	0.5
Furniture (821)	84	0.9	Hand Tools (695)	1,730	0.5
<b>MALAWI</b>			<b>NIGERIA</b>		
Sugar and Honey (061)	5,003	37.5	Crude Petroleum (331)	595,876	89.8
Unmanufactured Tobacco (121)	1,312	9.8	Special Transactions (931)	25,155	3.8
Crude and Synthetic Rubber (231)	876	6.6	<b>SENEGAL</b>		
Rice (042)	828	6.2	Petroleum Products (332)	23,425	17.4
Plastic Materials (581)	679	5.1	Manufactured Fertilizers (561)	21,809	16.2
Furniture (821)	585	4.4	Fresh Fish (031)	11,750	8.7
Road Motor Vehicles and Parts (732)	562	4.2	Other Crude Minerals (276)	8,940	6.6

Annex Table 3.2a Continued

Exporter/Product/SITC	Intra-Regional Exports		Exporter/Product/SITC	Intra-Regional Exports	
	Value \$000	Share of Country Exports (%)		Value (\$000)	Share of Country Exports (%)
<b>MALAWI Continued</b>			<b>SENEGAL Continued</b>		
Fresh Vegetables (054)	415	3.1	Articles of Paper (642)	8,712	6.5
Hand Tools (695)	353	2.6	Machines for Special Industries (718)	5,718	4.2
Non-Wheat Meal or Flour (047)	216	1.6	Chemicals nes (599)	4,926	3.7
Manufactured Tobacco (122)	201	1.5	Perfumes and Cosmetics (553)	4,402	3.3
Hides and Skins (211)	158	1.2	Articles of Plastics nes (893)	3,719	2.8
Special Transactions (931)	148	1.1	Road Motor Vehicles and Parts (732)	3,459	2.6
Footwear (851)	138	1.0	Plastic Materials (581)	3,434	2.5
Clothing Not of Fur (841)	123	0.9	Animal Feeds (081)	2,981	2.2
Medicinal Products (541)	111	0.8	Organic Chemicals (512)	2,524	1.9
Articles of Plastic nes (893)	100	0.7	Paper and Paperboard (641)	2,314	1.7
Machines for Special Industries (718)	98	0.7	Footwear (851)	2,055	1.5
Materials of Rubber (621)	97	0.7	Food Preparations nes (099)	1,892	1.4
Woven Cotton Fabrics (652)	96	0.7	Medicinal Products (541)	1,518	1.1
			Manufactured Tobacco (122)	1,170	0.9
<b>MALI</b>			Aircraft and Parts (734)	1,117	0.8
Cotton (263)	126,361	52.5	Agricultural Machinery (712)	1,054	0.8
Live Animals (011)	100,402	41.7	Metal Tanks and Boxes (692)	1,022	0.8
			Electrical Machinery nes (729)	868	0.6
<b>MAURITIUS</b>			Textile Products nes (656)	858	0.6
Woven Cotton Fabrics (652)	12,419	24.7	Glassware (665)	844	0.6
Textile Yarn (651)	10,191	20.2	Printed Matter (892)	841	0.6
Woven Non-Cotton Textiles (653)	5,502	10.9			
Wheat Meal or Flour (046)	3,487	6.9	<b>SEYCHELLES</b>		
Sugar and Honey (061)	3,420	6.8	Fresh Fish (031)	335	97.8
Manufactured Fertilizers (561)	2,420	4.8	Crude Vegetable Materials nes (292)	4	1.1
Nonelectrical Machinery nes (719)	816	1.6			
Articles of Plastic nes (893)	804	1.6	<b>TOGO</b>		
Textile and Leather Machinery (717)	800	1.6	Food Preparations nes (099)	9,216	23.0
Instruments and Apparatus (861)	757	1.5	Wheat Meal or Flour (046)	6,754	16.9
Agricultural Machinery (712)	663	1.3	Crude Fertilizers (271)	4,208	10.5
Printed Matter (892)	600	1.2	Cement and Building Products (661)	3,008	7.5
Clothing Not of Fur (841)	580	1.2	Wheat Unmilled (041)	2,210	5.5
Medicinal Products (541)	534	1.1	Plastic Materials (581)	2,138	5.3
Other Manufactured Goods (899)	438	0.9	Cotton (263)	1,791	4.5
Soaps and Cleaning Preparations (554)	428	0.8	Articles of Plastic nes (893)	1,740	4.3
Articles of Paper (642)	412	0.8	Wire Products (693)	996	2.5
Road Vehicles Non-Motor (733)	379	0.8	Articles of Paper (642)	825	2.1
			Road Motor Vehicles and Parts (732)	565	1.4

Annex Table 3.2a Continued

Exporter/Product/SITC	Intra-Regional Exports		Exporter/Product/SITC	Intra-Regional Exports	
	Value \$000	Share of Country Exports (%)		Value (\$000)	Share of Country Exports (%)
<b>MAURITIUS Continued</b>			<b>TOGO Continued</b>		
Road Motor Vehicles and Parts (732)	342	0.7	Spices (075)	547	1.4
Fixed Vegetable Oils (421)	265	0.5	Fixed Vegetable Oils (421)	521	1.3
Chemicals nes (599)	258	0.5	Soaps and Cleaning Preparations (554)	383	1.0
<b>ZIMBABWE</b>			Iron and Steel Plate (674)	370	0.9
Maize Unmilled (044)	96,711	32.9	Animal Feeds (081)	349	0.9
Manufactured Tobacco (122)	12,883	4.4	Woven Cotton Fabrics (652)	316	0.8
Unmanufactured Tobacco (121)	8,897	3.0	Furniture (821)	219	0.5
Coal and Coke (321)	7,586	2.6			
Soaps and Cleaning Preparations (554)	6,698	2.3			
Railway Vehicles (731)	6,228	2.1			
Live Animals (011)	5,795	2.0			
Iron and Steel Shapes (673)	5,757	2.0			
Milk and Cream (022)	5,487	1.9			
Oil Seeds and Nuts (221)	5,485	1.9			
Non-Wheat Meal or Flour (047)	5,257	1.8			
Fresh Vegetables (054)	4,970	1.7			
Animal Feeds (081)	4,798	1.6			
Textile Products nes (656)	4,377	1.5			
Manufactured Fertilizers (561)	3,984	1.4			
Petroleum Products (332)	3,774	1.3			
Road Motor Vehicles and Parts (732)	3,609	1.2			
Other Crude Minerals (276)	3,554	1.2			
Cereal Preparations (048)	3,459	1.2			
Sugar and Honey (061)	3,126	1.1			
Paper and Paperboard (641)	2,996	1.0			
Chemicals nes (599)	2,714	0.9			
Cement and Building Products (661)	2,711	0.9			
Wheat Meal and Flour (046)	2,707	0.9			
Textile Yarn (651)	2,614	0.9			
Metal Household Equipment ((697)	2,582	0.9			
Articles of Paper (642)	2,452	0.8			
Furniture (821)	2,441	0.8			
Crude Vegetable Materials nes (292)	2,397	0.8			
Iron and Steel Forms (672)	2,319	0.8			
Iron and Steel Tubes (678)	2,271	0.8			
Road Vehicles Non-Motor (733)	2,250	0.8			

Annex Table 3.2a Continued

Exporter/Product/SITC	Intra-Regional Exports	
	Value \$000	Share of Country Exports (%)
<b>ZIMBABWE Continued</b>		
Articles of Plastic nes (893)	2,167	0.7
Margarine (091)	2,024	0.7
Sugar Preparations (062)	2,011	0.7
Medicinal Products (541)	1,953	0.7
Fixed Vegetable Oils (421)	1,952	0.7
Iron and Steel Plate (674)	1,923	0.7
Plastic Materials (581)	1,877	0.6
Alcoholic Beverages (112)	1,867	0.6
Nonelectric Power Machinery (711)	1,629	0.6
Eggs (025)	1,598	0.5
Nonelectric Machinery nes (719)	1,569	0.5
Cereals Unmilled nes (045)	1,481	0.5
Preserved Vegetables (055)	1,321	0.4
Aluminum (684)	1,298	0.4
Rubber Articles nes (629)	1,298	0.4
Fresh Meat (011)	1,295	0.4
War Firearms and Ammunition (951)	1,216	0.4
Electric Power Machinery (722)	1,192	0.4
Machines for Special Industry (718)	1,099	0.4
Clothing Not of Fur (841)	1,091	0.4

Source: Computed from available UN COMTRADE statistics.

**Appendix Tables**



Appendix Table 3.1. The Value and Share of Intra-Trade in Individual African Countries' Imports (Selected Years)

Exporter	Value of Total Imports (\$million)				Share of Intra-Trade in Total Imports (%)			
	1989	1991	1993	1995	1989	1991	1993	1995
Angola	1,468	1,847	1,422	1,803	1.3	1.0	1.5	2.2
Benin	207	242	345	783	23.2	4.1	6.4	2.8
Burkina Faso*	395	533	613	794	24.6	29.6	31.6	34.4
Burundi	181	249	198	270	13.3	14.5	18.7	22.2
Cameroon	1,273	1,345	987	1,144	7.4	6.9	11.1	10.6
Cape Vert	112	148	193	289	2.7	8.1	7.8	7.6
Cent. African Rep.*	167	159	126	189	19.8	15.7	11.1	10.6
Chad*	176	168	140	186	12.5	15.5	32.1	33.9
Comoros	72	119	107	153	8.3	5.9	11.2	10.5
Congo	473	696	671	874	2.3	5.3	5.7	4.6
Cote d'Ivoire	2,111	2,103	2,233	3,217	21.6	26.3	31.8	27.2
Djibouti	196	215	442	430	13.3	9.3	6.6	9.8
Equatorial Guinea	98	87	85	145	40.8	36.8	37.6	22.1
Ethiopia*	957	472	1,146	1,349	3.6	9.5	6.3	7.1
Gabon	820	1,083	1,035	1,037	9.5	19.1	22.8	24.1
Gambia	195	308	376	316	8.7	7.1	7.4	18.4
Ghana	1,273	511	2,029	2,490	14.1	8.6	19.4	19.4
Guinea	495	695	797	884	9.3	15.8	18.2	22.4
Guinea-Bissau	125	118	133	143	8.0	13.6	6.0	7.7
Kenya	2,148	2,178	1,745	3,430	2.9	2.2	2.4	1.7
Madagascar	393	428	441	640	4.8	2.6	5.0	10.2
Malawi*	560	618	511	654	18.4	11.8	13.5	20.6
Mali*	564	663	809	1,103	37.6	45.4	48.2	50.8
Mauritania	351	486	591	637	0.9	2.9	4.9	4.9
Mauritius	1,324	1,558	1,718	1,949	1.1	3.4	2.1	3.1
Mozambique	759	842	1,034	1,213	9.0	8.0	9.0	10.6
Niger*	409	391	470	541	14.7	11.0	12.1	15.3
Nigeria	3,419	5,370	7,535	5,588	0.7	0.6	1.4	2.4
Reunion	1,436	1,876	1,740	2,272	5.0	4.3	4.9	4.1
Rwanda	333	306	276	325	18.3	19.0	22.8	28.6
Senegal	1,322	1,097	996	1,344	20.2	15.7	14.0	4.7
Seychelles	165	172	238	302	35.8	43.0	37.0	51.7
Sierra Leone	183	218	250	275	37.7	15.1	17.2	21.8
Somalia	399	161	276	269	7.3	24.8	29.0	43.9
Sudan	1,341	1,401	1,254	1,339	2.0	2.2	3.2	4.0
Tanzania	31	88	155	305	96.8	95.5	87.1	77.0
Togo	472	445	655	994	14.6	15.1	31.8	31.2
Uganda*	460	402	457	710	21.3	14.7	30.2	28.7
Zaire	1,201	1,028	807	1,260	7.2	9.0	14.5	16.7
Zambia*	1,275	811	702	697	9.5	10.1	9.1	12.3
Zimbabwe*	1,390	1,857	1,649	2,000	10.2	5.4	4.9	4.2
All Above	30,730	33,494	37,387	44,353	9.6	9.2	11.5	12.9
<b>Memo Item</b>								
All Land-Locked Countries	6,353	6,074	6,623	8,233	14.5	15.0	17.0	19.5

Source: Compiled from IMF, Direction of Trade Statistics.

Appendix Table 3.2. The Destinations of Imports in Sub-Saharan Countries' Intra-Trade

Importer	1989-91 Average Regional Imports (\$mill.)	Share of Total (%)	Cumulative Share (%)	1993-95 Average Regional Imports (\$mill.)	Share of Total (%)	Cumulative Share (%)
Cote d' Ivoire	537.0	16.0	16.0	782.3	15.9	15.9
Mali*	274.7	8.2	24.2	472.0	9.6	25.5
Ghana	198.7	5.9	30.1	434.7	8.8	34.3
Togo	84.3	2.5	32.6	256.3	5.2	39.5
Gabon	122.3	3.6	36.3	236.3	4.8	44.3
Burkina Faso	135.3	4.0	40.3	230.3	4.7	49.0
Tanzania	52.7	1.6	41.9	187.0	3.8	52.8
Uganda*	126.3	3.8	45.6	169.3	3.4	56.2
Guinea	79.7	2.4	48.0	168.3	3.4	59.6
Zaire	96.7	2.9	50.9	167.0	3.4	63.0
Nigeria	26.3	0.8	51.7	116.0	2.4	65.4
Cameroon	102.7	3.1	54.7	114.0	2.3	67.7
Mozambique	79.0	2.4	57.1	109.0	2.2	69.9
Seychelles	67.7	2.0	59.1	108.7	2.2	72.1
Malawi*	87.0	2.6	61.7	104.7	2.1	74.2
Somalia	37.7	1.1	62.8	98.0	2.0	76.2
Senegal	242.3	7.2	70.0	85.3	1.7	77.9
Ethiopia*	39.0	1.2	71.2	82.0	1.7	79.6
Zimbabwe*	144.0	4.3	75.5	79.7	1.6	81.2
Rwanda	60.0	1.8	77.3	77.3	1.6	82.8
Reunion	76.7	2.3	79.5	77.0	1.6	84.3
Zambia*	120.0	3.6	83.1	73.3	1.5	85.8
Niger*	52.3	1.6	84.7	69.3	1.4	87.2
Chad*	28.0	0.8	85.5	53.3	1.1	88.3
Sierra Leone	50.0	1.5	87.0	51.0	1.0	89.3
Mauritius	43.0	1.3	88.3	49.0	1.0	90.3
Burundi	29.3	0.9	89.2	48.7	1.0	91.3
Kenya	66.0	2.0	91.1	48.3	1.0	92.3
Madagascar	20.7	0.6	91.7	46.7	0.9	93.3
Sudan	26.7	0.8	92.5	45.7	0.9	94.2
Gambia	20.3	0.6	93.1	44.0	0.9	95.1
Congo	30.7	0.9	94.1	38.0	0.8	95.8
Djibouti	24.0	0.7	94.8	35.3	0.7	96.6
Equatorial Guinea	38.7	1.2	95.9	32.0	0.6	97.2
Angola	26.0	0.8	96.7	30.7	0.6	97.8
Mauritius	7.7	0.2	96.9	29.0	0.6	98.4
Benin	41.7	1.2	98.2	21.0	0.4	98.9
Cape Vert	7.0	0.2	98.4	18.3	0.4	99.2
Cent. African Rep.*	34.3	1.0	99.4	16.3	0.3	99.6
Comoros	6.3	0.2	99.6	14.0	0.3	99.8
Guinea-Bissau	14.0	0.4	100.0	9.3	0.2	100.0
Total	3,356.7	100.0	100.0	4,928.7	100.0	100.0

Source: International Monetary Fund Direction of Trade

Appendix Table 3.3. The Origin of Sub-Saharan African Countries' Imports in Intra-Trade.

Partner	Value of exports to Sub-Saharan Africa (\$000)								
	Angola	Cameroon	Congo	Djibouti	Ethiopia	Gabon	Ghana	Kenya	Madagascar
Sub-Saharan Africa	5,402	95,217	42,454	18,715	60,867	29,961	354,527	47,376	8,467
	Share of total intra-trade (%)								
Angola	--	0.37	13.66	0.00	0.01	0.05	0.13	0.06	0.00
Benin	0.00	0.18	3.30	0.00	0.00	1.47	0.01	0.39	0.00
Burkina Faso	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00
Burundi	0.07	0.00	0.00	0.00	0.00	0.04	0.00	1.80	0.03
Cameroon	0.00	0.00	10.63	0.00	0.04	38.67	2.15	0.17	13.35
Cape Verde	0.48	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.05
Cent. Afr. Rep	0.00	0.35	0.01	0.00	0.00	0.05	0.00	0.00	0.03
Chad	0.00	0.50	0.16	0.00	0.00	0.02	0.00	0.00	0.00
Comoros	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.01	0.07
Congo	14.84	0.40	0.00	0.00	0.00	4.31	0.01	0.00	0.00
Djibouti	0.00	0.02	0.00	0.00	56.62	0.00	0.00	0.00	0.01
Ethiopia	0.00	0.01	0.03	91.67	0.00	0.01	0.03	0.10	0.00
Eq. Guinea	0.00	0.03	0.00	0.00	0.00	0.06	0.00	0.02	0.04
Gabon	1.85	1.86	2.55	0.00	1.18	0.00	0.01	0.00	0.38
Gambia	0.00	0.00	0.06	0.00	0.07	0.00	0.09	0.00	0.00
Ghana	0.00	0.00	0.00	0.00	0.02	0.03	0.00	0.63	0.01
Guinea	0.00	43.57	0.00	0.00	0.00	0.01	0.06	0.00	0.00
Guinea Bissau	0.00	0.87	10.25	0.00	0.12	0.00	0.00	0.00	0.22
Cote D'Ivoire	0.37	9.62	16.62	0.48	0.00	24.37	6.50	0.23	2.04
Kenya	11.59	0.25	0.05	6.82	34.79	0.13	0.10	0.00	11.51
Liberia	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.02
Madagascar	0.00	0.01	0.00	0.00	0.00	1.69	0.03	0.02	0.00
Malawi	13.09	0.12	0.00	0.00	0.00	0.00	0.01	1.35	0.00
Mali	0.00	0.00	0.01	0.00	0.00	0.11	0.00	0.00	0.33
Mauritania	0.00	6.57	3.34	0.00	0.00	0.00	0.17	0.00	0.00
Mauritius	0.00	1.72	0.00	0.00	0.04	0.02	0.04	6.58	26.73
Mozambique	10.49	0.03	0.08	0.00	0.00	0.00	0.22	0.20	0.14
Niger	0.00	0.00	0.14	0.00	0.01	0.15	0.01	0.00	0.00
Nigeria	0.00	5.84	5.89	0.00	0.06	9.66	86.00	0.34	13.33
Rwanda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00
Sao Tome & Prn.	0.00	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00
Senegal	0.00	26.06	27.74	0.00	3.44	14.81	0.25	0.69	0.52
Seychelles	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05	0.06
Sierra Leone	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somalia	0.00	0.00	0.00	0.42	0.20	0.03	0.01	0.04	0.00
Sudan	0.00	0.00	0.00	0.00	1.54	0.00	0.00	0.00	0.00
Tanzania	0.00	0.00	0.18	0.60	1.59	0.04	0.07	18.47	24.48
Togo	0.00	0.35	1.76	0.00	0.00	2.48	1.72	0.07	0.08
Uganda	0.00	0.00	0.00	0.00	0.01	0.00	0.01	17.35	0.00
Zaire	4.01	0.02	2.89	0.00	0.00	0.06	0.00	5.61	0.28
Zambia	3.73	0.05	0.00	0.00	0.05	0.00	0.01	14.46	0.00
Zimbabwe	39.49	1.21	0.06	0.00	0.11	1.70	2.30	31.28	6.30

\*The two countries share a common land border.

Source: UN COMTRADE Statistics

Appendix Table 3.3. Continued

Partner	Value of exports to Sub-Saharan Africa (\$000)								
	Malawi	Mali	Mauritius	Nigeria	Senegal	Seychelles	Togo	Zimbabwe	All SSA
Sub-Saharan Africa	40,740	183,795	53,303	35,513	158,160	9,143	66,583	28,167	1,238,353
	Share of total intra-trade (%)								
Angola	0.01	0.00	0.00	0.12	0.00	0.00	1.75	0.83	0.66
Benin	0.00	0.00	0.00	5.67	0.48	0.00	6.06	0.00	0.73
Burkina Faso	0.00	0.30	13.37	0.86	0.00	0.00	2.38	0.00	0.77
Burundi	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.07
Cameroon	0.00	0.02	2.45	7.05	2.55	0.00	18.75	0.07	3.66
Cape Verde	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.01
Cent. Afr. Rep.	0.00	0.00	0.00	0.06	0.00	0.00	0.04	0.00	0.03
Chad	0.00	0.00	0.00	5.58	0.01	0.00	0.01	0.00	0.21
Comoros	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Congo	0.00	0.00	0.35	0.01	0.21	0.00	0.78	0.00	0.29
Djibouti	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	2.79
Ethiopia	0.00	0.01	0.00	0.01	0.00	0.00	0.02	0.14	1.41
Eq. Guinea	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Gabon	0.00	0.01	0.00	2.22	12.60	0.00	5.15	0.07	2.26
Gambia	0.00	0.00	0.00	0.14	0.99	0.00	0.00	0.06	0.16
Ghana	0.00	0.19	1.80	0.64	0.00	0.00	8.00	0.44	0.59
Guinea	0.00	0.00	0.00	1.04	0.05	0.00	0.03	0.01	3.41
Guinea Bissau	0.00	0.00	0.00	1.77	0.00	0.00	0.11	0.00	0.48
Cote D'Ivoire	0.00	59.36	0.42	15.18	36.55	0.00	25.25	0.16	19.08
Kenya	4.91	0.33	37.88	1.61	0.01	50.02	0.10	14.47	4.59
Liberia	0.00	0.10	0.00	0.30	0.02	0.00	0.33	0.00	0.06
Madagascar	0.00	0.03	21.58	1.09	0.05	9.45	0.05	0.04	1.09
Malawi	0.00	0.00	0.01	0.57	0.28	0.44	0.00	14.05	0.50
Mali	0.00	0.00	1.62	4.27	0.48	0.00	0.24	0.14	0.28
Mauritania	0.00	0.65	0.00	0.08	0.23	0.00	4.72	0.01	1.05
Mauritius	0.14	0.00	0.00	0.01	0.01	38.69	3.84	23.89	1.62
Mozambique	4.06	0.00	0.00	0.20	0.00	1.27	0.02	14.71	0.61
Niger	0.00	0.26	0.05	13.33	0.00	0.00	0.60	1.25	0.49
Nigeria	1.25	6.82	1.32	0.00	44.91	0.00	19.18	3.35	33.57
Rwanda	0.00	0.00	0.01	0.10	0.00	0.00	0.02	0.00	0.01
Sao Tome & Prn.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02
Senegal	0.17	30.55	0.03	3.53	0.00	0.00	2.38	0.01	8.36
Seychelles	0.00	0.00	0.51	0.00	0.00	0.00	0.00	0.31	0.04
Sierra Leone	0.00	0.00	0.07	0.28	0.01	0.00	0.03	0.06	0.02
Somalia	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.02
Sudan	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.01	0.08
Tanzania	1.21	0.00	1.69	0.05	0.00	0.00	0.00	2.49	1.16
Togo	0.00	1.16	0.00	33.60	0.22	0.00	0.00	0.00	1.80
Uganda	0.00	0.00	0.18	0.02	0.01	0.00	0.00	0.03	0.68
Zaire	0.00	0.00	1.24	0.05	0.01	0.00	0.12	0.09	0.40
Zambia	13.24	0.00	0.00	0.23	0.06	0.00	0.00	23.28	1.56
Zimbabwe	74.98	0.19	15.27	0.29	0.19	0.14	0.01	0.00	5.40

\* The two countries share a common land border.

Source: UN COMTRADE Statistics.

#### IV. PROSPECTS FOR INCREASED AFRICAN INTRA-TRADE

##### Major Message

*Empirical evidence indicates expanded regional trade arrangements among Sub-Saharan African countries have only a limited potential to fulfil their major growth and industrialization objectives. Sub-Saharan African countries have the export capacity to meet only a very small share of regional import needs. Analysis of changes in the composition of other countries' exports - like those of the dynamic Asian NICs - indicates this problem can not be corrected in the foreseeable future. Furthermore, there is no indication that recent trade changes are evolving along lines that would improve this situation. Newly compiled statistics on African trade restrictions suggest a multilateral liberalization of these barriers would be more beneficial than any exchange of regional preferences.*

The historical record shows countries have experienced varying degrees of success (and failure) in previous attempts to negotiate regional trade arrangements. According to Viatsos (1978) the Latin American Free Trade Association (LAFTA) and the Andean Pact eventually collapsed due to a wide number of reasons including a lack of complementarity in member countries' exports and imports, and disagreements about how costs and benefits were being shared. Others, like the Caribbean Community (CARICOM), continue to officially function although members clearly have had major difficulties in implementing the original terms of the agreements. The North American Free Trade Arrangement (NAFTA) was initiated too recently for a determination of its full effects, but the real success of regional arrangements occurred in Europe. This uncertainty as to the eventual outcome of a regional trade arrangement, and the time, effort and costs that accompany its negotiation and implementation, promoted an interest in the development of reliable procedures for identifying countries that might form successful arrangements, as opposed to those with a higher probability of failure.<sup>1</sup>

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<sup>1</sup>For example, Braga, Safadi and Yeats (1994) compare the recent environment for regional integration initiatives in Latin America with that which existed several decades earlier when the failed Latin American Free Trade Association was formed. Erzan and Yeats (1992) analyzed the trade gains Latin American countries might experience from a free trade arrangement with the United States, while Yeats (1996) undertook an analysis of the prospects for successful regional integration in the Middle East. Michaely (1994) employed an index of trade complementarity to assess prospects for increased intra-trade among Latin American countries.

Although their results must be analyzed with some caution, several comparisons of the "complementarity" of potential partners' imports and exports, and an analysis of statistical indices which measure the diversity of products in a country's exports may convey useful information.<sup>2</sup> Examination of recent trade trends may be informative if it addresses questions as to whether intra-trade among potential partners is growing faster than trade with other countries, or whether the structure of their global exports is shifting toward products of major importance in the perspective partner(s) imports. Several measures of national comparative advantage in different industries may also be useful if they allow one to determine how well products in which one country is internationally competitive correspond to potential partners' import needs.

Before proceeding with the empirical analysis, however, an important point to note concerns this chapter's objectives. The chapter does not address other legitimate objectives of regional integration efforts which may include such diverse elements as realizing benefits from increased political cooperation or enhancing the creditability of reform strategies. It should again be noted that regional integration initiatives could provide other benefits, such as allowing African countries to develop regional transport and communications systems. The chapter does not contest this point, although it does hold that many of the past proposals have been advanced with excessive rhetoric and insufficient objective analysis. Rather, its objective is to assess the available evidence on the magnitude of the contribution that regional trade arrangements might make to increasing Africa's industrialization and growth, to evaluate evidence relating to what such arrangements may objectively hope to achieve, and to assess the priorities that should be attached to regional versus multilateral trade liberalization strategies.

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<sup>2</sup>There are several previous studies that attempted to at least partially address these issues, but did not have as comprehensive a data base available as that developed in the present report. See, for example, World Bank (1991) or Oramah and Abou-Lehaf (1997), among others. In spite of the different methodological approaches employed, and different data sources used, almost all of these investigations concluded the major dissimilarity between Africa's export potentials and import needs greatly limits prospects for increased intra-trade in the foreseeable future.

## A. Implications of the Concentration of African Exports

### Message

*Sub-Saharan African countries' exports are highly concentrated in a very few products - most of which are not of significant importance in other African countries' imports. Available evidence, based on a historical analysis of the rate of change in the composition of the Asian NICs exports - a situation that almost certainly represents a "best case" scenario for Africa - indicates significant changes in regional export potentials will not occur in the foreseeable future. Africa will continue to be primarily reliant on non-regional sources for the key imports needed to facilitate industrialization and growth, and will continue to rely on non-regional markets to absorb their major non-oil exports. This will greatly restrict the potential impact of regional trade arrangements among African countries.*

An important point bearing on the likely success or failure of any proposed regional trade arrangement concerns the range of products perspective members have the capacity to export or import. If the potential partners have the ability to export a wide range of diversified goods this should be a positive factor. Ideally, comparisons between export potentials and prospective partners' import needs should also attempt to consider products which might be exported competitively, but at present are not traded. Due to difficulties in securing such information, however, most analyses are based on actual trade flows rather than attempts to identify potentially competitive products.

Several trade concentration or diversification indices can provide useful insights concerning this question as it bears on the prospects for African regional trade arrangements.<sup>3</sup> One such measure is simply a count of the number of three-digit SITC products exported. This tabulation requires some cut-off be used to exclude items that are very marginal in trade and which may not be exported on a regular basis. UNCTAD adopted an approach to this problem that seems sensible in that it excludes items where

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<sup>3</sup>The underlying assumption is that the higher the level of export diversification the better the prospects for a successful regional integration initiative. The more diversified a country's exports the greater the range of potential products that can be trade with regional partners. If only a limited number of such goods exist members of an RTA may have to rely heavily of third countries for a high share of their key imports (and as destinations for their major exports) and this would likely reduce their commitment to, and perceived benefits from, the arrangement. There may also be important secondary effects from a high degree of export concentration. Some studies have shown that countries with highly concentrated exports may experience a relatively high degree of export earnings instability - a factor that makes economic planning difficult. Such instability could reduce a country's ability to consistently maintain financial commitments required by a regional arrangement. For a related discussion see Massel (1970), MacBean (1966) or Michaely (1962).

trade was below either \$100,000, or three-tenths of a percent of total exports. The higher the numeric value of this index the greater the diversity of products exported. This measure's maximum value is 239, which represents the number of individual three-digit products in the SITC Revision 2 system.

A second related measure which has been used by UNCTAD is a so called "diversification" index which utilizes deviations between the shares of three-digit SITC products in a country's exports and their corresponding shares in world trade. The rationale for this approach is that it sets the global structure of trade as a "standard" and seeks to determine how closely it is matched by a country's exports.<sup>4</sup> A country with a diversification index of zero has an export structure that exactly matches that of world trade. This index ranges between zero and unity with higher values indicating more concentrated trade structures. A third measure, the so called concentration index, is the Hirschman Index computed using the shares of all three-digit products in a country's exports.<sup>5</sup> This index also ranges between zero and unity with higher values identifying countries with more concentrated exports. Although their potential

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<sup>4</sup> The diversification index ( $D_j$ ) for country  $j$  is defined as,

$$(4.1) \quad D_j = [\sum |h_{ij} - h_i|] \div 2$$

where  $h_{ij}$  is the share of commodity  $i$  in the total exports of country  $j$  and  $h_i$  is the share of the commodity in world exports. The structure of world trade provides the "standard" against which a country's diversification is measured. World trade, however, is concentrated in some products like petroleum and automobiles. As a result, this measure would show that a country with equal shares in every three-digit SITC product (complete diversification) has more concentrated exports than another whose profile matched the (concentrated) structure of world trade.

<sup>5</sup> The Hirschman Index for country  $j$  ( $H_j$ ) is defined as,

$$(4.2) \quad H_j = \sqrt{\sum (x_i \div X)^2}$$

where  $x_i$  is country  $j$ 's exports of three-digit product  $i$  and  $X$  is country  $j$ 's total exports. The index has been normalized to account for the number of actual three-digit products which could be exported.



Table 4.1. Concentration and Diversification Indices for Sub-Saharan African Countries Exports in the 1990s

Exporting Country	Number of Commodities Exported	Diversification Index**	Concentration Index**
Angola	28	0.906	0.912
Cameroon*	53	0.871	0.485
Congo*	26	0.892	0.636
Djibouti	24	0.852	0.560
Ethiopia*	19	0.941	0.557
Gabon*	45	0.918	0.743
Ghana	65	0.900	0.465
Kenya	124	0.808	0.305
Madagascar	69	0.799	0.285
Malawi	35	0.923	0.704
Mali	20	0.891	0.762
Mauritius	128	0.834	0.332
Nigeria	130	0.907	0.934
Senegal*	80	0.865	0.258
Seychelles*	8	0.978	0.721
Togo*	49	0.891	0.491
Zimbabwe	172	0.742	0.329
<u>Memo Item</u>			
Malaysia	223	0.548	0.156
Singapore	226	0.489	0.183
Austria	227	0.388	0.061
Thailand	211	0.555	0.090
Mexico	221	0.403	0.153
Slovenia	212	0.434	0.061

\*This country's export structure became more concentrated in a fewer products over 1980-1992.

\*\*The higher the value for this index the more limited the export base of the individual country. The maximum value for the index is unity and the minimum value is zero.

ranges are similar UNCTAD (1994, p. 221) maintains that the concentration index discriminates more finely between countries which are relatively more concentrated in their exports while the diversification index discriminates more finely between countries which are relatively more diversified. Table 4.1 shows the three indices' values which were computed using the most recent African export data. Similar statistics are also shown for a several smaller non-regional countries to help assess the implications of the African results.

Several points are evident from these statistics. First, the indices show that the African countries have a very limited export base. Nine of the countries, namely, Angola, Congo, Djibouti, Ethiopia, Gabon, Malawi, Mali, the Seychelles, and Togo export less than 50 out of a possible total of 239 three-digit SITC products.<sup>6</sup> To help put these numbers in perspective the table shows relatively small countries like Singapore, Mexico, Malaysia and Austria export over 220 products, and countries like Slovenia and Thailand export slightly less. Both the concentration and diversification indices also reflect the very limited export base of the African countries. The concentration index for all of the African exporters is at least four times higher than that for Austria -- five of the 17 countries actually have indices that are at least 10 times higher. Another negative point is that the export base for seven of the African countries actually diminished over 1980-92 with their exports consisting of fewer products in the 1990s than a decade earlier. What these tabulations do not show, however, is that the goods exported by individual African countries often are similar (that is, coffee or cocoa beans, oilseeds, tropical timber, or metal ores) and the prospects for increased African intra-trade in these primary products is clearly limited. Overall, Table 4.1 suggests that the lack of diversification in Africa's exports poses a major obstacle for regional trade arrangements.

There is an important related point that should be considered. The *geographic* concentration

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<sup>6</sup>When similar tabulations were made for imports it was found that, on average, African countries imported more than 200 individual three-digit SITC products.

of Sub-Saharan Africa's intra-trade also does not favor prospects of regional integration initiatives. The previous chapter demonstrated that African intra-trade was highly concentrated on a sub-regional basis - as reflected in the fact that almost no trade occurred between the countries of East and West Africa. The institutional and infra-structure constraints to East-West trade weaken arguments that RTAs will provide larger markets upon which Africa can capitalize, at least in the foreseeable future. Clearly, a relatively long time frame would be required before the necessary infra-structure (that is, transport, communications, finance, etc.) could be developed to broaden trade between geographically distant Sub-Saharan African countries. Also, it has yet to be demonstrated that the additional trade which might result would justify the cost of investment in this infra-structure.

These findings have important implications for objective analyses of the influence that African regional trade arrangements could have on the SSA countries industrialization and growth prospects. Some proponents argue that regional trade arrangements can help expand the very limited African export base reflected in Table 4.1, in spite of the fact that they have not yet had any measurable impact on exports (see Table 3.2 in this report and studies by Ariyo and Raheem (1991) or Lipumba and Kasekenge (1991). Advocates of African RTAs may not adequately recognize how slowly countries' production capacity and export profiles change, even under the most favorable conditions for such transformations.

There is evidence which bears on this latter point. From the mid-1970s to the mid-1980s, international attention focused on the export performance of the Asian newly industrialized countries (NICs) which went through a period of dynamic change that few (if any) developing countries have matched. The rate at which this change occurred must certainly be viewed as a very "best case"

scenario for the countries of Sub-Saharan Africa.<sup>7</sup> However, at the end of this 10 year period the number of new products exported by the NICs had only increased by about 10 percent, and the mid-1980s shares of all exported three-digit SITC products were still highly correlated with those of 1975.<sup>8</sup>

The implications are that change in the structure of national production and exports occurs slowly even under what appears to be ideal conditions. Do African countries really have the option of favoring high cost relatively inefficient regional exports over the next two or three decades or two in the hope that local industries will eventually become internationally competitive, and the export base will expand?. Over the transition period, if it should eventually prove successful, Africa would not have unrestricted access to superior foreign products that could improve living conditions and the production efficiency of domestic firms (unless major reductions in trade barriers on an MFN basis also took place). As a result, Africa's international competitiveness could continue to decline and the region would be further marginalized in world trade.

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<sup>7</sup>The infra-structure and related conditions which were in place greatly facilitated the NICs export expansion in the 1970 and stands in marked contrast to the far inferior conditions in most African countries today. For example, UNCTAD (1979) reported literacy rates in the Asian countries ranged from over 70 to 90 percent while those in many African countries today do not exceed 30 percent. Asia had access to more than adequate international transport and communications, to service global markets. In contrast, current transport facilities (particularly road transport) and communications within Africa are such as to constitute a major constraint to expanded trade. See Livingston (1986) or Amjadi and Yeats (1995).

<sup>8</sup>A regression of 1985 NIC three-digit SITC product export shares on the corresponding shares for 1975 produced an  $R^2$  of 0.75. A very high correlation was also observed in similar tests over the 1965 to 1975 period. However, when a 20 year (1965 to 1985) period was selected the  $R^2$  fell to under 50 percent.

## B. Implications of the Structure of African Imports and Exports

### Message

*Several summary measures can show how well the overall structure of a country's exports match those of a potential partner's imports. These indices indicate individual Sub-Saharan African countries generally export a very different "basket" of non-oil goods than others import. African imports are highly concentrated in machinery and other capital equipment, yet Africa has developed an extremely limited export base for these key products. Regional trade arrangements might help develop some new export capacity, but there is little evidence this could occur at a pace that would make a significant improvement in African growth prospects in the short or medium-term. Also, the products which are of primary importance in Africa's imports are normally manufactured using highly capital intensive production techniques. Both theory and empirical evidence show Africa does not have a comparative advantage in the manufacture of these types of goods.*

How closely do the types of goods some African countries export match the products others import? If the match is close this should facilitate regional trade arrangements - if not, it could constitute a serious problem if African countries must continue to rely very heavily on third countries as origins of their imports and destinations of their exports. Such a dependence on non-RTA members could force the Sub-Saharan African countries to pursue policies relating to trade, investment, exchange rate or the development of infra-structure better suited to foster exchange with their major partners at the expense of other RTA members.

Aside from the concentration and diversification measures that were previously examined, there are several summary indices that can provide additional useful information concerning this question. These include a trade "complementarity" index that can show the extent to which some African countries' exports correspond to others' imports. Several measures of "revealed" comparative advantage have also been used to determine whether the range of products perspective RTA members might trade among themselves is relatively broad or narrow.

Table 4.2 provides some initial evidence concerning the overall "match" of African exports and imports. It compares the share of each three-digit SITC group that accounted for at least one percent in African countries' total (global) imports with their shares in the region's total exports. The intention here is to try to assess the "complementarity" of trade, that is, how well does the structure of exports

correspond to Sub-Saharan Africa's import needs. If the export-import profiles match reasonably well this might be viewed as indicating that regional integration prospects were more favorable than would be the case if the structures were dissimilar.<sup>9</sup>

Although petroleum products constitute a relatively high share (over 6 percent) in both African exports and imports, the impression that Table 4.2 clearly conveys is that Africa's major import needs are highly concentrated in goods which the region has not appear developed an important export capacity. This is evident in the great disparities between these products' shares in total exports and imports. For example, road motor vehicles account for more than 10 percent of Africa's imports and only about one-half of one percent of the region's exports. Nonelectrical machinery accounts for almost 8 percent of regional imports and four-tenths of a percent of exports. Overall, a linear regression of the region's export shares on the corresponding import shares produced a coefficient of determination of only 0.01 and this remained virtually unchanged when petroleum products were excluded from the calculations. Overall, the 32 key products listed in Table 4.2 account for about 74 percent of African imports (67 percent excluding petroleum), but comprise less than one-third of the region's exports (about 25 percent without petroleum products). These comparisons indicate a very poor match occurs between the region's exports and its major import requirements.

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<sup>9</sup>The comparisons in Table 4.2 have a limited use in that they are only designed to show whether African countries have developed a capacity to export (to third countries or to the region) the types of goods that are of primary importance in Africa's imports. It should also be noted that if such a capacity was developed it does not mean that it could be extended further under constant cost conditions, or that Africa should divert exports from third countries to the region. However, if such a complementary capacity exists the learning experience associated with its initial development might make it easier to expand the production and export base.

Table 4.2. Sub-Saharan Africa's Export Capacity in Major Regional Import Products

Commodity (SITC)	African Exports (\$000)	Trade Share (%)		
		In African Exports(%)	In World Trade (%)	In African Imports (%)
Road Motor Vehicles (732)	29,067	0.55	11.01	10.38
Nonelectric Machines, nes (719)	21,971	0.41	6.29	7.71
Petroleum Products (332)	383,920	7.23	2.04	6.06
Machines for Special Industries (718)	34,194	0.64	1.43	3.13
Medicinal Products (541)	20,704	0.39	1.74	2.97
Chemicals, nes (599)	17,223	0.32	1.30	2.95
Telecom Equipment (724)	11,884	0.22	3.63	2.89
Plastic Materials (581)	14,885	0.28	2.45	2.80
Electric Power Machinery (722)	5,279	0.10	2.66	2.42
Printed Matter (892)	39,141	0.74	0.65	1.82
Cement and Building Products (661)	77,103	1.45	0.27	1.73
Paper and Board (641)	12,304	0.23	1.64	1.66
Iron and Steel Tubes (678)	15,027	0.28	0.57	1.65
Electrical Machinery, nes (729)	19,045	0.36	5.96	1.62
Prepared Fish (032)	13,477	0.25	0.70	1.59
Iron and Steel Plate (674)	52,261	0.98	1.19	1.55
Inorganic Elements (513)	61,528	1.16	0.44	1.55
Glazed or Polished Rice (042.2)	1,780	0.03	0.14	1.55
Scientific Instruments (861)	17,757	0.33	2.46	1.46
Iron and Steel Shapes (673)	17,692	0.33	0.63	1.42
Organic Chemicals (512)	13,652	0.26	2.59	1.42
Manufactured Fertilizers (561)	60,798	1.14	0.33	1.41
Rubber Articles, nes (629)	6,645	0.13	0.78	1.36
Sugar Preparations (061-062)	487,079	9.17	0.41	1.33
Vegetable Oils (421-422)	59,033	1.11	0.44	1.31
Woven Noncotton Textiles (653)	16,045	0.30	1.40	1.24
Woven Cotton Fabrics (652)	107,448	2.02	0.51	1.19
Textile Machinery (717)	3,740	0.07	0.66	1.14
Aircraft (734)	14,968	0.28	2.01	1.10
Nonelectric Power Machinery (711)	12,203	0.23	2.39	1.06
Office Machinery (714)	2,095	0.04	5.19	1.05
Textile Yarn (651)	52,524	0.99	0.78	1.00
<b>TOTAL OF ABOVE PRODUCTS</b>	<b>1,702,472</b>	<b>32.02</b>	<b>64.69</b>	<b>73.52</b>
<b>TOTAL EXCLUDING PETROLEUM</b>	<b>1,318,552</b>	<b>24.79</b>	<b>62.65</b>	<b>67.46</b>

Source: Computed from available UN COMTRADE statistics

Aside from the share differences reflected in Table 4.2, discrepancies in the levels of African exports and imports of these products have important implications. For example, Table 4.2 shows African exports of road motor vehicles totalled \$29 million in the 1990s, yet the region's total imports of these goods was \$3.1 billion - a figure more than 100 times higher.<sup>10</sup> Similarly, total imports of nonelectrical machinery came to \$2.2 billion - more than 140 times the value of current African intra-trade. Even if the structure of African exports were to evolve along lines that more closely matched that of regional imports major shortfalls in production capacity would continue to make the SSA countries highly dependent on third country producers.<sup>11</sup>

There is an additional summary measure that can provide information on how well the structure of imports and exports match. This summary index has the attraction that its values for countries considering the formation of an RTA (such as those in Africa) can be compared with those of countries that have formed, or tried to form, similar arrangements elsewhere. Such comparisons could provide some indication of the prospects for the African effort (see Michaely 1994 for an application that attempted to use the measure to assess prospects for RTAs in Latin America).

The index of trade complementarity between countries *i* and *j* ( $C_{ij}$ ) is defined as,

$$(4.3) \quad C_{ij} = 100 - \Sigma(|m_{ik} - x_{ij}| \div 2)$$

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<sup>10</sup>UN COMTRADE statistics do not allow one to determine how much of the reported \$29 million export total was re-exports. That is, some automotive equipment may have been imported into a specific country where it was used for a period of time and then exported to another. Such transfers of road motor vehicles and other capital equipment is a fairly common practice of international construction companies that may operate in several different countries. Foreign nationals who are temporarily based in a country may also temporarily import road motor vehicles and later export the equipment to a third country on their transfer.

<sup>11</sup>A point that should not be passed over lightly is that, aside from all of the major problems associated with local African production and quality control problems, most of the capital goods like motor vehicles and electric or nonelectric machinery also that require extensive and very costly marketing, distribution, sales financing and service operations be established to support sales of the domestically produced products. The fact that African owned marketing, distribution, servicing and financial systems are not in place certainly constitutes a major barrier to the expansion of regional trade in some goods.



where  $x_{ij}$  is the share of good  $i$  in the global exports of country  $j$  and  $m_{ik}$  is the share of good  $i$  in all imports of country  $k$ . The index is zero when no good exported by one country is imported by the other, and 100 when the export-import shares exactly match. Studies employing the index argue the higher its value the more likely is a proposed regional trade arrangement to succeed (Michaely 1994).<sup>12</sup>

The index took a wide range of values for non-African arrangements that persisted over a fairly long time frame as opposed to those that eventually dissolved. As Table 4.3 shows, index values for the EEC (6) averaged 53.4 when this arrangement began, while an even greater complementarity occurred between the trade of the United States and Canada when the Canadian-American Free Trade Arrangement (CAFTA) was initiated. The Andean Pact index (7.4) shows the export-import structures of Bolivia, Colombia, Ecuador, Peru, and Venezuela were very dissimilar when this arrangement was initiated - no doubt this contributed to its eventual collapse (Braga et. al. 1994 show how and why the different current economic environment in Latin America has revived interest in these arrangements). Complementarity among NAFTA members - this arrangement thus far appears to be functioning without major internal discord - is as high as that for the initial EEC members. In Mercosur, (an arrangement between Argentina, Brazil, Paraguay, Uruguay), the average complementarity index (28.6) is about half that of the longer-lived arrangements, though between the two central partners in this RTA, Argentina and Brazil, the index is closer to 35. Sufficient time has not yet elapsed for an assessment as to whether MERCOSUR will persist or go the way of LAFTA.

The statistics shown in the lower half of Table 4.3 indicate that Sub-Saharan Countries have extremely low trade complementarity indices. That is, these results reinforce the conclusion that the

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<sup>12</sup>The index has some limitations that should be noted. First, it takes the existing structure (share) of exports as a given and attempts to determine how well it matches a potential partner's imports. This assumes that either existing exports will be diverted to the regional partner, or the country can expand these exports at constant costs. Also, the approach assumes there is something optimal about the existing structure of trade. This need not be the case. Third, the complementarity index treats all exports as equals, yet some may have very different associated national policy objectives. Fourth, the influence of distance and transport costs are neglected in the complementarity index. See Yeats (1997a) for an assessment.

Table 4.3. Trade Complementarity Indices for Select Regional Trade Arrangements

Regional Arrangement	Index	Regional Arrangement	Index
Regional Arrangements Which Persist			
European Community (6)	53.4	Canada-United States FTA	64.3
Collapsed Arrangements			
NAFTA	56.3	Mercosur	28.6
Unsuccessful Arrangements			
LAFTA	22.2	Andean Pact	7.4
Possible Arrangements within Sub-Saharan Africa			
All Sub-Saharan Africa	8.9	Madagascar and SSA	13.0
Angola and SSA	8.6	Malawi and SSA	5.7
Cameroon and SSA	16.5	Mali and SSA	3.6
Congo and SSA	6.6	Mauritius and SSA	11.5
Djibouti and SSA	16.1	Nigeria and SSA	4.2
Ethiopia and SSA	6.9	Senegal and SSA	27.9
Gabon and SSA	4.2	Seychelles and SSA	2.4
Ghana and SSA	10.9	Togo and SSA	13.1
Kenya and SSA	25.2	Zimbabwe and SSA	20.0

Source: Computed from available UN COMTRADE data.

structure of their exports matches that of the region's imports very poorly. The trade weighted complementarity index for the SSA countries averages about 8.9, which is about the same as that for the failed Andean pact. A further (negative) point is that Nigeria, the largest African market, has an index value of only 4.2 which is less than half the (already very low) average index value for all the African countries.

### C. Implications of Africa's Comparative Advantage

#### Message

*Indices of "revealed" comparative advantage show the range of processed products African countries export competitively is very narrow. Many have a common comparative advantage in the same items - sugar preparations and refined petroleum products appear frequently in the profiles of individual SSA countries. Excluding refined petroleum, individual African countries have a comparative account in products accounting for about 5 percent of total regional imports. These findings indicate Africa faces what may amount to a "lose-lose" situation concerning policies toward RTAs. If Africa does not develop an export capacity in the machinery and transport equipment sector, the region will continue to be highly dependent on third countries for these key imports. This could erode members' support for, or interest in, regional arrangements. However, machinery and transport equipment are normally manufactured using capital intensive production techniques, and economic theory and empirical evidence shows Africa does not have a comparative advantage in these goods. If Africa attempts to develop an export capacity in this sector, the goods would be relatively high cost and, in all likelihood less reliable than similar products from "efficient" suppliers. Attempts to utilize such equipment would undercut the competitive position of SSA exporters in global markets.*

Other statistical measures, such as the "revealed" comparative advantage (RCA) index, can be employed in connection with the trade diversification and complementarity indices to help assess a RTAs prospects. Countries with different RCA index profiles should have more mutually beneficial trade opportunities than those where a high degree of similarity exists. As such, a key factor concerns the number and types of industries in which African countries have a comparative advantage. If the number is low, and in sectors where aggregate trade is relatively unimportant, this would not favor eventual success of the initiative.

The RCA of country  $i$  for product  $j$  is measured by the item's share in the country's exports

relative to its share in world trade.<sup>13</sup> The index has a simple interpretation. If it is less than unity this implies the country has a revealed comparative disadvantage in the product - if it exceeds unity the country has a revealed comparative advantage. The measure was first developed by Balassa (1965) and has been employed in numerous policy related studies including efforts to assess prospects for the success of regional trade arrangements (Yeats 1996).

Any attempt to apply the concept of revealed comparative advantage to African countries should, however, specifically acknowledge the influence of major distortions that are characteristic of their trade regimes. Revealed comparative advantage should be measured in an environment in which neither external trade constraints, like tariffs and nontariff barriers, distort individual countries export profiles, and where domestic market interventions in the exporting country do not have sectorial effects or a general anti-export bias. Recent World Bank studies show that foreign barriers facing Africa's exports are relatively benign (Yeats et. al. 1997), but that trade interventions by the African countries themselves may greatly reduce the ability of local producers to capitalize on opportunities in foreign export markets (Ng and Yeats 1997). As such, the true comparative advantage of some African countries may be different than the empirical results now suggest. Indeed, Section E in this chapter argues that a general liberalization of African trade barriers would significantly improve Africa's international competitiveness and would likely expand the product coverage of Africa's export base.

Table 4.4 provides information on the revealed comparative advantage profiles of the SSA countries that reported data to UN COMTRADE in the 1990s. Although the index was calculated for all

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<sup>13</sup>That is, if  $x_{ij}$  is the value of country  $i$ 's (global) exports of  $j$ , and  $X_{ij}$  is the country's total (global) exports its revealed comparative advantage index is:

$$(4.4) \quad RCA_{ij} = (x_{ij}/X_{ij}) \div (X_{iw}/X_{iw})$$

where the  $w$  subscripts refer to world totals. RCA indices are computed only for processed goods or manufactures because trade in agricultural products is often distorted by export incentives or trade barriers which may obscure whether a country has a comparative advantage of disadvantage in these goods.

Table 4.4. The Revealed Comparative Advantage of Individual African Countries.

Exporter/Product/SITC	Exports (\$000)	Share in Country Exports	Share in World Exports	RCA Index
<b>ANGOLA</b>				
Petroleum Products (332)	61431.7	99.98	2.04	49.00
<b>CAMEROON</b>				
Cocoa preparations (072-073)	169759.5	28.85	0.27	104.94
Synthetic rubber (221.2-3)	414.7	0.07	0.00	53.28
Aluminum (684)	139656.8	23.73	0.84	28.18
Tea and Mate (074)	6638.7	1.13	0.05	21.69
Cement and Building Products (661)	29929.9	5.09	0.27	19.01
Shaped Wood (243)	57440	9.76	0.71	13.80
Soap and Cleaning Preparations (554)	21367.2	3.63	0.28	13.13
Plywood and Veneers (631)	26228.8	4.46	0.43	10.39
Wheat Meal or Flour (046)	1790.1	0.30	0.06	5.08
Woven Cotton Fabrics (652)	13322.1	2.26	0.51	4.46
Vegetable Oils (421-422)	11510	1.96	0.44	4.43
Glassware (665)	4298.8	0.73	0.24	3.00
Leather (611)	4983.4	0.85	0.36	2.37
Non-acholic Beverages (111)	1560	0.27	0.12	2.30
Perfumes and Cosmetics (553)	5774.1	0.98	0.47	2.10
Sugar Preparations (061-062)	4784	0.81	0.41	1.97
Alcoholic Beverages (112)	6821.8	1.16	0.69	1.68
Machines for Special Industries (718)	12914.7	2.19	1.43	1.53
Food Preparations nes (099)	2731.7	0.46	0.38	1.22
Other Manufactured Goods (899)	2826	0.48	0.45	1.07
<b>CONGO</b>				
Plywood and Veneers (631)	9124.9	16.45	0.43	38.35
Sugar Preparations (061-062)	6439	11.61	0.41	28.12
Shaped Wood (243)	8787.1	15.84	0.71	22.40
Petroleum Products (332)	19135.3	34.49	2.04	16.92
Hand Tools (695)	1699.4	3.06	0.42	7.22
Explosives and Pyrotechnics (571)	76.7	0.14	0.04	3.27
Chemicals (599)	929.2	1.67	1.30	1.29
Iron and Steel Pipes (678)	380.3	0.69	0.57	1.20
<b>DJIBOUTI</b>				
Prepared Vegetables (055)	163.2	5.99	0.17	35.39
Textile Products nes (656)	236.3	8.68	0.27	32.48
Metal Tanks and Boxes (692)	135	4.96	0.17	29.40
Hand Tools (695)	112.5	4.13	0.42	9.73
Leather Manufactures (612)	28.1	1.03	0.15	6.76
Metal Manufactures nes (698)	146.3	5.37	0.91	5.93
Leather (611)	50.6	1.86	0.36	5.20
Non-Ferrous Base Metals (689)	11.3	0.41	0.09	4.49
Prepared Meat (011-013)	135	4.96	1.22	4.08
Vegetable Oils (421-422)	45	1.65	0.44	3.74
Cereal Preparations (048)	39.4	1.45	0.40	3.58
Other Manufactured Goods (899)	33.8	1.24	0.45	2.76
Prepared Fish (032)	50.6	1.86	0.70	2.64
Textile Yarn and Thread (651)	39.4	1.45	0.78	1.85
Glassware (665)	11.3	0.41	0.24	1.71
Woven Cotton Fabrics (652)	22.5	0.83	0.51	1.63

Table 4.4. Continued

Exporter/Product/SITC	Exports (\$000)	Share in Country Exports	Share in World Exports	RCA Index
<b>DJIBOUTI continued</b>				
Printed Matter (892)	28.1	1.03	0.65	1.60
Essential Oils (551)	5.6	0.21	0.14	1.47
Other Nonmetallic Mineral Manufactures (663)	11.3	0.41	0.31	1.33
Rubber Articles (629)	22.5	0.83	0.78	1.06
Sugar Preparations (061-062)	11.3	0.41	0.41	1.01
<b>ETHIOPIA</b>				
Sugar Preparations (061-062)	4882.9	31.65	0.41	76.88
Processed Animal and Vegetable Oils (431)	869.1	5.63	0.10	58.60
Non-Wheat Meal or Flour (047)	59	0.38	0.01	28.25
Petroleum Products (332)	8020	51.98	2.04	25.50
Dyes and Tanning Products (532)	70.8	0.46	0.02	21.56
Clothing Not of Fur (841)	1104.1	7.16	3.90	1.83
Leather Manufactures (612)	41.6	0.27	0.15	1.77
<b>GABON</b>				
Radioactive Materials (515)	7555.7	15.64	0.12	127.22
Petroleum Products (332)	22482.3	46.54	2.04	22.83
Plywood and Veneer (631)	3063.4	6.34	0.43	14.78
Pottery (666)	474.7	0.98	0.14	7.06
Base Metal Household Equipment (697)	612.4	1.27	0.21	5.94
Explosives and Pyrotechnics (571)	91.7	0.19	0.04	4.49
Inorganic Elements (513)	798.8	1.65	0.44	3.79
Metal Tanks and Boxes (692)	262.2	0.54	0.17	3.22
Furniture (821)	1786.1	3.70	1.17	3.17
Hand Tools (695)	538.3	1.11	0.42	2.63
Textile Products nes (656)	338.6	0.70	0.27	2.62
Machines for Special Industries (718)	1328.7	2.75	1.43	1.92
Iron and Steel Pipes (678)	503.2	1.04	0.57	1.83
Cocoa Preparations (072-073)	185.4	0.38	0.27	1.40
Soaps and Cleaning Preparations (554)	178.0	0.37	0.28	1.33
Clothing Not of Fur (841)	2177.5	4.51	3.90	1.16
Floor Coverings (657)	126.9	0.26	0.23	1.15
Animal Feeds (081)	301.3	0.62	0.55	1.13
<b>GHANA</b>				
Cocoa Preparations (072-073)	310387.2	60.97	0.27	221.81
Shaped Wood (243)	70982.5	13.94	0.71	19.72
Synthetic Rubber (221.2-3)	131.1	0.03	0.00	19.47
Aluminum (684)	45049.9	8.85	0.84	10.51
Plywood and Veneers (631)	17958.3	3.53	0.43	8.22
Railway Vehicles (731)	9309.6	1.83	0.31	5.93
Petroleum Products (332)	23209.8	4.56	2.04	2.24
Iron and Steel Pipes (678)	6126.5	1.20	0.57	2.11
Vegetable Oils (421-422)	3588.6	0.70	0.44	1.60
Wood Manufactures (632)	2109.1	0.41	0.34	1.22
Prepared Fish (032)	1315.0	0.26	0.22	1.18

Table 4.4. Continued

Exporter/Product/SITC	Exports (\$000)	Share in Country Exports	Share in World Exports	RCA Index
<b>KENYA</b>				
Tea and Mate (074)	336866.5	34.81	0.05	669.36
Dyes and Tanning Products (532)	6895.1	0.71	0.02	33.48
Gold and Jewelry (897)	84549.9	8.74	0.54	16.05
Preserved Fruit (053)	43348.9	4.48	0.30	14.92
Cement and Building Products (661)	32479.3	3.36	0.27	12.54
Leather (611)	27507.7	2.84	0.36	7.95
Preserved Vegetables (055)	12371.7	1.28	0.17	7.55
Petroleum Products (332)	128526.9	13.28	2.04	6.52
Soaps and Cleaning Preparations (554)	16118.2	1.67	0.28	6.02
Animal and Vegetable Oils (431)	4948.8	0.51	0.10	5.32
Margarine and Shortening (091)	1732.2	0.18	0.04	4.78
Iron and Steel Plate (674)	44082.6	4.56	1.19	3.82
Alcoholic Beverages (112)	24530.4	2.53	0.69	3.67
Iron and Steel Wire (677)	3240.5	0.33	0.11	3.15
Textile Products nes (656)	6782.8	0.70	0.27	2.62
Tobacco Manufactures (122)	9180.7	0.95	0.45	2.11
Essential Oils (551)	2845.7	0.29	0.14	2.10
Base Metal Household Equipment (697)	4251.3	0.44	0.21	2.06
Office Supplies nes (895)	3087.6	0.32	0.17	1.87
Printed Matter (892)	10343.3	1.07	0.65	1.66
Iron and Steel Shapes (673)	9966	1.03	0.63	1.63
Wood Manufactures nes (632)	4230.8	0.44	0.34	1.29
Articles of Paper (642)	6378.4	0.66	0.52	1.27
Cereal Preparations (048)	4736.6	0.49	0.40	1.21
Glassware (665)	2820.1	0.29	0.24	1.20
Nonelectric Wire Products (693)	1099.4	0.11	0.11	1.02
<b>MADAGASCAR</b>				
Sugar Preparations (061-062)	13304.1	18.14	0.41	43.96
Essential Oils and Perfume (551)	3880.6	5.29	0.14	37.79
Preserved Fruit (053)	7325.4	9.99	0.30	33.27
Printed Matter (892)	9309.1	12.70	0.65	19.68
Woven Cotton Fabrics (652)	6865.9	9.36	0.51	18.44
Cocoa Preparations (072-073)	3384.3	4.62	0.27	16.79
Preserved Vegetables (055)	1637.8	2.23	0.17	13.19
Synthetic Rubber (221.2-3)	8.4	0.01	0.00	8.66
Leather (611)	2050.8	2.80	0.36	7.82
Animal and Vegetable Oils (431)	414.2	0.56	0.10	5.88
Prepared Meat (011-013)	4436.8	6.05	1.22	4.98
Tea and Mate (074)	168.8	0.23	0.05	4.43
Textile Products nes (656)	846.7	1.15	0.27	4.32
Rice Glazed or Polished (042.2)	384.3	0.52	0.14	3.87
Wood Manufactures (632)	754.5	1.03	0.34	3.04
Floor Coverings (657)	482.4	0.66	0.23	2.89
Nonfur Clothing (841)	7724.9	10.54	3.90	2.70
Other Manufactured Goods (899)	809.3	1.10	0.45	2.46
Textile Yarn and Thread (651)	1351.1	1.84	0.78	2.35
Travel Goods (831)	449.8	0.61	0.26	2.34
Shaped Wood (243)	1016.3	1.39	0.71	1.96
Non-Wheat Meal or Flour (047)	13.9	0.02	0.01	1.40

Table 4.4. Continued

Exporter/Product/SITC	Exports (\$000)	Share in Country Exports	Share in World Exports	RCA Index
<b>MADAGASCAR Continued</b>				
Petroleum Products (332)	2030.5	2.77	2.04	1.36
Animal Oils and Fats (411)	42.7	0.06	0.04	1.33
Gold and Jewelry (897)	527.8	0.72	0.54	1.32
Special Textile Products (655)	421.8	0.58	0.47	1.22
<b>MALAWI</b>				
Oil Seed Flour (221.9)	120.1	0.40	0.00	136.33
Animal Feeds (081)	555.9	44.09	0.55	80.13
Wheat Meal or Flour (046)	50.9	1.12	0.06	18.75
Noncotton Woven Textiles (653)	5.9	7.79	1.40	5.57
Nonwheat Meal or Flour (047)	215.7	0.06	0.01	4.66
Wood Manufactures nes (632)	314.8	1.56	0.34	4.60
Travel Goods and Handbags (831)	0.1	0.77	0.26	2.91
Non-Motor Road Vehicles (733)	47.6	0.70	0.40	1.75
Dried Fruit (052)	8.6	0.07	0.04	1.60
Inorganic Elements and Oxides (513)	29.2	0.58	0.44	1.32
<b>MALI</b>				
Vegetable Oils (421-422)	4044.6	38.87	0.44	88.04
Leather (611)	1763.4	16.95	0.36	47.40
Animal Feeds (081)	916.4	8.81	0.55	16.01
Telecommunications Equipment (724)	2752.5	26.45	3.63	7.28
Floor Coverings (657)	142.3	1.37	0.23	6.00
Food Preparations nes (099)	202.3	1.94	0.38	5.12
Synthetic Rubber (221.2-.3)	0.7	0.01	0.00	5.09
Zinc (686)	18.4	0.18	0.10	1.76
Tobacco Manufactures (122)	61.1	0.59	0.45	1.30
Woven Cotton Fabrics (652)	65.8	0.63	0.51	1.25
<b>MAURITIUS</b>				
Sugar Preparations (061-062)	322476.7	25.15	0.41	60.94
Nonfur Clothing (841)	718546.7	56.05	3.90	14.36
Prepared Fish (032)	28006.5	2.18	0.22	9.95
Tea and Mate (074)	4549	0.35	0.05	6.82
Wheat Meal or Flour (046)	3634.1	0.28	0.06	4.74
Synthetic Rubber (221.2-.3)	80.1	0.01	0.00	4.72
Watches and Clocks (864)	24648.3	1.92	0.47	4.10
Woven Cotton Fabrics (652)	26166	2.04	0.51	4.02
Gold and Jewelry (897)	22147.2	1.73	0.54	3.17
Textile Products nes (656)	6789.4	0.53	0.27	1.98
Ships and Boats (735)	15553.4	1.21	0.95	1.28
Manufactured Fertilizers (561)	5086.8	0.40	0.33	1.21
Textile Yarn and Thread (651)	12007.3	0.94	0.78	1.20
Travel Goods and Handbags (831)	3435.7	0.27	0.26	1.02
<b>NIGERIA</b>				
Cocoa Preparations (072-073)	143898	0.55	0.27	1.99
Synthetic Rubber (221.2-.3)	462.6	0.00	0.00	1.33



Table 4.4. Continued

Exporter/Product/SITC	Exports (\$000)	Share in Country Exports	Share in World Exports	RCA Index
<b>SENEGAL</b>				
Preserved Fish (032)	66870.2	9.89	0.22	45.02
Inorganic Elements and Oxides (513)	56640.6	8.38	0.44	19.18
Manufactured Fertilizers (561)	26812.9	3.96	0.33	12.13
Vegetable Oils (421-422)	34324.8	5.08	0.44	11.50
Metal Tanks and Boxes (692)	12671.5	1.87	0.17	11.11
Petroleum Products (332)	86780.7	12.83	2.04	6.30
Animal Feeds (081)	13574.4	2.01	0.55	3.65
Articles of Paper (642)	11742.2	1.74	0.52	3.34
Perfumes and Cosmetics (553)	4738	0.70	0.47	1.50
Machines for Special Industries (718)	12415.7	1.84	1.43	1.28
Sugar Preparations (061-062)	2849.2	0.42	0.41	1.02
<b>SEYCHELLES</b>				
Preserved Fish (032)	17676.5	95.97	0.22	436.93
Synthetic Rubber (221.2-.3)	32.2	0.17	0.00	132.18
Animal Feeds (081)	460.0	2.50	0.55	4.54
Other Manufactured Goods (899)	209.4	1.14	0.45	2.53
Dried Fruit (052)	17.9	0.10	0.04	2.26
<b>TOGO</b>				
Wheat Meal or Flour (046)	6825.6	12.75	0.06	213.12
Cocoa Preparations (072-073)	10970.2	20.50	0.27	74.57
Food Preparations nes (099)	9215.5	17.22	0.38	45.35
Margarine and Shortening (091)	728.7	1.36	0.04	36.33
Cement and Building Products (661)	3007.7	5.62	0.27	21.00
Nonelectric Wire Products (693)	995.6	1.86	0.11	16.77
Animal Feeds (081)	2329	4.35	0.55	7.91
Petroleum Products (332)	5824.6	10.88	2.04	5.34
Articles of Paper (642)	1291.5	2.41	0.52	4.64
Textile Products (656)	501.2	0.94	0.27	3.51
Vegetable Oils (421-422)	673.9	1.26	0.44	2.85
Articles of Plastic nes (893)	1777.4	3.32	1.17	2.83
Soaps and Cleaning Preparations (554)	384.7	0.72	0.28	2.60
Iron and Steel Wire (677)	116.2	0.22	0.11	2.04
Rice Glazed or Polished (042.2)	144.6	0.27	0.14	1.99
Metal Tanks and Boxes (692)	171.9	0.32	0.17	1.90
Plastic Materials (581)	2138.2	4.00	2.45	1.63
Railway Rails (676)	24.4	0.05	0.03	1.59
Sugar Preparations (061-062)	306	0.57	0.41	1.39
Tea and Mate (074)	36.5	0.07	0.05	1.31
Woven Cotton Fabrics (652)	348.7	0.65	0.51	1.28

Table 4.4. Continued

Exporter/Product/SITC	Exports (\$000)	Share in Country Exports	Share in World Exports	RCA Index
<b>ZIMBABWE</b>				
Nickel (683)	80533.1	9.25	0.08	109.80
Pig Iron (671)	115164.2	13.23	0.18	72.05
Nonwheat Meal or Flour (047)	7388.7	0.85	0.01	62.70
Dyes and Tanning Products (532)	7584.8	0.87	0.02	40.94
Sugar Preparations (061-062)	101831.5	11.70	0.41	28.35
Tea and Mate (074)	11301.9	1.30	0.05	24.97
Margarine and Shortening (091)	5044.4	0.58	0.04	15.47
Nonferrous Base Metals (689)	7091.7	0.81	0.09	8.81
Base Metal Household Equipment (697)	16277.5	1.87	0.21	8.77
Woven Cotton Fabrics (652)	33506.5	3.85	0.51	7.58
Wheat Meal or Flour (046)	2812.4	0.32	0.06	5.40
Textile Products nes (656)	10928.1	1.26	0.27	4.70
Cement and Building Products (661)	10744	1.23	0.27	4.61
Nonelectric Wire Products (693)	4438.8	0.51	0.11	4.60
Tobacco Manufactures (122)	16579.1	1.90	0.45	4.23
Textile Yarn and Thread (651)	24595.5	2.83	0.78	3.61
Leather (611)	10991	1.26	0.36	3.53
Gold and Jewelry (897)	16288.6	1.87	0.54	3.44
Copper (682)	19510.8	2.24	0.67	3.36
Wood Shaped (243)	20373.1	2.34	0.71	3.31
Iron and Steel Castings (679)	2519.5	0.29	0.09	3.23
Furniture (821)	31125.3	3.58	1.17	3.07
Railway Rails (676)	762.7	0.09	0.03	3.05
Soaps and Cleaning Preparations (554)	6840.3	0.79	0.28	2.84
Printed Matter (892)	15673.5	1.80	0.65	2.79
Explosives and Pyrotechnics (571)	924.5	0.11	0.04	2.51
Railway Vehicles (731)	6435.1	0.74	0.31	2.40
Tin (687)	624.4	0.07	0.03	2.10
Animal Feeds (081)	9975.2	1.15	0.55	2.08
Preserved Vegetables (055)	2979	0.34	0.17	2.02
Processed Animal and Vegetable Oils (431)	1682.4	0.19	0.10	2.01
Wood Manufactures (632)	5756.6	0.66	0.34	1.96
Prepared Meat (011-013)	20182.5	2.32	1.22	1.91
Nonfur Clothing (841)	64047.3	7.36	3.90	1.89
Cereal Preparations (048)	6607.8	0.76	0.40	1.88
Iron and Steel Wire (677)	1545.6	0.18	0.11	1.67
Prepared Fish (032)	10052.4	1.15	0.70	1.64
Travel Goods and Handbags (831)	3538.2	0.41	0.26	1.55
Manufactured Fertilizers (561)	4026.0	0.46	0.33	1.42
Agricultural Machinery (712)	5624.5	0.65	0.47	1.37

Source: Computed from UN COMTRADE statistics.

129 three and four-digit SITC processed products, the table only lists those in which each country registered an RCA index above unity (that is, products in which it had a comparative advantage).<sup>14</sup>

Two key points are evident from these tabulations. First, most African countries only have a comparative advantage in a very limited range of products, and the same products often appear in other African countries' RCA profiles.<sup>15</sup> For example, Angola only has a RCA above unity for refined petroleum products while the Congo has a comparative advantage in petroleum products and seven other goods. Second, most of the countries do not have a comparative advantage in those products that are of primary importance in regional imports. Cameroon, Gabon and Senegal have RCA indices above unity for machines for special industries (SITC 718), as do Ghana and Zimbabwe for railway vehicles (SITC 731). With one or two other exceptions, however, products in the machinery and transport equipment group (SITC 7) are generally missing from these countries' RCA profiles. (Box 4.1 presents similar information on SACU's RCA indices).

The latter observation seemingly places Sub-Saharan Africa in a very awkward position as far as policy initiatives for regional trade arrangements are concerned. Machinery and transport equipment constitutes the single most important sector in African imports, yet the region has not developed a comparative advantage for these goods - a point which weakens prospects for any RTA. However, a study by the World Bank (1992, Appendix B) shows machinery and transportation equipment is generally manufactured using very capital intensive production techniques and developing countries do not have a comparative advantage in these types of goods (Lary 1968, Yeats 1989). As a result, if Africa did

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<sup>14</sup>The appendix tables in Yeats (1991) provide a full list of these products. In general, the RCA computations were made at the three-digit SITC level, but in cases where UNIDO (1982) determined there were significant production differences between components the four-digit level was used.

<sup>15</sup>The data indicate that Angola, the Congo, Gabon, Ghana, Kenya, Madagascar, Senegal and Togo all have a comparative advantage in refined petroleum products. Similarly, the Cameroons, Congo, Ethiopia, Madagascar, Mauritius, Senegal, Togo and Zimbabwe all have a comparative advantage in sugar preparations. This common concentration of comparative advantage in a narrow range of products does not bode well for prospects for successful regional trade initiatives.

**Box 4.1**  
**Implications of South Africa's Revealed Comparative Advantage Profile**

Although most Sub-Saharan African countries have a comparative advantage in a relatively few, and often closely related, product lines the RCA profile of the South African Customs Union differs in several important aspects. One of the most important differences relates to the number of industries in which SACU has a revealed comparative advantage. Empirical tests show that the Union has a revealed comparative advantage in over 80 different industry groups and that many of these figure prominently in the imports of other Sub-Saharan African countries.

Aside from the number of industries, South Africa's RCA profile differs from that of other SSA countries in terms of the diversity of products in which it has a comparative advantage. As an illustration, the tabulation shown below lists the 26 industry groups in which SACU had an RCA index of four or more. Labor intensive products like footwear, shaped wood, and non-cotton textiles appear on the list, as do some processed agricultural products like oil seed flour and polished rice. Several different types of machinery are represented (items like office machines and textile machinery) as are products that normally require relatively high inputs of human capital in production (medical products and scientific instruments). Among some of the other important products in which SACU has a revealed comparative advantage (that is, its RCA index exceeded unity) include non-electric power machinery, metalworking machinery, electric power machinery, electrical distributing equipment, organic chemicals, agricultural machinery and plastic and rubber manufactures.

Commodity (SITC)	RCA	Commodity (SITC)	RCA
Watches and Clocks (864)	22.85	Ships and Boats (735)	5.92
Sound Recorders (891)	11.18	Electro-Medical Equipment (726)	5.77
Office Machines (714)	10.15	Tin (687)	5.63
Cork Manufactures (633)	10.13	Oil Seed Flour (221.9)	5.62
Toys & Sporting Goods (894)	9.57	Telecommunications (724)	5.53
Fur Clothing (842)	7.66	Lead (685)	5.48
Electrical Machinery nes (729)	7.35	Footwear (851)	5.18
Synthetic Dyes (531)	7.18	Non-Cotton Textiles (653)	5.09
Pottery (666)	7.00	Medical Products (541)	4.74
Textile Machinery (717)	6.96	Domestic Electrical Equipment (725)	4.61
Office Supplies (895)	6.66	Leather Manufactures (612)	4.40
Wood Shaped (243)	6.51	Rice Glazed or Polished (042.2)	4.11
Photo Supplies (862)	6.44	Scientific Instruments (861)	4.08

One of the major problems associated with proposals for regional trade arrangements among other Sub-Saharan African countries is that the latter often appear to have very few product lines in which mutually beneficial trade could occur. This is not the case for the South African Customs Union which has developed an export capacity in a wide and diverse range of manufactures and processed products.

attempt to develop a production and export capacity in this sector the goods would be relatively high cost and, in all probability, less reliable and of lower quality than similar products available from "efficient" suppliers. Africa is seemingly in a "lose-lose" situation concerning policies toward regional arrangements. If it does not develop this export capacity the prospects for success of any regional trade arrangement would be diminished since Africa would continue to be almost completely dependent on third countries for these key imports. However, if Africa did attempt to establish such an export capacity, economic theory suggests the goods would be relatively high cost - a point that would undermine the competitive position of users of this equipment in exports to third markets.<sup>16</sup>

Table 4.5 attempts to summarize the implications of the Africa's comparative advantage profiles in relation to the region's major import needs. The table shows the number of individual products in which each country has a comparative advantage (this is out of a total of 129 distinct product groups) and also indicates the share of the former in total Sub-Saharan African imports. For example, Malawi has a comparative advantage in 10 product groups that collectively account for 3.6 percent of the region's total imports. Similarly, the Seychelles has RCA indices above unity for five items that account for only about one-half of one percent of Africa's imports. Overall, the key message that emerges from these tabulations is that Sub-Saharan African countries have a comparative advantage in a very narrow range of products that are relatively unimportant in the region's imports.<sup>17</sup>

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<sup>16</sup>There appear to be parallels between some arguments advanced in favor of African regional trade arrangements and the disastrous import substitution policies that were pursued by Latin American countries in the 1960s and 1970s. Import substitution policies suggest that, by erecting barriers against outside suppliers, local industries will be able to utilize opportunities in local markets to improve their production efficiency and know how that would (eventually) allow them to become internationally competitive. International opinion now holds that these policies were very detrimental to the industrialization and growth of countries that tried to implement them and that general "outward oriented" trade strategies are a far more promising option (see, among others, Balassa 1978, Edwards 1989, Meier 1968 or Keesing 1967). Those who argue that countries which join African RTAs should maintain barriers against third countries while their industries develop within protected local markets should take note of the extremely poor results produced by these strategies in the past.

<sup>17</sup>The appearance of refined petroleum products (SITC 332) in the RCA profiles of countries like Kenya, Senegal or Togo causes these countries' apparent compatibility with all Sub-Saharan African imports to approximately double. It is not clear how much refining is actually being done in these countries and how much of this exchange may reflect transit trade. Refined petroleum products account for about 5 percent of all SSA imports.

**Table 4.5 The Number of Industries in which Sub-Saharan African Countries have a Revealed Comparative Advantage and Their Importance in Regional Imports.**

African Exporter	1995 Value of All Regional Exports (\$000)	Products in Which the SSA Country has a Revealed Comparative Advantage	
		Number of Items	Items Share in Total African Imports (%)
Angola	3,324	1	5.09
Cameroon	2,138	20	10.64
Congo	1,360	8	10.99
Djibouti	108	21	10.94
Ethiopia	452	7	6.92
Gabon	1,416	18	13.20
Ghana	1,662	11	8.66
Kenya	1,932	26	14.94
Madagascar	572	26	14.40
Malawi	439	10	3.58
Mali	243	10	5.87
Mauritius	1,452	14	6.56
Nigeria	11,664	2	0.10
Senegal	577	11	17.75
Seychelles	113	5	0.61
Togo	360	21	15.03
Zimbabwe	2,129	40	13.11

Source: 1995 trade values from the IMF Direction of Trade Statistics. RCA computations based on available UN COMTRADE statistics.

One further point should be noted from the information presented in Tables 4.4 and 4.5. African countries have developed a comparative advantage in several specific industrial sectors like processed foods, certain chemicals, wood manufactures and textiles which are imported by other SSA countries. In these specific sectors, more detailed analyses are clearly warranted with the objective of identifying constraints to the possible expansion of intra-trade. However, it is unlikely that a formal regional trade arrangement would be a suitable vehicle for promoting this type of exchange. To be consistent with World Trade Organization regulations an RTA must cover "substantially all" trade between member countries - a point that makes such an agreement inappropriate for sector specific trade promotion.

#### D. Dynamic Products in African Intra-Trade

##### Message

*Findings of the previous (essentially static) analysis of African intra-trade patterns were largely negative regarding prospects for increasing intra-trade through regional arrangements. However, an important consideration is whether recent trade changes are evolving along lines which more closely match regional import needs. This section shows the most dynamic products in recent African intra-trade are not in sectors which are of primary importance in SSA imports. One potentially positive finding is that foodstuffs dominate the fastest growing products in intra-trade - a point which suggests a further expansion of this exchange might be able to alleviate somewhat Africa's chronic food security problems and also help improve conditions for the rural poor.*

Although the findings of the previous analyses were not favorable for future regional trade prospects, a further point that should be examined is whether this exchange is evolving along lines that could provide a larger base for future expansion. These changes, if they are occurring, may presently be marginal, but they could be indicative of more significant future developments. In other words, are some African countries' exports changing in ways that match more closely other regional countries' major imports. Second, it could be important to determine if the dynamic products have different production characteristics than traditional exports. If they are (say) significantly more intensive in the use of some special factor (like land), one would want to determine the reason and whether export opportunities exist in other related goods.

Table 4.6 addresses this question by identifying the 30 items that recorded the highest compound annual growth rates in intra-trade from the 1980s to the 1990s. It shows the value and share of each item in all intra-trade, and also identifies the largest supplier of each product and gives its share of all intra-trade in the item. In preparing these tabulations, certain marginal products whose trade did not exceed \$500,000 in the 1980s were excluded so as not to have the growth rates biased by products starting from an extremely low base. Two questions are addressed. Are these products concentrated in sectors of primary importance in Africa's total (global) imports, and are their country origins narrowly or widely dispersed. The latter point could provide some indication as to whether the base for intra-regional trade was expanding, or was remaining highly concentrated and dominated by a few countries (see Chapter III).

Table 4.6 shows that a relatively few countries account for a high share of these dynamic products. Four, namely, Zimbabwe, Kenya, Camerouns and Ghana originate 22 (73 percent) of the products and their share of the total exchange of each good averages about 66 percent. Zimbabwe alone accounts for almost 100 percent of the exports of the fastest growing product (Unmilled Maize), which is also the largest product with current exports approaching \$500 million). Zimbabwe also has shares exceeding 90 percent for four of the seven products which it is the primary exporter. Kenya is the major supplier for 7 of the fast growing products - 2 more than Cameroon. In short, the high degree of concentration in the country origins of all African intra-trade are also apparent in the fast growing products.<sup>18</sup>

An analysis of the composition of the dynamic products reveals two important points. First, almost half (in terms of total value) of the products are foods and feeds - a group that accounts for about

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<sup>18</sup>The reader is reminded of the importance of the Cote d'Ivoire in total African intra-trade (Chapter III) and the implications of this country's failure to report to UN COMTRADE. It is uncertain as to how the pattern reflected in Table 4.6 would change if data for the Cote d'Ivoire were available, but it seems clear that the central conclusion (that the origins of the fast growing products are highly concentrated) would not be altered.



Table 4.6. The Thirty Fastest Growing Products in Sub-Saharan Africa's Intra-Trade.

Commodity (SITC)	Major Supplier and Share (%)	Value of Intra-Trade (\$000)		Share in Total Intra-Trade (%)		Share in External Exports (%)		1980s-90s Growth Rate of Intra-Trade
		1980s	1990s	1980s	1990s	1980s	1990s	
Maize Unmilled (044)	Zimbabwe (99.3)	1,436	486,734	0.10	5.28	0.00	0.20	79.1
Iron Plate and Sheet (674)	Kenya (94.3)	2,531	233,457	0.17	2.53	0.01	0.02	57.2
Food Preparations nes (099)	Togo (54.2)	1,313	85,000	0.09	0.92	0.00	0.00	51.8
Wheat Meal or Flour (046)	Togo (44.7)	1,314	75,347	0.09	0.82	0.00	0.00	49.9
Special Transactions (931)	Nigeria (97.1)	2,784	128,648	0.18	1.40	0.45	0.23	46.7
Milk and Cream (022)	Zimbabwe (70.0)	863	39,498	0.06	0.43	0.00	0.02	46.6
Fixed Vegetable Oil(422)	Cameroon (56.9)	1,573	53,163	0.10	0.58	0.07	0.01	42.2
Margarine and Shortening (091)	Kenya (45.7)	571	18,786	0.04	0.20	0.00	0.01	41.8
Non-Wheat Meal or Flour (047)	Zimbabwe (95.5)	863	27,471	0.06	0.30	0.00	0.01	41.4
Electrical Energy (351)	Ghana (100.0)	6,904	214,898	0.46	2.33	0.00	0.00	41.0
Fixed Vegetable Oils (421)	Mali (42.9)	904	27,603	0.06	0.30	0.11	0.15	40.8
Railway Vehicles (731)	Zimbabwe (98.6)	1,073	31,594	0.07	0.34	0.00	0.05	40.2
Road Vehicles Non-Motor (733)	Kenya (38.4)	1,238	35,812	0.08	0.39	0.00	0.02	40.0
Alcoholic Beverages (112)	Kenya (72.3)	5,988	165,776	0.40	1.80	0.00	0.01	39.4
Instruments and Apparatus (861)	Mauritius (29.4)	539	14,009	0.04	0.15	0.02	0.06	38.5
Glassware (665)	Cameroon (41.8)	2,076	51,415	0.14	0.56	0.00	0.00	37.8
Machines for Special Industries (718)	Cameroon (46.8)	4,120	92,829	0.27	1.01	0.02	0.06	36.5
Textile Yarn and Thread (651)	Mauritius (61.5)	3,726	82,877	0.25	0.90	0.06	0.18	36.4
Articles of Plastic (893)	Kenya (49.1)	4,904	105,583	0.33	1.15	0.00	0.01	35.9
Primary Iron Forms (672)	Zimbabwe (91.5)	620	12,681	0.04	0.14	0.09	0.03	35.2
Chocolate and Products (073)	Ghana (60.6)	1,308	26,109	0.09	0.28	0.00	0.03	34.9
Nonelectric Power Machinery (711)	Zimbabwe (77.8)	550	10,598	0.04	0.11	0.01	0.04	34.4
Oil Seeds and Nuts (221)	Mali (51.5)	3,321	61,496	0.22	0.67	0.28	0.09	33.9
Rough Wood (242)	Congo (89.8)	1,242	21,964	0.08	0.24	0.64	1.91	33.3
Tobacco Manufactures (122)	Zimbabwe (51.1)	7,388	127,079	0.49	1.38	0.00	0.02	32.9
Aluminum (684)	Ghana (64.5)	17,161	285,588	1.14	3.10	0.88	0.03	32.5
Furniture (821)	Kenya (49.8)	3,170	50,958	0.21	0.55	0.02	0.15	32.0
Metal Manufactures nes (698)	Cameroon (41.3)	2,766	43,606	0.18	0.47	0.01	0.01	31.8
Iron and Steel Tubes (678)	Ghana (43.2)	3,875	61,044	0.26	0.66	0.02	0.01	31.7
Electrical Machinery nes (729)	Cameroon (64.8)	4,255	61,883	0.28	0.67	0.02	0.03	30.7

Source: Computed from available UN COMTRADE records.

14 percent of the SSA countries' global imports. This raises the interesting possibility that expanded trade opportunities for these goods might make some contribution to the alleviation of Africa's major food security problems. Second, the two key SSA import groups - all manufactured goods and machinery and transport equipment - are significantly under-represented in the dynamic products. Manufactures account for about three-quarters of Africa's global imports, but they represent only about one-third the value of the dynamic products. Machinery and transport equipment account for less than 10 percent of the fast growing products - a point that was anticipated given the capital intensive production procedures generally used in the manufacture of these goods.

#### E. Intra-Trade and the Influence of African Trade Barriers

##### Message

*African countries have expressed a strong commitment to the expansion of regional trade, but little thought appears to have been given to how this might best be accomplished. Although the proposition may, at first, appear paradoxical the liberalization of African trade barriers on a most-favored-nation basis would likely have a greater expansionary impact on intra-trade than an exchange of regional preferences. An MFN liberalization of Africa's high trade barriers would allow local producers to access the most efficient low-cost sources of supplies and production equipment, whatever their origin, thereby improving Africa's ability to compete internationally. Such a liberalization should reduce existing sectorial anti-export biases in Africa's own trade restrictions.*

Any discussion of prospects for increased African intra-trade must consider the influence of these countries own trade barriers on this exchange, and the channels through which they influence the economy. 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 may often create a bias against exports

that prevents the achievement of otherwise attainable rates of growth.<sup>19</sup> In the case of African countries this problem has major implications. If general SSA growth rates accelerated this would clearly improve prospects for expanded intra-trade and trade with non-regional partners. How restrictive are African import barriers and how do they compare with those in countries that have achieved superior export growth rates? 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>20</sup>

Table 4.7 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 individual countries. 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 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 one would want to determine if their protectionist regimes differed markedly from those of sub-Saharan Africa. Finally, the table also provides similar information for two

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<sup>19</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>20</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.

groups of countries whose export growth rates were also well above Africa's, namely, the high income non-OECD countries and the OECD members.

Table 4.7 clearly shows Africa trade barriers are far more restrictive than in any of the other country groups. Sub-Saharan Africa's tariffs average 26.8 percent, which is more than three times those of the fast growing exporters, and more than four times the OECD average (6.1 percent). A further point 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. In contrast, Africa's trade barriers were virtually unchanged by the Round. As a result, the 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. More than one-third of all African imports encounters some form of these restrictions (over 40 percent in the case of the low income Africa) which is almost *nine times higher* the corresponding average (3.9 percent) for the fast growing exporters, and *thirteen times greater* than in the high income non-OECD countries. There is reason to believe the detrimental impact of these NTBs on African growth and trade prospects is considerably greater than that of African tariffs. Specifically, if foreign producers become increasingly efficient, relative to domestic African suppliers, they may be able to erode a tariff's protective effects over time. This would increase African nationals' access to lower cost foreign products, which would improve living standards and the region's ability to compete internationally. Under nontariff barriers like quotas, however, no such beneficial adjustment is possible as the volume of imports are subject to fixed ceilings. Instead of narrowing, as under tariffs, the gap between Africa's standard of living (which impacts on the development of human capital) and production efficiency would further worsen relative to other countries.

Table 4.7. 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.

Table 4.8 provides another perspective on how African trade barriers adversely influence regional 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>21</sup> These tariffs reflect additional direct costs a potential African exporter (who used these items as inputs) would have to absorb to compete in both regional and non-regional 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 export industries. 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 reflected in Table 4.8 is that African tariffs on these goods 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 the table 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 - more than 3 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. 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 of trade restrictions on

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<sup>21</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 on 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.

major inputs must constitute an important dis-incentive to local production for export.<sup>22</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 agricultural chemicals, clearly have the potential to be a major constraint to the expansion of African agricultural output which could raise living conditions and income in Africa, and lead to improvements in human capital. Recent studies accent the key role that the latter play as a catalyst for industrialization and growth. The conclusion which follows is that Africa's own restrictive general trade policies has a major negative on trade both within and outside the region.

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<sup>22</sup>Empirical evidence shows 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. These policy changes enabled reformers 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.

Table 4.8. 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.



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## V. PROSPECTS FOR REGIONAL TRADE ARRANGEMENTS IN AFRICA: AN ASSESSMENT

### Major Message

*Preferences for African intra-trade do not appear to have the potential to make an important impact on these countries' trade due to high non-complementarity of the region's exports and imports, and the lack of appropriate infra-structure needed to support this exchange. Preferences extended under regional trade arrangements may have a negative impact on Africa's industrialization and growth if they divert regional imports from low to higher cost sources. Trade reforms, implemented on a general most-favored nation basis, clearly are a far better strategy for African development.*

For more than two decades Sub-Saharan African countries have expressed a strong and growing interest in the utilization of regional integration initiatives to help accelerate their industrialization and growth. The projects which have been proposed to foster integration have been very broad in the nature as are the range of problems they were meant to address. For example, these proposals encompassed initiatives such as: (i) the development of regional ports to help African countries most effectively utilize modern shipping technologies and realize economies of scale in transport; (ii) the development of regional road and rail systems to help facilitate the transfer of goods and people across national frontiers; (iii) the use of joint tenders to help secure key imports at more favorable prices; or (iv) cooperation on various monetary and financial matters (including the establishment of regional banks) to help facilitate new investment. Very clearly, many of these initiatives could have a major positive impact on Africa's industrialization and growth prospects. However, a proper assessment of their likely influence requires a thorough economic analysis of the likely costs and benefits associated with each individual proposal. In the past, many integration proposals have been advanced with considerable rhetoric, but with very little

concrete objective analysis.<sup>1</sup>

This report examined one proposal that has been advanced to foster regional integration, that is, the exchange of mutual trade preferences among Sub-Saharan countries. To assist in this assessment a database on intra-African trade was developed that is far more detailed and comprehensive than information previously available to other researchers that have examined this topic. For the first time these statistics allow one what products and countries are of primary importance in African intra-trade.

An analyses of these data leads to the conclusion that problems associated with African regional trade arrangements are far more daunting than have been generally recognized. The major difficulty is that Africa's non-oil exports are highly concentrated in a very few products - none of which are important in regional imports. Evidence indicates the problem of non-complementarity in African trade can only be resolved over a fairly long interval.

Although the point was not previously discussed, there are reasons why the implementation of regional trade preferences might actually be detrimental to prospects for Africa's industrialization and growth. Africa does not have a comparative advantage in the types of machinery and capital goods that are vital for regional development, and are of paramount importance in regional imports. If trade preferences, within Africa's very high tariffs and nontariff barriers, did stimulate some intra-trade in these sectors it could have a detrimental impact on the region's ability to compete in other international markets. For example, if other developing countries (say those in South Asia) are able to source imports

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<sup>1</sup>Proposals for African integration can be traced back to at least the 1960s and 1970s. A point that should be recognized is that some of the reasons for the early proposals now are clearly of greatly weakened validity. Specifically, one of the major reasons for the interest in regional trade arrangements was to help African countries overcome any constraints associated with the small size of their own domestic markets. However, the Kennedy, Tokyo and Uruguay Rounds of the multilateral trade negotiations, along with the adoption of the generalized system of preferences and the Lomé Convention, reduced tariff barriers against most African exports to zero or insignificant levels (Yeats et. al. 1996). Furthermore, after the Uruguay Round agreement is fully implemented nontariff barriers should cover less than 3 percent of African exports (Amjadi and Yeats 1995). In short, the international environment has become so "open" that African countries can use international markets to overcome any constraints associated with the small size of their domestic economies and should not need regional preferences. It should be noted that the Asian NICs capitalized on opportunities in international markets in the 1960s and 1970s - when trade barriers were considerably higher - to accelerate their own industrialization and growth.

of production equipment from global low cost producers, while preferences cause SSA countries to turn to higher-cost less-efficient sources in the region (whose products might also be less reliable and of lower quality), this would reduce Africa's ability to compete in non-regional markets with Asia. *Globally, Africa would continue to be marginalized!*

The information on African trade and trade barriers indicates that reforms implemented on a MFN basis are a far more promising option for the region. 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, and prevent the achievement of otherwise attainable rates of growth. This study shows the 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 to enhance its international competitiveness, and to permit African exporters to capitalize on opportunities in foreign markets. The exchange of regional preferences, particularly in view of the very narrow range of products that might be affected, cannot achieve this key objective. Broad based reductions in African trade barriers on a most-favored-nation basis is the optimum approach for implementing the key needed reforms.

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