

The SADC's Revealed Comparative Advantage in Regional and International Trade

Nicole Valentine

FOREWORD

The first phase of the Industrial Strategy Project commenced in 1992. The Project has its origins in the Congress of South African Trade Union's (COSATU) efforts to develop policy responses to the malaise afflicting South African manufacturing.

The first phase of the ISP submitted its final report in 1995. This comprised 11 sectoral studies, a number of cross-sectoral studies, and a synthesis volume that proposed an overall industrial strategy for South Africa.

The ISP is now in its second phase and comprises four research themes. One of these examines the relationship between industrial development and the environment, a second focuses on firm-level innovation, a third examines issues in human resource development, and the fourth is concerned with identifying mechanisms to strengthen manufacturing competitiveness at regional and local levels. Examination of the export performance of South Africa's manufacturing sector has been a persistent theme running through the work of the Industrial Strategy Project, and this concern is taken up in this contribution to our series of working papers.

The Industrial Strategy Project is a project of the Development Policy Research Unit of the University of Cape Town. The second phase of the ISP is funded by the FES, HIVOS, the IDRC and the Olof Palme International Centre.

These are working papers intended to catalyse policy debate. They express the views of their respective authors and not necessarily those of the Industrial Strategy Project.

David Lewis - Director: Industrial Strategy Project

EXECUTIVE SUMMARY

The economic structure of the Southern African Development Community is such that the value of output is dominated by the services and manufacturing sectors. Services and agricultural sectors are the largest employers of labour. The region's export of goods to the world is dominated by the mining and manufacturing sectors, while intra-regional trade is dominated by manufactured goods (88%). Due to the size of the South African economy (78 % of regional GDP), South Africa dominates intra-regional trade. However, the share of its manufacturing output that is exported is not the highest in the region (41 %). The share of Zimbabwe and Malawi's manufacturing exports are higher.

All SADC countries have a regional comparative advantage in agricultural exports and all countries have a comparative advantage in at least one manufacturing sector's exports. South Africa is the most important export destination for about 7 countries in the region, measured by the share of imports received, and in terms of inter-country comparative advantage rates. However, several regional trading partnerships that exclude South Africa show a stronger comparative advantage for certain types of trade. These trading partnerships involve the following countries as export destinations: Malawi, Mozambique, Mauritius, Zambia and Zimbabwe.

The region's comparative advantage with respect to the world is dominated by agricultural produce and mining exports. At a broad sectoral level, only Botswana, Namibia and Swaziland have a comparative advantage in manufacturing sector exports. Only Mauritius has an overall comparative advantage in trade in services. A comparison of intra-regional and international comparative advantage suggests that there is a comparative advantage in a greater number of manufacturing sectors in regional trade. The SADC's traditional international comparative advantage lies in the following sectors: non-ferrous metals, basic iron and steel, clothing, food products, paper and paper products and other manufacturing output (e.g. sports goods, toys, brooms, etc.). Manufacturing sectors whose advantage seem to have appeared more recently include textiles, beverages, furniture, leather, certain industrial and other chemicals (including crude fertilisers and inorganic chemicals). Comparative advantage in these manufacturing sectors seemed to have been present in regional trade prior to their international advance.

The SADC's current competitive advantage lies in agricultural, mineral, and more recently, unskilled labour, resource intensive manufacturing sectors. However, its potential comparative advantage, measured by improvement in comparative advantage, appears to lie in technology and human capital resource-intensive sectors. Therefore, future industries to look to are chemical materials and products, printing and publishing, machinery, telecommunications, rubber manufactures, other wood products (excluding furniture) and sanitary, plumbing, heating and lighting fixtures.

Another important consideration for industrial policy is the share of a commodity in world trade. The sectors in which the SADC currently has a comparative advantage, and whose share of world trade has increased between 1986 and 1995, include: certain food products (especially animal and vegetable fats and oils, live animals), leather, clothing and furniture. The sectors in which the SADC has a potential comparative advantage are generally also sectors that had high growth rates in their shares of world trade.

There are several possible interpretations of these results for trade strategy and it will be the work of the main project to discern them. One option to look at is the consolidation of the SADC's comparative advantage strengths, prior to the development of more technology and human capital resource-intensive sectors. It would be necessary to make sure that the technology and human capital resource-intensive sectors targeted were also considered "rising stars" in global trade. At this point, another question would need to be asked, and that is: which trading partners should be targeted? Preliminary comparative advantage analyses suggest that these partnerships might best be formed with "non-traditional" SADC trading partners.

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INTRODUCTION AND OVERVIEW OF PAPER

This work was commissioned by the Development Policy Research Unit (DPRU) of the University of Cape Town to provide an analysis of revealed comparative advantage for the Southern African Development Community. It will be used to inform the sectoral and cross-sectoral studies that will comprise the bulk of the work for the project on "An Industrial Strategy for Southern Africa" being undertaken by the DPRU (DPRU 1998). The Southern African Development Community (SADC) was established with The Declaration and Treaty signed by the Heads of State in Windhoek, Namibia on 17 July 1992. The member states included in this paper are Angola, Botswana, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe (SADC 1997)

The main aim of this paper is to analyse the Community's comparative advantage with a view to recommending sectors requiring further in-depth research. One of the purposes of further research will be to identify potential export sectors. Although the promotion of export industries is only one facet of an industrial strategy, it is important because the generation of a trade surplus enables a country to import goods and services required for economic growth. An industry's ability to export has been used as a criterion for targeting priority industries by Departments of Trade such as MITI, in Japan. To provide a context to the comparative advantage analysis, an overview of regional production, employment and trade, as well as an overview of the theory of comparative advantage, form the substance of the first two sections.

In connection with industrial and trade strategy, it should be noted that the assumptions of trade strategy over-ride certain conclusions one can draw from classical, comparative advantage theory. One such conclusion is that a country should specialise in agriculture and mineral resource-intensive products if they are richly endowed with these resources. Trade strategy can use the phenomenon of decreasing costs, brought about by technology, to enable even natural resource-rich countries to export manufactured goods (and possibly other higher value added services) (Murakami 1996). With this in mind, this paper attempts to look further than current comparative advantage. For this purpose, other indicators such as the growth of revealed comparative

advantage indicators were used to estimate potential comparative advantage.

Data Constraints, Methodological Assumptions and Terminology

While other studies commissioned for this project have focused on policy issues for the development of a regional industrial and trade strategy (Page 1998), this paper is data intensive in nature. Its primary focus is to analyse indicators of comparative advantage, both current and potential. The formulation of an integrated industrial strategy for the SADC will require more information on specific sectors than could be collected here but hopefully this paper will help to narrow down the choice of sectors. Most of the data used in this paper came from the Industrial Development Corporation (IDC), except for some data used in the overview of the region and trade in services. Much of the structure of this paper was determined by data availability. The most recent production and employment data available from the IDC that included *all* SADC countries were for the years 1991 to 1993. The regional overview was therefore presented for the average of these three years. For the main thrust of the paper, that being the analysis of comparative advantage, two trade data sets were available. However, these data sets described SADC trade for different time periods, were of different levels of completeness, and were documented under different classification systems. The two classification systems were the International Standard Industrial Classification (ISIC) system and the Standard International Trade Classification (SITC) system. The ISIC system coded at two digits shows 37 commodity categories, from major divisions 1 to 3, while the SITC system coded at two digits identifies 100 commodity categories. The ISIC-based data set included trade data averaged between 1991 and 1993. All twelve SADC countries were included. The SITC-based data set included trade data up to 1995. Out of the 12 SADC countries, the trade of 7 was covered. The IDC data set for the ISIC-based trade data distinguished between regional and international trade (trade with the "rest-of-the-world"). However, this distinction was not made in the SITC-based data due to its incompleteness. The differences between the two data sets made their derivative analyses complement one another, so both analyses were presented in this paper. For, while the ISIC-based data set was complete, using the SITC-based data set was advantageous as it showed the commodity categories in more detail as well as for more recent years (up to 1995).

Two main assumptions underlie the presentation and analysis of data in this paper. The one is that the production of exports from the region to the rest-of-the-world is something to be encouraged because it generates economic growth. The second assumption follows from the first and is that regional integration of productive activity is also to be encouraged. Regional integration is assumed to hold potential benefits because the integration of productive capacity can reduce costs of trade with the rest-of-the-world. Both assumptions require qualification. A necessary qualification to the first assumption is that exports of higher value added products should be encouraged because research has shown that growth rate variations between countries correspond to the level of value added of the export (Wood and Berge 1997). The second assumption should be qualified with the observation that smaller economies in the region will have a greater share in the gains from trade, the greater their share in intra-regional, intra-industry trade (Proff, 1997).

The term "region" is used frequently in the paper and refers to the SADC region. The terms "sector", "product", and "commodity" are used interchangeably to refer to a sub-division of either the ISIC or SITC classification systems. The term "sector" is also used more generally to refer to more aggregated production groups, e.g. agriculture, mining, manufacturing or services. The term "international trade" refers to trade between a SADC country and a non-SADC country. Two categories in the ISIC classification system that appear both in this section and in Section 3 need to be described in a little more detail. They are "Agriculture (not elsewhere classified)" and "Other Manufactured Products". Included in "Agriculture n.e.c." are miscellaneous agricultural products, fishing and forestry. Miscellaneous agricultural products exclude grains, cotton, coffee, tea, tobacco, sugar, beef and "fruit and vegetables" which are generally classified under "Horticulture". The category "Other Manufactured Products" includes a diverse number of items. Some of these are musical instruments, toys, sports goods and brooms.

Structure of Paper

The structure of the paper is as follows. The first section introduces the populations and economies of the SADC's constituent member states as well as an overview of quantitative aspects of production, employment and trade in the SADC. The second section examines the tools used to evaluate the region's trade advantage. This section includes a

description of the concept of "comparative advantage"; how it was estimated; and how it was interpreted in this paper. Section 3 then applies the tool of "revealed comparative advantage analysis" to regional and international trade and is comprised of two sub-sections. The first explores differences in countries' comparative advantage in intra-regional trade, while the second analyses the region's international comparative advantage. Both parts use trade data, averaged for 1991 – 1993. Section 4 presents the second comparative advantage analysis of international trade but uses more up-to-date data (for the year, 1995). It estimates potential comparative advantage using growth in revealed comparative advantage indicators. Finally, Section 5 summarises the main findings of the paper. The appendices contain data tables, many of which contain the data extracted in tables in the text.

The overlap between Section 1, covering an overview of the constituent SADC member's economies, and later sections covering their comparative advantage, is limited. What overlap exists uses a simplified analysis of the effect of increased export production on employment, to evaluate the potential importance of sectors identified using the revealed comparative advantage indicators in Section 3. Section 1 was construed as a necessary stand-alone section, with its main purpose being to provide a baseline overview of countries in the region.

1. OVERVIEW OF THE SADC REGION

The purpose of this section is to provide a context to the main focus of the paper, SADC's comparative advantage in trade. In doing so, the section provides an overview of production, employment and trade for the SADC region. It is divided into three sub-sections. The first sub-sector describes socio-economic characteristics of the various SADC economies such as population health (using life expectancy indicators), living standards (using income per capita and rate of employment) and change in living standards (using change in income per capita). The second sub-section describes the structure of the regional economy (according to primary, secondary and tertiary sectors of production) and the third sub-section focuses on the structure of the SADC's trade.

1.1 Background to SADC Countries' Economies

Table 1 presents various descriptive indicators for SADC countries. The indicators shown are compared with those for other countries and groups of countries in the world in order to provide a context

for them. The total population of the twelve SADC countries listed below is 131.5 million, equal to about half the population of the United States. Population density varies from the lowest rate of 1.82 people per km² in Namibia to the highest rate of 550.00 people per km² in Mauritius. The average weighted urbanisation rate for the region is about 36%. It lies between the average urbanisation rates for low-income economies¹ (29%) and lower middle income economies (56%). The most urbanised country in the region is South Africa (50%), followed by Zambia (43%) and Mauritius (41%). Adult illiteracy rates lie within the range of 15% (Zimbabwe) to 60%

(Mozambique) of the population. The average illiteracy rate is high at 29% of the region's adult population and corresponds to the average for all low-income economies. Life expectancy varies markedly between different countries within SADC. The country with the lowest life expectancy is Malawi, with life expectancy at birth of 44 years, and the highest is Mauritius, with life expectancy at birth of 70 years. Average life expectancy is about 55 years.

South Africa's economy is the largest in the region when measured by Gross Domestic Product (GDP). It accounts for about 78% of the GDP of the SADC. Second and third highest are Angola and

Table 1: SADC Countries Statistics: basic population indicators

Country	Total Population, mid-1994 (millions)	Pop/sq. km	Urbanisation Rate, mid-1994(%)	Adult Illiteracy Rate, 1995(%)	Life Exp. at Birth, 1994 years)
Angola	10.4	8.34	47
Botswana	1.4	2.41	30	30	68
Lesotho	1.9	63.33	22	29	61
Malawi	9.5	80.51	13	44	44
Mauritius	1.1	550.00	41	17	70
Mozambique	15.5	19.33	33	60	46
Namibia	1.5	1.82	36	..	59
South Africa	40.5	33.17	50	18	64
Swaziland	0.9	52.19	..	23	58
Tanzania	28.8	30.48	24	32	51
Zambia	9.2	12.22	43	22	47
Zimbabwe	10.8	27.62	31	15	58
All SADC	131.5	18.97	35.5	29.3	54.5

Source: World Bank, World Development Report 1998

Table 2 : SADC Countries Statistics: background economic indicators

Currency	Gross Domestic Product, Average 1991-1993 (millions of US \$)	The Value of Country Gross Domestic Product as a Percentage of SADC Production (%)	Average Annual Growth in GNP/cap, 1985-1994 (%)	Current Account Balances, Average 1990-1994 (millions of US \$)	Dollar Exchange Rate, Average 1996	Currency Name
Angola	9,246.0	6.8	-6.8	-512	59,515.00	Kwanzas
Botswana	3,362.8	2.5	6.6	273.8	3.32	Pula
Lesotho	573.0	0.4	0.6	64.6	3.63	Loti
Malawi	1,936.1	1.4	-0.7	-243	15.31	Kwacha
Mauritius	2,430.6	1.8	5.8	-115	17.95	Rupee
Mozambique	1,076.5	0.8	3.8	-404.8	11,293.80	Meticais
Namibia	2,058.3	1.5	3.3	103.2	4.30	Dollar
South Africa	105,006.7	77.6	-1.3	1,648.2	4.30	Rand
Swaziland	824.8	0.6	-1.2	-16	4.30	Emalengeri
Tanzania	2,384.9	1.8	0.8	-708.4	579.98	Shilling
Zambia	2,310.0	1.7	-1.4	-450	1203.71	Kwacha
Zimbabwe	4,188.0	3.1	-0.5	-348.4	10.00	Dollar
All SADC	135,397.7	100.0	-0.35	-707.8	-	-

Source: IDC, World Bank, The World Development Report 1998; IMF, Balance of Payments Statistics Yearbook, Part 1 & Part 2, 1997; Table 1

Table 3: Output, Employment and Trade for the SADC Region by Economic Sector (average 1991 - 1993)²

Sector	Value of Output (millions of US \$)	Gross Domestic Product (millions of US \$)	Employment (1000's)	Sectoral Employment as Percentage of Total Employem.	Exports to the Rest of the World (millions of US \$)	Imports from the Rest of the World (millions of US \$)
Agriculture	19,223.5	10,141.9	7421	37.3	2,596.5	755.2
Mining	26,550.1	16,952.9	1130	5.7	12,912.6	1,582.2
Manufacturing	97,986.3	29,964.8	2534	12.7	10,176.3	17,177.3
Services	140,512.4	78,338.1	8821	44.3	5,160.0	9,893.2
Total	284,272.2	135,397.7	19906	100.0	30,845.4	29,407.9

Zimbabwe. In all SADC countries between 1985 and 1994, there was a net decrease in GNP per capita of 0.35 %. By contrast, over the same time period there was growth in world GNP of 0.9 %. The aggregate, net current account balance for all the SADC countries, averaged between 1990 and 1994, was a deficit of \$708 million. Except for Botswana's, currencies in the region have been weak over the last decade.

1.2 The Structure of SADC Economies

Table 3 summarises collective production, employment and trade information for the countries in SADC. The data are presented for four sectors: agriculture (primary sector), mining (primary sector), manufacturing (secondary sector) and services (tertiary sector). As shown in Table 3, the value of annual output (total turnover for all industries) for the SADC community, averaged between 1991 and 1993, was \$284,272 million. Average annual GDP was \$135,398 million for the same period. The value of output and GDP was dominated by the services sector, the largest of the four sectors. The second largest sector was the manufacturing sector. These sectors were also the largest import sectors, suggesting a trade disadvantage in the services and manufacturing sectors for the region as a whole. The category "services" includes tourism (referred to as "personal

travel" in the IMF Balance of Payments Statistics), as well as transport and business services. In aggregate, services was the sector employing the highest number of people (44 %), with agriculture second (37 %). In aggregate, the value of exports of agricultural and mining products was greater than imports, while in manufacturing the opposite was true. These data therefore point towards an aggregate trade advantage in primary sectors of production. Note that the ratio of exports to production is highest in the case of the mining sector (0.76: 1).

The structure of production is shown for each country individually in Table 4. The countries whose production in the agricultural and mining sectors accounts for more than half of their GDP are Angola and Tanzania. Highly agriculturally centred economies are those of Malawi, Mozambique and Tanzania. The mining centred economies are Angola and Botswana. The countries where at least one fifth of GDP is comprised of manufacturing goods are Mauritius, Mozambique, South Africa, Swaziland, Zambia and Zimbabwe. For the SADC region as a whole, manufacturing sector production is slightly higher in value than agricultural and mining production (22 % versus 20 %), but production of services has the highest share of value of GDP (58 %). Services production formed the largest percentage of total

Table 4: The Structure of GDP for Each SADC Country (% , average 1991 - 1993)

Share of Domestic Product(%)	Agriculture	Mining	Sum of Agricultural and Mining Sectors	Manufacturing	Services	Total
Angola	10.8	57.4	68.2	3.3	28.5	100.0
Botswana	5.3	36.9	42.2	5.7	52.2	100.0
Lesotho	11.3	0.2	11.5	15.1	73.5	100.0
Malawi	32.0	0.0	32.0	13.6	54.4	100.0
Mauritius	10.8	0.1	10.9	22.7	66.4	100.0
Mozambique	41.1	0.2	41.3	24.7	34.0	100.0
Namibia	9.7	19.3	29.0	7.6	63.4	100.0
South Africa	4.6	8.8	13.4	24.1	62.5	100.0
Swaziland	13.9	1.7	15.6	34.9	49.5	100.0
Tanzania	60.8	0.8	61.6	4.3	34.1	100.0
Zambia	12.4	18.0	30.4	25.4	44.2	100.0
Zimbabwe	17.1	6.5	23.6	44.3	32.2	100.0
Total	7.5	12.5	20.0	22.1	57.9	100.0

Source: IDC; IMF Balance of Payments Statistics

production (over 50 %) for SACU countries as well as for Mauritius and Malawi

The description of production, employment and trade in agricultural and manufacturing sectors can be divided further by product. This cannot be done for the mining and service sectors as their production and employment data were not broken down. Table 5 shows 13 top sectors in the agricultural and manufacturing sectors of the SADC region. The top sectors from each category were chosen for the purpose of describing which sectors contributed the most to production, employment and exports, and the extent to which their contributions overlapped. The cut-off of 13 was chosen arbitrarily for purposes of space. Leading production sectors are Food Products (12 %), Industrial Chemicals (8 %), Agriculture (n.e.c.) (6 %) and Motor Vehicles (5 %). Leading employment sectors are Agriculture (n.e.c.) (41 %), Beef (10 %), Maize (5 %), and Food Products. Leading export sectors are Other Manufacturing (7 %), Basic Iron and Steel (6 %), Machinery (5 %) and Agriculture (n.e.c.) (3 %). Several sub-sectors are common to all three lists in Table 5. They are Agriculture (n.e.c.), Clothing, Electrical Machinery, Food Products and Textiles. Although the category Agriculture (n.e.c.) is common to all three lists, its importance for employment (41 %) is far greater than to the value of production (6 %) or trade (3 %). The Clothing sector's importance for production (2 %) and employment (2 %) is greater than for exports (1.5 %). The Electrical Machinery sector has a greater share of the value of total output (2.5 %) and production for exports (2.8 %) than it does for employment (1.1 %). The Food Products sector contributes a larger share to total output (12 %) than to employment (4 %) and exports (3 %). The Textile sector contributes a larger share to exports

(2.3 %) than to production (2.7 %) and employment (2.3 %). While the sub-sectors like Basic Iron and Steel, Industrial Chemicals, Machinery and Paper are important contributors to regional output and exports, their contributions to regional employment is comparatively small (between 0.4 % and 0.9 %) (see Appendix 1). While employment rates are higher in the agricultural sectors, the value of output per worker, namely, in Agriculture (n.e.c.), Other Grains, Maize and Beef, is very low (roughly \$1.00 - \$3.00). Exceptions to this rule are the cases of Sugar (\$10.11), Horticulture (\$10.92) and Tobacco (\$27.30).

1.3 The Structure of SADC's Intra-regional and International Trade

The structure of the region's trade can be described by identifying the source and destination of trade, the contributions of each member state and the content of trade. Table 6 separates imports and exports for SADC countries into intra-regional and international trade. While South Africa notably dominates intra-regional and international trade, it has a higher share of intra-regional trade than it does of international exports. This suggests that other SADC countries' export markets are more oriented to countries outside SADC than to other SADC countries.

In spite of the dominant position of South Africa in trade, relative to its total production, it is a fairly closed economy. When comparing total trade for each SADC country using the data presented in Table 7, one observes that South Africa has one of the most closed economies in the region. Its Index of Openness, measured by exports divided by GDP, was only 2.2 compared with 7.9 for Mauritius, an economy with a similar share of manufacturing exports in total exports. Regarding

Table 5: The Top Producing, Employment and Export Sub-sectors for the SADC Economy (average 1991 - 1993)

Top Producing Sub-Sectors		Top Employment Sub-Sectors			Top Export Sub-Sectors	
Sector	% of Non-Services Output	Sector	% of Non-Services Employment	Value of Output per Worker (\$)	Export Sector	% of Non-Services Exports
Agriculture n.e.c.	5.8	Agriculture n.e.c.	41.1	1.84	Agriculture n.e.c.	3.4
Basic Iron and Steel	3.9	Beef	10.3	2.16	Basic Iron and Steel	5.7
Beverages	3.6	Clothing	2.3	13.25	Clothing	1.5
Clothing	2.3	Electrical Machinery	1.1	30.99	Electrical Machinery	2.8
Electrical Machinery	2.5	Fab. Metal Products	1.6	28.89	Food Products	3.3
Fab. Metal Products	3.7	Food Products	4.0	39.90	Industrial Chemicals	2.4
Food Products	12.4	Horticulture	1.9	10.92	Machinery	4.5
Industrial Chemicals	7.5	Maize	5.0	2.72	Non-ferrous metals	2.6
Machinery	3.5	Other Chemicals	1.1	41.13	Other Manufacturing	7.2
Motor vehicle	4.9	Other grains	3.5	3.06	Paper	1.4
Other Chemicals	3.4	Sugar	1.0	10.11	Sugar	1.8
Paper	3.4	Textiles	2.3	15.15	Textiles	3.1
Textiles	2.7	Tobacco (agr)	3.3	27.30	Tobacco (agr)	2.9
Cumulative	59.6	Cumulative	78.5		Cumulative	42.6

Source: IDC

Table 6: Exports and Imports for SADC Countries (goods only) (average 1991 - 1993)

SADC Country	Exports to the Rest-of the-World (\$)	All Exports (\$)	Imports from the Rest-of-the-World (millions of \$)	All Imports (\$)	Share of Each Country's Exports to the Rest-of-the-World of All SADC exports to ROW (%)	Share of Each Country's Imports to the SADC Region as a Percentage of All Imports to SADC (%)
Angola	3,659.43	3,662.79	1,583.39	1,836.39	14.3	0.0
Botswana	1,538.71	1,718.66	262.16	1,742.14	6.0	2.6
Lesotho	56.64	103.56	89.61	938.62	0.2	0.7
Malawi	388.15	447.79	280.73	473.84	1.5	0.9
Mauritius	1,286.67	1,372.87	1,417.31	1,589.81	5.0	1.2
Mozambique	300.77	320.07	497.76	792.77	1.2	0.3
Namibia	924.81	1,315.59	129.48	1,208.02	3.6	5.6
South Africa	14,697.44	20,138.03	12,478.79	13,588.78	57.2	77.7
Swaziland	287.57	612.53	47.36	791.33	1.1	4.6
Tanzania	481.05	491.74	1,087.74	1,109.65	1.9	0.2
Zambia	1,209.93	1,236.79	456.28	790.92	4.7	0.4
Zimbabwe	854.26	1,264.05	1,184.06	1,651.43	3.3	5.9
Total	25,685.45	32,684.49	19,514.66	26,513.70	100.0	100.0

Source: IDC, Author's estimation

imports, the average proportion of imports from the agricultural and mining sectors are small (a little over 6 % combined) while average export shares for these sectors are large (just over 50 % of exports). On average, therefore, a country in the SADC has its trade dominated by agricultural and mineral exports, and manufacturing and service imports.

Under the category "Services", "Travel" represents the tourism industry. The tourism industry is the highest service export sector by a small margin of between 0.8 % and 1.4 %. Average transport costs as a proportion of total exports are higher for imports (13 %) than exports (5 %). This difference may be attributable in part to the differing

composition of export trade (mostly agricultural and mining) and import trade (mostly manufactured products). On average, the economies in the region are net importers of Business services (by about 4 %). Unfortunately, the revealed comparative advantage analysis of the services sector that follows in the Section 3 does not do this sector justice as the SADC's comparative advantage in service trade could only be evaluated on a country-by-country basis for international trade using one of the data sets.

1.3.1 Regional versus International Trade

The share of all exports and imports of goods traded regionally accompanies the presentation of the map of the

Table 7: Trade for SADC Countries: the share of different categories in total exports and imports and the total value of trade (% , average 1991 - 1993)^{3,4,5}

	Angola	Botswana	Lesotho	Malawi	Mauritius	Mozambique	Namibia	South Africa	Swaziland	Tanzania	Zambia	Zimbabwe	SADC	Ave %
Agr	0.45	1.58	9.86	81.60	19.96	33.10	14.63	5.09	4.35	40.57	3.27	35.11	8.72	20.81
Mining	89.12	64.12	-	-	0.00	0.11	39.18	28.56	0.91	0.16	86.03	4.83	34.43	31.30
Man	7.76	25.00	66.60	11.67	51.35	32.91	43.70	51.88	82.14	29.04	5.41	41.20	43.22	37.39
Goods	97.33	90.71	76.47	93.27	71.31	66.12	97.51	85.53	87.41	69.87	94.72	81.75	86.37	84.28
Transport	1.18	2.05	1.92	3.33	8.94	14.32	-	5.30	3.28	3.84	3.75	6.31	4.73	4.93
Travel	-	6.29	13.29	1.87	14.80	-	0.99	7.71	4.71	11.84	0.77	6.86	6.59	6.28
Business	1.49	0.95	8.32	1.53	4.95	19.56	1.50	1.46	4.80	14.44	0.77	5.69	2.32	5.44
Services	2.67	9.29	23.53	6.73	26.69	33.88	2.49	14.47	12.59	30.13	5.28	18.55	13.63	15.72
Exports	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Agr	1.06	5.83	9.86	2.68	3.11	10.56	3.75	3.78	7.44	0.94	4.04	5.28	4.00	4.86
Mining	0.08	0.31	1.43	0.12	0.21	0.28	1.08	8.57	0.65	0.67	2.61	2.07	4.67	1.51
Man	49.15	77.05	83.42	56.99	73.42	65.09	66.81	62.52	69.55	70.46	62.55	66.85	64.15	66.99
Goods	50.30	83.19	94.71	59.80	76.74	75.93	71.63	74.87	77.64	72.07	69.20	74.19	72.83	73.36
Transport	14.59	9.47	3.85	32.49	10.94	12.66	12.39	11.67	1.98	13.60	17.76	14.11	12.25	12.96
Travel	1.88	3.51	0.97	2.63	6.11	-	4.21	8.42	4.05	6.77	0.71	2.52	6.01	4.06
Business	33.24	3.83	0.48	5.08	6.22	11.40	11.76	5.03	16.33	7.56	5.42	9.18	8.92	9.63
Services	49.79	16.81	5.29	40.20	23.26	24.07	28.37	25.13	22.36	27.93	30.90	25.61	27.17	26.64
Imports	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total Exports	3,763.4	1,894.7	135.4	480.1	1,925.2	484.1	1,349.2	23,544.4	700.8	703.8	1,305.8	1,557.7	37,844.5	3,153.7
(millions \$)														
Total Imports	3,650.9	2,094.1	991.1	792.3	2,071.6	1,044.0	1,686.4	18,148.8	1,019.3	1,539.7	1,142.9	2,225.9	36,406.9	3,033.9
(millions \$)														
% of Total	9.9	5.0	0.4	1.3	5.1	1.3	3.6	62.2	1.9	1.9	3.5	4.1	100.0	
Exports	10.0	5.8	2.7	2.2	5.7	2.9	4.6	49.8	2.8	4.2	3.1	6.1	100.0	
% of Total														
Imports	1.0	0.9	0.1	0.6	0.9	0.4	0.8	1.2	0.7	0.4	1.1	0.7	1.0	
Export/Import Ratio	4.1	5.6	2.4	2.5	7.9	4.5	6.6	2.2	3.5	3.0	5.7	3.7	2.8	
Openness														

Source: IDC, IMF Balance of Payments Statistics Yearbook, Part 1, 1997; Author's estimation

SADC in Figure 1 and the figures are again presented in Table 8. The map also shows intra-regional development and transport corridors (planned and existing). Note that the trade shares in Figure 1 and Table 8 only refer to trade in goods. Overall, the region is heavily reliant on trade with the non-SADC countries. About 80% of exports are destined for markets outside the SADC and about 75 % of imports are obtained from there. The extent and content of intra-regional trade varies between countries as is shown in Table 8. The Southern African Customs Union (SACU) countries show higher than average shares of intra-regional imports than other countries. The exception is South Africa which only imports 8% of the value of total imports from the SADC. All non-SACU countries had higher SADC import ratios than South Africa's except for Tanzania (2 %). The countries with more than a fifth of agricultural exports going to other SADC countries were the SACU countries as well as Zambia (23 %). Of all SADC mining exports, only 0.9 % are destined for SADC markets. It would appear that very little beneficiation occurs locally. The majority of these were from SADC countries with relatively small mining sectors (i.e. Mauritius and Swaziland, and to a lesser extent, Zimbabwe). In the manufacturing sector, 38 % of all exports are destined for SADC markets. The countries with the highest proportion of manufacturing sector exports destined for SADC markets are Malawi (60 %), Swaziland (51 %), South Africa (41 %) and Zimbabwe (38 %). Contrary to popular perceptions, several of the countries with smaller economies exported a larger proportion of their manufactured goods than agricultural goods to the rest of the SADC (i.e. Malawi, Mauritius, Zimbabwe, Tanzania).

1.4 Observations on the Economic Structure of SADC Countries for a Regionally Integrated Trade Policy

A few fairly obvious observations can be summarised from the data presented in this section.

1. The regional productive capacity of goods and services is dominated by the services sector (58 %), with manufacturing second (22 %).
2. The services (44 %) and agricultural (37 %) sectors are the largest employers of labour.
3. As high unemployment is common to all countries in the region, policies aimed at encouraging export production should be compatible with increasing employment, whether directly or indirectly.
4. Relative to its prominent position in production, the services sector remains an under-developed aspect of trade in the SADC region. Due to poor availability of services trade statistics, the analysis of services trade is also neglected in the sections that follow.
5. The trade of countries in SADC with the rest-of-the-world has the following composition: exports are dominated by the mining (42 %) and manufacturing (33 %) sectors while imports are dominated by the manufacturing (58 %) and services (33 %) sectors.
6. South Africa's share of goods exports is 60% of international exports and 80 % of regional exports of SADC.
7. Overall, about 80 % of the region's exports of goods are destined for markets outside SADC, while 75 % of imports are sourced from outside markets.
8. Apart from SACU countries, only Zimbabwe exports a comparable proportion of its total exports to other

Table 8: The Share of SADC Country Trade with the SADC (goods only) (% , average 1991 – 1993)

Country	EXPORTS				IMPORTS	
	Agriculture	Mining	Manufacturing	Total Exports	Share of SADC	Total Imports
Angola	0.11	0.00	1.14	0.09	0.05	13.78
Botswana	57.42	0.38	33.38	10.47	2.57	84.95
Lesotho	97.93	-	37.51	45.30	0.67	90.45
Malawi	6.61	-	60.22	13.32	0.85	40.75
Mauritius	0.78	10.78	8.41	6.28	1.23	10.85
Mozambique	4.19	0.74	7.89	6.03	0.28	37.21
Namibia	87.69	1.33	35.73	29.70	5.58	89.28
South Africa	29.36	1.28	40.96	27.02	77.73	8.17
Swaziland	87.79	76.37	50.95	53.05	4.64	94.02
Tanzania	0.91	0.31	3.95	2.17	0.15	1.97
Zambia	22.89	0.05	23.33	2.17	0.38	42.31
Zimbabwe	13.28	18.14	50.40	32.42	5.86	28.30
SADC	21.30	0.90	37.78	21.41	100.00	26.40
Share of Total (%)	10.04	1.67	88.29	100.00		
Total (US \$ millions)	702.89	116.66	6,179.50	6,999.04		

Source: IDC, Author's estimation

**SADC INTRA-REGIONAL CORRIDORS (EXISTING AND PLANNED)
AND THE SHARE OF EACH COUNTRY'S EXPORTS AND IMPORTS
TRADED IN THE REGION (X;M) (%)**

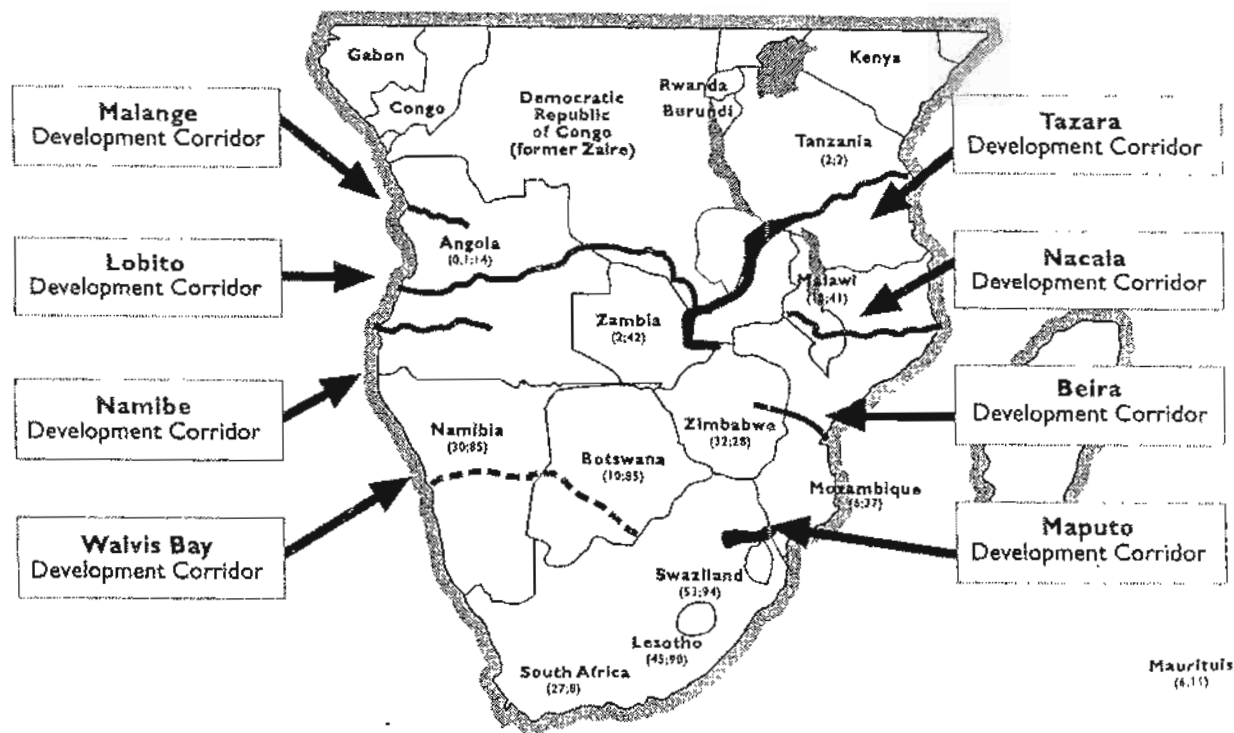


Figure 1: Map of the SADC with Share of Regional and International Trade Shown for Each Country (% , average 1991 - 1993)

SADC countries. Most of the other countries outside the SACU and Zimbabwe concentrate their exports on non-SADC countries.

9. Intra-regional trade in goods is dominated by trade in manufactured goods (88 %). There is a minimal amount of regional trade in mining production relative to international trade (2 %), given the share of that sector in GDP (30 %).

10. Given the low level of trade in mining sector output (2 %), more extensive beneficiation of products from mining sectors might be a policy strategy worth considering. Alternatively, the strength of this sector might be used to bridge the need for foreign exchange when converting to an industrial based economy.

This section has served to introduce some of the trade data to be used in following sections. The next section is a fairly short one and serves to review the tools to be used to analyse comparative advantage. It is followed by an analysis of the SADC's comparative advantage for individual countries and the region as a whole. Trade is divided into intra-regional trade (also referred to as regional trade) and international trade to assess the distribution of the regions trade strengths.

2. THE REVEALED COMPARATIVE ADVANTAGE FORMULA

The "law" of comparative advantage is used in economic models to explain the composition and direction of trade. The "law" states that countries export the goods and services that they produce at lower costs, relative to other trading partners under autarky (a situation of no trade). While comparative advantage is a venerable economic concept, in a trading world, it is difficult to estimate what costs (prices) would have been under autarky. Two possible calculations for estimating comparative advantage are shown below. They are respectively referred to as the Balassa formula (Equation 1) and the "own-trade" formula (Equation 2) in this text.

Balassa's formula was a revolutionary expression of the comparative advantage concept and it is presented in Equation 1. He used it to express that if the share of a country's exports to total trade in that commodity were higher than the share of its total exports in world trade, the exporter had a comparative advantage in the export of that commodity. If comparative advantage existed,

the revealed comparative advantage (RCA) formula would generate an indicator greater than 1 (Greenaway and Milner 1993). Theoretically, in cases of comparative advantage, the RCA indicator ranges from 1 to infinity. When there is no comparative advantage, the indicator lies between 0 and 1. The value of 1 is therefore the cut-off point for comparative advantage. The second formula used to calculate a comparative advantage indicator is shown in Equation 2. It is the difference divided by the sum of exports and imports. In addition to the advantage that it is less data intensive, it has shown a strong positive correlation with Balassa's formula (Greenaway and Milner 1993). The indicator ranges from -1 to +1, with a positive sign indicating the existence of comparative advantage. The value "0" is therefore the cut-off point for comparative advantage.

Equation 1: Balassa Formula

$$RCA_{ijk} = \frac{X_{ijk} / \sum_{i=1}^m X_{ijk}}{\sum_{k=1}^n X_{ijk} / \sum_{i=1}^m X_{ijk} (\sum_{k=1}^n X_{ijk})}$$

where: n = number of products
m = number of Importers
 X_{ijk} = exports of country i to country j of commodity k

Equation 2: Own-trade Formula

$$RCA = \frac{X_k - M_k}{X_k + M_k}$$

where X = exports of commodity k, M = imports of commodity k

When revealed comparative advantage ratios are calculated, between a country or region and another country, the share of exports of that country or region is compared with the share of imports of the trading partner.

In this form it means that the importer is the targeted destination for the product. The indicator measures the comparative advantage for the exporter with respect to other competing countries (Hoekman and Djankov 1997).

When comparing a cross-section of RCA indicators, different aspects of the formula can change, and with it, the interpretation of the RCA's. Therefore, care should be exercised when interpreting RCA's. The RCA indicator calculated using the own-trade measure is fairly simple to understand. It is the proportion of the difference over the sum of exports and imports. However, the RCA indicator developed by Balassa is more difficult to interpret. For this reason, the framework shown in Figure 2 was developed to facilitate the conceptualisation of RCA indicator differences. It is important to note that there are three aspects of trade relations that can change when calculating revealed comparative advantage indicators for a country. Firstly, there is the *product or product group*; secondly, there is the *exporting country* for which one is estimating comparative advantage. Thirdly, there is the *export destination*.

Consider case (a) in Figure 2. A comparison of differences in the RCA indicators for different commodities or products traded between the same exporter and importer can make use of the absolute value of the RCA indicator. Its absolute value tells a story about the share of that commodity's trade, relative to the share of other commodities. For example, if the RCA indicator for SADC exports of Coal is 11 and for Iron and Steel is 2.9, then the share of SADC exports of Coal is about 4 time greater than the share of exports of Iron and Steel. In the context of this paper, lower rank values indicate higher comparative advantage.

Figure 2: Framework for Interpreting Balassa's Formulation of Comparative Advantage

Case	Exporting Country or Group of Countries	Commodity or Commodity Group	Importer or Group of Importers	Interpretation
(a)	Same	Different	Same	RCA indicators can be compared between products/commodities. The higher the absolute value of the indicator, the greater the comparative advantage of its export over the export of other products. Can also compare the ratio of the comparative advantage indicators.
(b)	Same	Same	Different	RCA indicators can be compared between countries. The higher the absolute value of the indicator, the greater the comparative advantage a country has over another.
(c)	Different	Same	Same	Special caution needs to be exercised in this case. <i>Ranked RCA</i> indicators should preferably be used to compare comparative advantage between exporters. Other data to include when comparing absolute RCA indicators between exporters is the share of a product in a country's exports.

Source: Author's formulation

Consider case (b) in Figure 2. When comparing comparative advantage for a commodity between different importers, a comparison of the RCA indicator rank enables one to determine the relative importance of the traded commodity with different trading partners. In the contrast of different trading partners, an important background question to trade strategy formulation is, "What is the average comparative advantage with different trading partners?". This can be worked out by comparing trade weighted averages of RCA indices for each trading partner.

In case (c) of Figure 2, special care needs to be exercised as different size economies will affect the absolute value of the comparative advantage indicator's size. More specialised economies will generally have RCA indicators falling in higher ranges. Therefore, the rank value of the RCA indicator should be used to compare exporter's comparative advantage in the export of different products.

The final point to note is that making a complete assessment of comparative advantage requires a combination of the different approaches. Take the example of trying to develop a Coffee export strategy for the region. If Malawi is the exporter with the highest RCA, it might not mean that they should specialise in the production of Coffee if it has a lower rank than their other exports. Another country with a lower absolute RCA may have a higher ranked RCA for Coffee, which would indicate that they might be in a better position to specialise in the export of Coffee. Here, one is using analytical frameworks from cases (a) and (c) to discuss comparative advantage. In the next two sections, all three cases outlined in the framework are used in the analysis of comparative advantage. As described in the introduction, Section 3 uses ISIC classified trade data and Section 4 uses SITC classified trade data.

3. REVEALED COMPARATIVE ADVANTAGE IN SADC TRADE: ISIC

This section encompasses two main sub-sections in which comparative advantage is reviewed. In the first, data is used to estimate revealed comparative advantage (RCA) indicators for the SADC's intra-regional trade. In the second sub-section the same data is used to analyse SADC's international trade. Two types of RCA measures were also used in this section. The backgrounds to these measures were discussed in detail in Section 2. They are

the Balassa indicator and the alternative "own-trade" indicator that only uses trade data of the exporting country. The own-trade indicator requires only the trade data for the country for which comparative advantage is being measured. It was therefore used for the estimation of the SADC's comparative advantage in international trade as Balassa's formula could not be used because there was insufficient data. As the analysis proceeds by using RCA indicators, and they are rather abstract indicators, it is useful to be reminded of the interpretation of RCA indicators. The most important information communicated by the indicators is whether or not a comparative advantage exists. In the case of Balassa's formulation, comparative advantage exists if the indicator is greater than 1. In the case of the own-trade measure, it exists if the indicator is positive. The discussion of the results is framed in terms of the effect that increased production for exports in certain commodity categories would have on employment and production in other sectors of the economy. The employment analysis uses the data obtained from the IDC on sectoral employment for each SADC country, averaged for 1991 - 1993 (documented in Section 1 and Appendix 1). The analysis of the effect of increased exports on production in other sectors uses information from input-output tables developed for South Africa. It was also possible to identify the resource base of manufactured export sectors with comparative advantage using the Krause Classification of Manufactures (KCM). The KCM is a scheme that distinguishes between manufactured products whose inputs are comprised chiefly of agricultural resources, mineral resources, unskilled labour resources, technology resources and human capital resources. Foreign investment in South Africa from 1994 to 1997 (only available for South Africa) is reviewed to see to what extent sectors invested in are identified by the comparative advantage analysis for South Africa. Finally, an attempt is made to weave together the findings on regional and international comparative advantage.

3.1 Regional Comparative Advantage

The analysis that follows explores the following areas of comparative advantage for regional trade. Firstly, for each country in the region, their trade with respect to the region is analysed to see in which export sectors they have a regional comparative advantage. Secondly, their trade is

Table 9: Intra-SADC RCA's, each country with respect to the SADC Group (average 1991 - 1993) (using the Balassa formula)

No. Sectors	Angola	Botswana	Lesotho	Malawi	Maurit.	Mozam	Namibia	RSA	Swaziland	Tanzania	Zambia	Zimbabwe
1 Agriculture	0.10	1.72	5.02	7.81	0.63	6.26	7.97	1.16	1.48	4.40	6.55	3.19
2 maize	-	-	3.89	-	-	-	-	0.96	-	-	0.39	3.60
3 other grains	-	0.02	2.16	-	-	-	-	0.90	-	-	7.95	0.46
4 tobacco	-	-	-	105.69	-	2.10	-	0.33	-	-	17.35	29.11
5 sugar	-	-	-	0.45	17.25	-	-	2.14	-	-	92.59	-
6 beef	-	10.40	10.68	-	-	0.31	50.81	0.26	-	-	-	0.70
7 horticulture	-	0.80	-	5.11	0.04	5.64	-	1.45	-	6.10	16.61	3.15
8 cotton	-	-	-	0.63	-	-	-	0.66	-	55.49	2.99	0.01
9 tea and coffee	-	-	-	92.49	0.34	-	-	1.01	-	0.68	0.27	7.56
10 agriculture n.e.c	0.38	1.26	8.73	0.80	0.04	21.55	5.35	1.96	5.48	1.85	1.60	1.81
11 Mining	-	0.39	-	-	0.00	0.00	0.28	0.24	0.23	0.00	0.34	0.51
Manufact.	1.10	0.97	0.80	0.63	1.07	0.72	0.60	1.02	1.00	0.84	0.68	0.87
12 Food Products	-	7.75	6.17	0.89	0.14	1.03	5.48	1.77	4.45	0.78	0.86	1.11
13 Beverages	-	1.03	-	0.30	0.11	0.01	-	2.07	18.24	-	0.02	0.91
14 Tobacco	66.36	-	-	0.22	0.06	1.81	-	1.36	-	25.95	3.59	0.81
15 Textiles	-	1.03	2.32	3.55	12.87	3.15	0.90	0.89	1.42	0.46	0.58	1.70
16 Clothing	-	-	-	2.99	0.18	7.19	-	2.77	-	-	4.40	4.17
17 Leather Products	-	0.62	-	-	0.09	-	-	0.53	-	-	-	1.04
18 Footwear	-	-	-	-	0.36	-	-	1.75	-	-	0.00	1.76
19 Wood Products	-	1.37	-	3.82	1.94	11.90	-	1.39	3.92	0.25	17.86	3.31
20 Furniture	-	-	10.00	-	0.01	-	0.75	2.51	-	-	-	0.37
21 Paper and Paper Products	-	2.29	-	0.05	0.06	-	-	1.50	4.67	1.85	0.26	0.61
22 Printing and Publishing	-	-	0.30	-	0.02	0.03	0.61	1.65	-	-	0.06	0.32
23 Industrial Chemicals	4.67	1.04	-	-	0.03	0.12	-	0.68	0.05	1.42	0.58	0.45
24 Other Chemicals	-	-	0.07	0.23	0.05	0.01	1.13	1.03	-	0.02	0.22	0.76
25 Rubber Products	-	-	-	0.02	0.07	1.26	-	1.11	-	0.19	0.23	0.50
26 Plastic Products	-	-	-	-	0.03	-	-	1.50	-	-	0.23	0.64
27 Pottery and Earthenware	-	-	-	-	0.01	-	-	1.10	-	-	-	0.79
28 Glass and Glass Products	-	-	-	-	-	0.03	-	1.01	2.23	-	2.87	0.19
29 Oth. Non-Met. Min. Products	-	-	0.21	0.35	0.01	-	0.39	1.93	-	0.13	4.70	2.79
30 Basic Iron and Steel	-	-	-	-	0.02	0.02	-	1.31	-	7.06	0.24	6.73
31 Non-Ferrous Metals	-	-	-	-	-	10.66	-	0.98	-	0.00	0.00	10.84
32 Fab Metal Products	-	1.58	-	2.82	0.04	0.02	0.32	1.80	0.33	2.45	0.11	0.77
33 Machinery	0.00	-	-	-	0.04	0.06	-	0.49	0.05	0.03	0.08	0.11
34 Electrical Machinery	0.00	-	-	-	0.11	0.01	-	0.66	-	0.01	0.50	0.35
35 Motor Vehicle	0.26	-	-	-	0.26	0.06	-	1.28	-	0.14	0.71	0.18
36 Transport Equipment	0.00	-	-	-	0.01	0.87	-	0.22	-	-	0.00	0.53
37 Measuring Equipment	-	0.24	0.02	0.01	0.21	0.07	0.31	0.40	0.61	0.05	0.00	0.04
38 Oth. Manuf Products	0.29	0.11	1.84	1.47	0.17	0.02	0.16	0.57	0.88	-	0.14	0.06

Source: IDC, Author's estimation

analysed with respect to trading partners within SADC to see with which countries, and for which products, they have the highest comparative advantage.

Table 9 presents RCA indicators for each country in the SADC with respect to regional trade. Note that each country's exports compete with other SADC countries as well as the rest-of-the-world. First, consider the comparative advantage indices on a broad sectoral level. All countries except Mauritius and Angola have a comparative advantage in exports of agricultural produce to SADC. Following from the low mining export levels observed in Section 1, no country in SADC has a comparative advantage in regional mining sector exports. For the manufacturing sector, the results are a little more diverse. Only Angola, Botswana, Mauritius, South Africa and Swaziland appear to have a comparative advantage in aggregate manufactured products exported to the SADC region.

The sectors showing a comparative advantage were extracted from Table 9 and presented in two ways. Firstly, Figure 3 shows countries with the leading comparative advantage exports for the agricultural sector. Even though agricultural trade between SADC countries is small (10 % of all trade), countries may benefit from greater co-operation. Then the sectors with the highest ranked RCA indicators for all sectors are listed on a country-by-country basis in Table 10. As seen in Figure 3, Tobacco, Sugar, Beef, Cotton and Agriculture n.e.c. (which includes fishing and forestry) are the sectors which have the best

comparative advantage ranking amongst the different SADC countries for their regional trade.

Table 10 also records the share of each country's exports as a percentage of their exports to SADC and of all exports in a particular category. Although only five countries show an overall competitive advantage in exports of manufactures, more countries displayed a comparative advantage in specific manufacturing sub-sectors. In Mozambique, for example, the RCA for Wood Products (11.90) is ranked second to the export of Agriculture not-elsewhere-classified (21.55). Together, Wood Products, Textiles and Clothing exports are 40 % of their total exports to other SADC countries. In Malawi, the export of Wood Products and Textiles is about 28 % of total exports to SADC countries. In Mauritius, the export of Textiles (with the second highest RCA indicator, 12.87), is the country's major export to other SADC countries. In South Africa, the largest and most developed economy in the region, the comparative advantage is spread across a broad spectrum of sectors. Having made the point that certain less developed economies in the SADC region have a comparative advantage in manufacturing exports, it is still true that many of their exports are agricultural, mineral or unskilled labour resource-intensive.

Finally, having reviewed comparative advantage for the SADC's collective trade, it remains to be seen how comparative advantage is distributed across sectors in specific trading partnerships. Table 11 shows the share of exports from each SADC country to every other SADC country in the region. Table 12

Figure 3: Intra-regional Comparative Advantage for Agricultural Output

Agricultural Category	Countries with Sector ranked no. 1 for all Agriculture	Countries with Sector ranked no. 2 for all Agriculture	Countries with Sectors ranked no. 3 for all Agriculture	Countries with Sectors ranked greater than no. 3 for all Agriculture
Maize			•Zimbabwe, Lesotho	
Other Grains			•Zambia, Lesotho	
Tobacco	•Malawi, Zimbabwe	•Zambia	•Mozambique	
Sugar	•Mauritius, SA, Zambia			
Beef	•Botswana, Lesotho, Namibia			
Horticulture		•Tanzania, Mozambique	•SA, Malawi, Zambia	•Zimbabwe
Cotton	•Tanzania			•Zambia
Tea and Coffee		•Zimbabwe, Malawi		•SA
Agriculture n.e.c.	•Mozambique, Swaziland	•Namibia, SA, Botswana, Lesotho	•Tanzania	

Source: IDC; Author's formulation

Table 10: Comparative Advantage for SADC Countries in Regional Trade (average 1991 - 1993)

Sector	RCA	Share of that Sector's Exports that go to the SADC	Share of Total Country's Exports to the SADC	Cumulative Share of Exports to SADC
Angola	Tobacco	66.36	2.91	58.37
	Industrial Chemicals	4.67	3.15	38.31
Botswana	Beef	10.40	98.20	7.42
	Food Products	7.75	48.41	55.18
	Paper and Paper products	2.29	42.35	4.70
	Fabricated Metal Products	1.58	29.20	8.45
	Wood Products	1.37	23.64	1.24
Lesotho	Beef	10.40	96.65	7.62
	Furniture	10.00	94.07	8.81
	Agriculture n.e.c.	8.73	97.58	13.12
	Food Products	7.75	30.73	43.97
	Maize	3.89	100.00	5.71
Malawi	Tobacco (agr.)	105.69	4.45	24.04
	Tea and Coffee	92.49	23.84	16.31
	Horticulture	5.11	38.23	1.56
	Wood Products	3.82	78.13	3.47
	Textiles	3.55	99.77	24.14
Mauritius	Sugar	17.25	0.79	3.36
	Textiles	12.87	16.14	87.58
	Wood Products	1.94	52.42	1.76
Mozambique	Agriculture n.e.c.	21.55	4.88	32.38
	Wood Products	11.90	71.75	10.82
	Non-ferrous Metals	10.66	21.49	10.39
	Clothing	7.19	74.80	7.67
	Textiles	3.15	67.72	21.43
Namibia	Beef	50.81	95.69	36.25
	Food Products	5.48	32.92	39.02
	Agriculture n.e.c.	5.35	63.67	8.04
	Other Chemicals	1.13	60.96	4.24
South Africa	Clothing	2.77	71.66	2.96
	Furniture	2.51	96.67	8.81
	Sugar	2.16	29.22	0.42
	Beverages	2.07	90.51	3.42
	Agriculture n.e.c.	1.96	19.20	2.94
Swaziland	Beverages	18.24	73.77	30.11
	Agriculture n.e.c.	5.48	87.79	8.24
	Paper and Paper Products	4.67	62.39	9.58
	Food Products	4.45	35.02	31.71
	Wood Products	3.92	85.03	3.57
Tanzania	Cotton	55.49	2.80	19.68
	Tobacco	25.95	66.52	22.83
	Basic Iron and Steel	7.06	3.27	12.85
	Horticulture	6.10	1.09	1.86
	Fabricated Metal Products	2.45	69.96	13.07
Zambia	Sugar	92.59	99.83	18.04
	Wood Products	17.86	86.38	16.74
	Tobacco	17.35	9.92	3.95
	Horticulture	16.61	11.55	5.06
	Other Grains	7.95	74.62	5.26
Zimbabwe	Tobacco (agr.)	29.11	6.74	6.62
	Non-ferrous metals	10.84	43.55	10.56
	Tea and Coffee	7.56	27.24	1.33
	Basic Iron and Steel	6.73	31.76	12.26
	Clothing	4.17	58.71	4.44

Source: IDC

Table 11: The Share of SADC Exports Going to Different SADC Countries (% , average 1991 - 1993)

	Angola	Botswana	Lesotho	Malawi	Mauritius	Mozambique	Namibia	South Africa	Swaziland	Tanzania	Zambia	Zimbabwe	Total
Angola		0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	96.7	0.0	0.0	100.0
Botswana	6.6		0.0	8.9	7.8	28.9	0.0	31.8	0.0	0.1	7.7	8.2	100.0
Lesotho	2.1	0.0		0.6	1.0	1.1	0.0	94.4	0.0	0.0	0.5	0.3	100.0
Malawi	1.6	2.8	6.3		0.3	1.4	0.5	77.1	0.2	1.2	3.3	5.3	100.0
Mauritius	0.0	0.5	4.1	0.3		2.4	0.1	84.2	0.1	1.1	1.4	5.7	100.0
Mozambique	0.0	2.5	0.9	2.2	2.6		0.5	73.1	0.0	0.0	0.0	18.2	100.0
Namibia	0.3	0.0	0.0	0.3	0.5	1.0		94.3	0.0	0.0	0.3	3.2	100.0
South Africa	4.1	26.8	15.0	2.3	2.7	3.2	19.8		13.6	0.2	4.7	7.5	100.0
Swaziland	2.4	0.0	0.0	1.4	1.2	5.7	0.0	86.9		0.5	1.4	0.7	100.0
Tanzania	0.0	0.0	0.1	14.2	39.4	0.0	0.0	9.4	0.0		0.0	36.9	100.0
Zambia	0.0	1.6	0.2	7.2	0.0	0.0	0.3	41.6	0.0	0.0		49.1	100.0
Zimbabwe	1.2	4.6	6.4	9.6	0.5	10.7	0.4	51.9	0.4	1.0	13.2		100.0

Source: IDC, Author's estimation

then summarises the top areas of comparative advantage for each SADC country with respect to each other SADC country with whom trade is at least 10% of all their SADC trade. As seen in Table 12, the most common trading partner in the SADC is South Africa. Only in two instances, that of Tanzania and Angola, was South Africa's export share less than 10% (9.4%). In addition, because the presentation in

Table 12 is limited to the larger trading partners, the choice of sector is biased with the result that the sectors that appear in Table 12 are frequently repetitions of those appearing in Table 10. There was notable uniformity in the RCA indicators for SACU trade, suggesting that the differences in comparative advantage between these countries have largely been exploited.

The trading partners in Table 12 were selected because they were trading partners with whom the countries in the first column had an average comparative advantage for all trade. The products/sector column shows the three best sectors for each

trading partner, with their corresponding RCA value in column four. Other information on intra-regional comparative advantage that it is possible to glean from Table 12 concerns which sectors will have comparative advantage in the future. It was

Table 12: Comparative Advantage for Trade with Specific SADC Partners (1991 - 1993)

SADC Country	Trading Partner	Products/Sector	RCA Indicator	
Angola	Tanzania	Tobacco	28.81	
		Industrial Chemicals	4.40	
Botswana	Mozambique	Food Products	4.86	
		Paper and Paper Products	4.40	
	South Africa	Mining	4.37	
		Beef	19.76	
Lesotho	South Africa	Food Products	8.82	
		Industrial Chemicals	2.21	
		Furniture	38.15	
		Agriculture n.e.c	13.17	
Malawi	South Africa	Food Products	10.72	
		Tobacco (agr)	88.64	
		Tea and Coffee	86.24	
		Horticulture	8.87	
Mauritius	South Africa	Sugar	135.82	
		Textiles	16.22	
		Wood Products	2.11	
		Agriculture n.e.c	39.69	
Mozambique	South Africa	Clothing	26.31	
		Wood Products	11.17	
		Non-ferrous Metals	63.66	
	Zimbabwe	Wood Products	33.42	
		Tobacco (agr)	24.38	
		Beef	32.50	
Namibia	South Africa	Food Products	9.32	
		Agriculture n.e.c.	7.67	
		Sugar	50.01	
		Furniture	11.75	
South Africa	Botswana	Tobacco	10.95	
		Lesotho	Fabricated Metal Products	1.14
			Cotton	1.14
			Clothing	1.13
	Namibia	Tobacco	1.12	
		Sugar	1.11	
	Swaziland	Swaziland	Basic Iron and Steel	1.10
			Fabricated Metal Products	1.07
		Zambia	Sugar	1.07
			Paper and Paper Products	1.06
	Zimbabwe	Zambia	Clothing	2.67
			Paper and Paper Products	2.45
			Plastic Products	2.28
		Zimbabwe	Printing and Publishing	3.24
Beef			2.87	
Plastic Products			2.81	
Swaziland	South Africa	Beverages	30.90	
		Agriculture n.e.c.	8.40	
		Food Products	7.33	
		Basic Iron and Steel	22.48	
Tanzania	Malawi	Other Non-metallic Mineral Products	2.13	
		Mauritius	Cotton	25.94
			Tobacco	19.77
	Zimbabwe	Industrial Chemicals	4.34	
		Cotton	95.64	
		Fabricated Metal Products	10.74	
	Zambia	South Africa	Paper and Paper Products	4.59
			Horticulture	52.39
Wood Products			36.66	
Zimbabwe		Clothing	32.80	
		Sugar	87.36	
		Tobacco (agr.)	69.76	
Zimbabwe	Mozambique	Tobacco	6.03	
		Beef	12.93	
		Tobacco (agr.)	8.07	
	South Africa	Other Non-metallic Mineral Products	7.79	
		Tobacco (agr.)	32.40	
		Clothing	20.91	
	Zambia	Zimbabwe	Non-ferrous Metals	20.78
			Tobacco (agr)	14.57
		Zambia	Beef	9.69
			Cotton	4.86

Source: IDC; Author's estimation

hypothesised that a way to identify SADC sectors with potential comparative advantage would be to identify sectors of comparative advantage that did not exist with older trading partners but which exist with newer ones. The reasoning behind this is that companies moving into new trade areas would first explore them in more familiar market environments, like those of neighbouring SADC countries, before venturing into the international export market. South Africa's trade with non-SACU countries was chosen as a good example because of its established trade relationship with SACU countries and because of the level of development of the economy in the region. Following this reasoning, it is possible that the industries highlighted by the RCA indicator for South Africa's trade with non-SACU countries like Zambia and Zimbabwe might point to sectors with potential international comparative advantage for South Africa, if not for the region. From the list in Table 12, these sectors would be Plastic Products and Printing and Publishing.

3.1.1 Summary of Regional Comparative Advantage

In summary, the discussion of regional comparative advantage highlighted the following descriptive and strategic points.

1. At an aggregate level, no countries in SADC have a comparative advantage in regional trade in mining sector output; all countries have a comparative advantage in exported agricultural produce. Several countries have a comparative advantage in exporting manufactures regionally, and all countries have a comparative advantage in at least one manufacturing sector's exports.

2. In the regional export of agricultural produce, three countries share the highest ranked comparative advantage indicator for sugar exports, a controversial export. They are Mauritius, South Africa and Zambia.

3. Regional manufacturing sector exports in which at least some countries have a comparative advantage are: Industrial Chemicals, Food Products, Paper and Paper Products, Fabricated Metal Products, Wood Products, Furniture, Tobacco, Textiles, Clothing, Other Chemicals, Beverages, Basic Iron and Steel and Non-ferrous Metals.

4. South Africa is the most important trading partner, measured by its share of regional imports received, for 7 out of 11 SADC countries. However, comparative advantage rates are higher in trade partnerships that exclude South Africa in some sectors.

Table 13: Comparison of Comparative Advantage between all Exports and Exports to the Rest-of-the-world (ROW), average 1991 – 1993, (using the own-trade formula)

All Exports	Angola	Botswana	Lesotho	Malawi	Mauritius	Mozambique	Namibia	South Africa	Swaziland	Tanzania	Zambia	Zimbabwe	SADC
Agriculture	-0.39	-0.61	-0.76	0.90	0.71	0.18	0.52	0.27	-0.43	0.90	-0.04	0.65	-
Mining	1.00	0.99	-1.00	-1.00	-0.97	-0.70	0.93	0.62	-0.02	-0.80	0.95	0.24	-
Manufacturing	-0.72	-0.55	-0.80	-0.78	-0.21	-0.62	-0.31	0.04	-0.10	-0.68	-0.82	-0.40	-
Goods (a)	0.33	-0.01	-0.80	-0.03	-0.07	-0.42	0.04	0.19	-0.13	-0.39	0.22	-0.13	-
Transport	-0.68	-0.06	-0.09	-0.78	0.42	0.11	-0.72	0.23	0.63	0.01	-0.49	-0.03	-
Travel	-0.21	-0.31	-0.57	-0.13	0.15	-	-1.00	-0.10	-0.28	-0.59	-0.28	0.27	-
Business	-1.00	0.20	0.58	-0.64	0.38	-1.00	-0.87	0.33	-0.67	-0.17	-0.72	-0.31	-
Services	-0.89	-0.33	-0.24	-0.82	0.07	-0.21	-0.87	-0.14	-0.44	-0.34	-0.67	-0.32	-
Exports to ROW													
Agriculture	-0.27	-0.29	-0.97	0.94	0.74	0.32	0.68	0.38	-0.34	0.91	0.01	0.66	0.55
Mining	1.00	1.00	-1.00	-1.00	0.90	-0.10	0.96	0.63	0.36	-0.80	0.98	0.70	0.78
Manufacturing	-0.70	0.10	-0.10	-0.80	-0.20	-0.30	0.50	-0.20	0.80	-0.70	-0.80	-0.50	-0.26
Total (gds) (b)	0.40	0.71	-0.23	0.16	-0.05	-0.25	0.75	0.08	0.72	-0.39	0.45	-0.16	0.14
Difference (gds)													
(a-b)	-0.07	-0.72	-0.63	-0.19	-0.02	-0.17	-0.71	0.11	-0.85	0.0	-0.22	0.03	-

Source: IDC, IMF Balance of Payments Statistics Yearbook 1997, Author's estimation

The next sub-section deals with SADC's comparative advantage with respect to international trade. Comments on how regional and international comparative advantage may fit together are summarised in the discussion at the end of this sub-section.

3.2 International Comparative Advantage

The data that was used to analyse intra-SADC comparative advantage was also used to estimate comparative advantage for trade with the rest-of-the-world (ROW). This was accomplished using the alternative own-trade index for comparative advantage, i.e. the difference divided by the summation of exports and imports. The aim of this exercise was to identify the sectors with the highest comparative advantage in international trade for individual countries and the SADC region as a whole.

3.2.1 Analysing Total Individual Country Trade

International comparative advantage can be analysed in two ways. Firstly, it is possible to calculate an RCA index for *total* exports for each country. Secondly, it is possible to calculate an RCA index that excludes regional trade, again, for each country. The second index estimates comparative advantage for a country in the region with respect to exporting outside of the region (i.e. to the rest-of-the-world). The results are presented in Table 13. Although both forms of comparative advantage were reviewed, the remainder of this section and the next focuses on comparative advantage excluding regional trade.

Regional comparative advantage was isolated and covered in the previous section. However, due to data deficiencies to derive a comparative advantage indicator for services trade, it was necessary to use the first index. Appendix 2 contains the country-by-country RCA indices calculated both including and excluding intra-SADC trade.

The first three rows in Table 13 show the RCA indicators for agricultural, mining and manufacturing sectors for all trade. The calculations of RCA indicators include all trade of each country. The countries with comparative advantage in the export of agricultural produce are: Malawi, Mauritius, Mozambique, Namibia, South Africa, Tanzania and Zimbabwe. The countries with comparative advantage in mining exports are: Angola, Botswana, Namibia, South Africa, Zambia and Zimbabwe. Of all the countries in the region, only South Africa has a slight comparative advantage in the export of manufactured goods (RCA indicator = 0.04). In general, countries in the region have a disadvantage in the export of services. Only Lesotho (0.60) and Mauritius (0.06) have a slight comparative advantage. In Lesotho's case, the comparative advantage is mostly explained by the export of labour services to South Africa by the migrant labour force. While in Mauritius's case, it could be attributed to the country's strong tourist industry.

When the analysis excludes intra-regional trade, no overall change in the pattern of comparative advantage can be observed for all sectors, but in a few countries there is a qualitative change, a shift

Table 14: Comparative Advantage: SADC's Collective Trade with the ROW (average 1991 – 1993)

SADC	RCA Indicator	Percentage of Total Exports to the Rest-of-the-World (%)	Cumulative percentage of Exports to the Rest-of-the-World (%)	Percentage in Category Exported to the Rest-of-the-World (versus to SADC) (%)
Tobacco (agr)	0.97	2.86	2.86	94.03
Sugar	0.91	1.77	4.63	93.70
Tea and Coffee	0.82	0.79	5.42	89.03
Mining	0.78	50.27	55.69	99.10
Agriculture n.e.c.	0.74	3.36	59.05	77.77
Other Manufactured Products	0.70	7.22	66.27	97.21
Non-ferrous Metals	0.68	2.59	68.86	87.26
Basic Iron and Steel	0.66	5.75	74.61	89.05
Clothing	0.59	1.48	76.09	67.44
Cotton	0.30	0.56	76.65	90.40
Horticulture	0.27	0.33	76.98	73.13
Food Products	0.04	3.32	80.30	43.65
Paper and Paper Products	0.02	1.36	81.66	62.13
Leather Products	-0.08	0.37	82.03	84.90
Wood Products	-0.09	0.38	82.41	50.90
Printing and Publishing	-0.11	0.42	82.83	54.80
Beverages	-0.18	0.41	83.24	26.40

Source: IDC, Author's estimation

Table 15: Comparative Advantage for SADC's World Trade by Country (average 1991 - 1993)
(using own-trade formula)

Sectors	Angola	Botswana	Lesotho	Malawi	Mauritius	Mozambique	Namibia	RSA	Swaziland	Tanzania	Zambia	Zimbabwe	SADC
1 Agriculture	-0.27	-0.29	-0.97	0.94	0.74	0.32	0.68	0.38	-0.34	0.91	0.01	0.66	0.55
2 maize	-1.00	-1.00	-1.00	-1.00	-0.96	-1.00	-1.00	-0.86	-1.00	-1.00	-0.98	-0.75	-0.89
3 other grains	-1.00	-0.24	-1.00	-1.00	-1.00	-1.00	-1.00	-0.06	-1.00	-0.99	-0.52	-0.98	-0.21
4 tobacco	-1.00	-1.00	-1.00	0.99	-1.00	0.90	-1.00	0.09	-1.00	0.99	1.00	1.00	0.97
5 sugar	-1.00	-	-	1.00	1.00	0.06	-1.00	0.98	-	0.13	-0.68	0.50	0.91
6 beef	-1.00	-0.88	-0.94	-	-0.95	-0.60	0.88	-0.03	-1.00	-1.00	0.91	0.99	-0.35
7 horticulture	-1.00	0.73	-1.00	0.69	0.52	-0.37	-1.00	-0.09	-1.00	0.95	0.97	0.34	0.27
8 cotton	-0.78	-1.00	-1.00	1.00	-0.91	0.95	-1.00	-0.92	-1.00	1.00	0.99	0.76	0.30
9 tea and coffee	-1.00	-1.00	-1.00	1.00	0.93	0.54	-1.00	0.07	-1.00	1.00	1.00	1.00	0.82
10 agriculture n.e.c.	0.53	-0.23	-0.74	0.96	-0.85	1.00	0.80	0.81	0.74	0.80	0.40	0.38	0.74
11 Mining	1.00	1.00	-1.00	-1.00	0.90	-0.10	0.96	0.63	0.36	-0.80	0.98	0.70	0.78
Manufacturing	-0.70	0.10	-0.10	-0.80	-0.20	-0.50	0.50	-0.20	0.80	-0.70	-0.80	-0.50	-0.26
12 Food Products	-1.00	0.67	0.49	0.82	-0.49	-0.18	0.78	-0.94	1.00	0.14	0.19	0.33	0.04
13 Beverages	-1.00	0.94	-1.00	0.69	-0.67	-0.61	-1.00	-0.37	0.95	-1.00	-0.92	-0.75	-0.18
14 Tobacco	0.76	-1.00	-1.00	-0.97	-0.72	-0.60	-1.00	-0.24	-1.00	-0.89	-0.94	-0.66	-0.24
15 Textiles	-1.00	0.55	0.21	-0.99	0.03	-0.89	-0.52	-0.40	0.92	-0.37	-0.07	-0.14	-0.22
16 Clothing	-1.00	-1.00	-1.00	-0.87	0.93	-0.59	-1.00	0.41	-1.00	-0.93	0.42	0.87	0.59
17 Leather Products	-1.00	0.29	-1.00	-1.00	-0.48	-0.80	-1.00	-0.03	-1.00	-0.45	-0.17	0.64	-0.08
18 Footwear	-1.00	-1.00	-1.00	-1.00	-0.51	-0.84	-1.00	-0.86	-1.00	-1.00	-0.97	0.35	-0.88
19 Wood Products	-0.99	0.90	-1.00	0.81	0.29	-0.66	-1.00	-0.07	0.94	0.12	0.55	-0.10	-0.69
20 Furniture	-1.00	-1.00	-0.82	-1.00	-0.66	-0.98	0.02	-0.81	-1.00	-0.97	-0.98	0.19	-0.73
21 Paper and Paper Products	-1.00	0.92	-1.00	-1.00	-0.80	0.36	-1.00	0.12	0.99	-0.71	0.03	-0.43	0.02
22 Printing and Publishing	-1.00	-1.00	-0.77	-1.00	-0.91	-0.99	-0.65	0.02	-1.00	-0.99	-0.97	-0.34	-0.11
23 Industrial Chemicals	-0.01	-0.37	-1.00	-1.00	-0.70	-0.52	-1.00	-0.41	-0.58	-0.89	-0.89	-0.92	-0.50
24 Other Chemicals	-1.00	-1.00	-0.98	-0.95	-0.79	-0.98	-0.05	-0.98	-1.00	-0.97	-0.99	-0.72	-0.94
25 Rubber Products	-1.00	-1.00	-1.00	-1.00	-0.90	-0.33	-1.00	-0.63	-1.00	-1.00	-1.00	-0.86	-0.75
26 Plastic Products	-1.00	-1.00	-1.00	-1.00	-0.88	-1.00	-1.00	-0.91	-1.00	-0.99	-0.99	-0.66	-0.92
27 Pottery, China and Earthenware	-1.00	-1.00	-1.00	-1.00	-0.96	-0.95	-1.00	-0.76	-1.00	-1.00	-0.87	-0.11	-0.84
28 Glass and Glass Products	-1.00	-1.00	-1.00	-1.00	-0.79	-0.77	-1.00	-0.37	0.27	-0.73	-0.99	-0.61	-0.53
29 Other non- metallic mineral products	-0.99	-1.00	-0.98	-1.00	-0.97	0.12	-0.29	-0.15	-1.00	-0.97	-0.79	-0.85	-0.30
30 Basic iron and Steel	-0.98	-1.00	-1.00	-1.00	-0.82	0.76	-1.00	0.81	-1.00	0.09	-0.62	0.35	0.66
31 Non-ferrous metals	-1.00	-1.00	-1.00	-1.00	-1.00	0.68	-1.00	0.76	-1.00	-1.00	-1.00	0.80	0.68
32 Fabricated Metal Products	-1.00	0.98	0.71	-0.51	-0.64	0.43	-0.35	-0.77	0.96	-0.98	0.76	-0.68	-0.69
33 Machinery	-0.95	-1.00	-1.00	-1.00	-0.86	-0.95	-1.00	-0.51	-0.97	-0.89	-0.89	-0.95	-0.61
34 Electrical Machinery	-0.99	-1.00	-1.00	-1.00	-0.92	-0.91	-1.00	-0.23	-1.00	-0.96	-0.97	-1.00	-0.37
35 Motor vehicle	-0.99	-1.00	-1.00	-1.00	-0.97	-0.87	-1.00	-0.56	-1.00	-0.99	-0.99	-0.99	-0.77
36 Transport Equipment	-1.00	-1.00	-1.00	-1.00	-0.85	-0.78	-1.00	-0.14	-1.00	-1.00	-1.00	-0.71	-0.58
37 Measuring and controlling equipment	-1.00	0.41	-0.60	-0.96	0.10	-0.85	-0.02	-0.73	-0.24	-0.95	-1.00	-0.66	-0.60
38 Other Manu- factured Products	0.92	0.81	-0.76	0.58	-0.15	-0.20	0.98	0.72	0.98	-0.03	0.66	0.44	0.70
39 Unclassified	-1.00	-	-	-	-	-	-	-	-	-1.00	-1.00	-	-1.00
40 Average	0.40	0.71	-0.23	0.16	-0.05	-0.25	0.75	0.08	0.72	-0.39	0.45	-0.16	0.14

Source: IDC, Authors estimation

from comparative disadvantage to an advantage. This was notable in the manufacturing sectors of Botswana, Namibia and Swaziland where the RCA

indicator changed from negative (disadvantage) to positive (advantage) when trade within SADC was excluded. For South Africa however, manufacturing comparative advantage changed to disadvantage. This switch reflects the fact that although South Africa has a comparative advantage in the region for exporting manufactured goods, it did not have an advantage in the world when regional trade was excluded. The overall comparative advantage indicators for global trade of each major sector were as follows: 0.55 for agriculture; 0.78 for mining and -0.50 for manufacturing.

3.2.2 Sectors showing Comparative Advantage in Collective International Trade

Having observed the pattern of comparative advantage for broad sector headings, the next step is to review which specific sectors have the strongest comparative advantage in the region's collective international trade. In Table 14 on page 19, seventeen sectors are extracted from Table 15 and listed in

descending order of RCA indicators. Table 15 shows the comparative advantage for collective SADC country trade with the rest-of-the-world. The list in Table 14 includes all sectors with RCA indicators in the range -0.20 to +1. The first observation to make about the sectors listed in Table 14 is that included in their number are most of the agricultural sub-sectors. The only agricultural sub-sectors excluded were Maize and Other Grains. Of agricultural exports, the category Agriculture n.e.c. (includes fishing and forestry) made the largest contribution to SADC export revenue (3.36 %). High comparative advantage in mining was an obvious feature of SADC international trade and mining sector exports to the world were 50 % of total goods exports. Manufacturing sectors whose comparative advantage was substantially higher than others were: Other Manufactured Products (which includes items such

as toys, sports goods, brooms etc.); Non-Ferrous Metals; Basic Irons and Steel; and Clothing.

3.2.3 A Country-by-country Analysis of Comparative Advantage

Table 15 presented a breakdown of sectors with

Table 16: Comparative Advantage and the Importance of Trade in the Agricultural Sector: SADC Exports to the Rest-of-the-World (average trade 1991 – 1993)

Sector	Country with Comparative Advantage In Sectors as Shown by Top 3 Ranked Indicators	Share of SADC Exports of Commodity (%)	Share of Country's Export Revenue (%)
SUGAR	Malawi	3.73	4.37
	Mauritius	80.22	28.36
	South Africa	12.09	0.37
COTTON	Malawi	4.69	1.73
	Mozambique	11.01	5.24
	Tanzania	50.97	15.16
	Zambia	4.76	0.56
	Zimbabwe	26.55	4.45
TEA AND COFFEE	Tanzania	62.53	26.31
	Zambia	1.29	0.22
	Zimbabwe	7.21	1.71
	Malawi	15.35	8.01
TOBACCO	Mauritius	3.03	0.45
	Zimbabwe	51.08	43.93
	Zambia	1.31	0.80
	Tanzania	3.55	5.42
AGRICULTURE NEC	Malawi	41.90	79.31
	Mozambique	14.10	40.45
	Malawi	0.21	0.46
	Namibia	2.08	1.94
	South Africa	74.56	4.38
HORTICULTURE	Swaziland	0.43	5.00
	Angola	1.95	0.50
	Zambia	12.24	0.86
	Tanzania	21.21	3.75
	Botswana	3.01	0.17
	Mauritius	8.46	0.56
	Zimbabwe	24.75	2.47

Source: IDC, Author's estimation

comparative advantage for each of the SADC countries, excluding intra-SADC trade. In this section the distribution of comparative advantage between sectors for each country is analysed and documented.

This discussion also refers to each sector's share of trade, either of the SADC, or of the country.

3.2.3.1 Agriculture

Firstly, we turn to the agricultural sector. All the agricultural sectors that appeared in the joint SADC list, also appear in the country-by-country list. International comparative advantage appeared to exist for the following agricultural export sectors: Sugar, Cotton, Tea and Coffee and Tobacco. The countries with high comparative advantage in these sectors are shown in Table 16. The columns alongside the comparative advantage indicators shown in Table 16 are the share of all SADC's world exports from that sector and the share of the country's total export revenue.

Although there was not sufficient space in this report to discuss specific trade and industrial strategies, the information presented in Table 16 illustrates other factors to consider, apart from comparative advantage, when designing trade and industrial strategies. An example is the Sugar sector. In the Sugar sector, Mauritius was the largest exporter of Sugar in the region and this sector contributed the largest share to the country's total export revenue. Therefore, although the comparative advantage indicators for Mauritian, Malawian and South African Sugar exports were all high, it is likely that Mauritius will be the most sensitive to industrial and trade strategies. Policies that affect Mauritian exports of Sugar to the rest-of-the-world could also affect total Sugar exports from the SADC because of the country's high share of SADC Sugar exports.

A second important consideration for the development of trade strategy, especially for the agricultural sector, concerns the question of which countries are the largest producers of different produce. In several instances, the greatest exporting countries were not the greatest producers. One can use the example of Sugar again. Although South Africa is the greatest producer, much of its production is used in domestic consumption and a smaller proportion is exported than in the case of Mauritius.

The largest producers within other agricultural sectors are as follows. The largest producer of Cotton is Zimbabwe with Tanzania second, although Tanzania's share of exports was the largest. Tanzania

is the largest producer of Tea and Coffee, with Malawi second. The largest producer of Tobacco is Zimbabwe, with Malawi in second position even though, based on their share of total export earnings, the tobacco export earnings mean more to Malawi than to Zimbabwe. Most countries have a comparative advantage in exports included in Agriculture Not-Elsewhere-Classified (n.e.c.). The exceptions are Botswana, Lesotho and Mauritius. The countries exporting the highest share are South Africa (75 %), Mozambique (14 %) and Tanzania (4 %). The countries that are most reliant on export revenue from this sector are Mozambique (40 %), Tanzania (7 %) and South Africa (4 %). Countries with a comparative advantage in Horticultural exports are Zambia, Tanzania, Botswana, Mauritius and Zimbabwe. Although South Africa does not have a comparative advantage in Horticultural exports (-0.09), its share of all SADC Horticultural exports of 24.51 % is second to Zimbabwe's of 24.75 %. The third highest export contribution in the sector comes from Tanzania (21 %).

3.2.3.2 Mining

Not much can be added about the comparative advantage for mining exports as only a single category of data was available for this sector. Comparative advantage indicators were high for this sector relative to other sectors for Angola, Botswana, Zambia and Namibia. In these countries, the shares of mining exports were 92 %, 79 %, 93 % and 56 % respectively. However, collectively their exports only accounted for 48 % of all mining exports from the region. The share of South African mining exports of 51 % was the greatest. Although Mauritius showed a comparative advantage in mining exports, their share was a very small portion of both SADC mining exports and the country's total exports.

3.2.3.3 Manufacturing

Table 17 shows the sectors leading in comparative advantage for each SADC country. It also gives an indication of the importance of that export sector to the country concerned and the region as a whole. An important question to ask is how the comparative advantage for individual SADC countries compares with collective comparative advantage. The answer is that it appears that several sectors that appear in the country-by-country list did not appear in the collective comparative advantage list. These categories are Fabricated Metal Products, Wood Products, Beverages, Manufactured Tobacco Products and Textiles. Therefore, relative to total SADC trade, the region does not appear to have a

comparative advantage in these sectors, but certain individual countries do. There are no effects in the opposite direction: no sectors listed with a comparative advantage for collective trade were omitted from individual country lists. In general, the region does not appear to have a collective comparative advantage in any of the manufacturing sectors ranked lower than the top five for individual countries i.e. those not appearing in Table 17. The

following few paragraphs highlight aspects of trade for the sectors for which at least one country in SADC has a comparative advantage. The list in Table 17 only shows the top five ranked sectors but there is a full RCA matrix in Appendix 2. Although production is not consistently discussed below as was done for agricultural exports, it should be born in mind when using the data.

Table 17: Comparative Advantage Indicators for SADC Trade with the Rest-of-the-World (average 1991 – 1993, up to the top five ranked indicators)

Country	Sector	RCA Indicator	Share of Country's (region's) Exports to the Rest-of-the-World (%)	Cumulative Share of Exports to the Rest-of-the-World (%)	Share of SADC's Exports from that Sector to the Rest-of-the-World (%)
Angola	Mining	1.00	91.65	91.65	25.97
	Other Manufactured Products	0.92	4.75	96.40	9.37
	Tobacco	0.76	1.79	98.19	77.64
Botswana	Agriculture n.e.c.	0.53	0.46	98.65	1.95
	Mining	1.00	78.66	78.66	9.37
	Fabricated Metal Products	0.98	2.40	81.06	24.77
	Beverages	0.94	3.18	84.24	46.51
	Paper and Paper Products	0.92	0.75	84.99	3.29
Lesotho	Wood Products	0.90	0.47	85.46	6.64
	Fabricated Metal Products	0.71	7.63	7.63	2.90
	Food Products	0.49	82.09	89.72	5.45
Malawi	Textiles	0.21	7.86	97.58	0.56
	Sugar	1.00	4.37	4.37	3.73
	Cotton	1.00	1.73	6.10	4.69
	Tea and Coffee	1.00	8.01	14.11	15.35
Mauritius	Tobacco (agr.)	0.99	79.31	93.42	41.90
	Agriculture n.e.c.	0.96	0.46	93.88	0.21
	Sugar	1.00	28.36	28.36	80.22
	Clothing	0.93	23.48	51.84	79.30
	Tea and Coffee	0.93	0.48	52.32	3.03
Mozambique	Mining	0.90	0.00	52.32	0.00
	Horticulture	0.52	0.56	52.88	8.46
	Agriculture n.e.c.	1.00	40.45	40.45	14.10
	Cotton	0.95	5.24	45.69	11.01
	Tobacco (agr.)	0.90	1.71	47.40	0.70
Namibia	Basic Iron and Steel	0.76	19.10	66.50	3.89
	Non-ferrous Metals	0.68	2.43	68.93	1.10
	Other Manufactured Products	0.98	5.56	5.56	2.77
	Mining	0.96	56.40	61.96	4.04
	Beef	0.88	0.69	62.65	82.95
South Africa	Agriculture n.e.c.	0.80	1.94	64.59	2.08
	Food Products	0.78	33.60	98.19	36.43
	Sugar	0.98	0.37	0.37	12.09
	Basic Iron and Steel	0.81	8.61	8.98	85.72
	Agriculture n.e.c.	0.81	4.38	13.36	74.56
Swaziland	Non-ferrous Metals	0.76	4.09	17.45	90.46
	Other Manufactured Products	0.72	10.10	27.55	80.02
	Food Products	1.00	66.50	66.50	22.42
	Paper and Paper Products	0.99	6.52	73.02	5.37
	Other Manufactured Products	0.98	7.51	80.53	1.16
Tanzania	Fabricated Metal Products	0.96	0.69	81.22	1.33
	Beverages	0.95	12.10	93.32	33.11
	Cotton	1.00	15.16	15.16	50.97
	Tea and Coffee	1.00	26.31	41.47	62.53
	Tobacco (agr.)	0.99	5.42	46.89	3.55
Zambia	Horticulture	0.95	3.75	50.64	21.21
	Agriculture n.e.c.	0.80	7.23	57.87	4.03
	Tea and Coffee	1.00	0.22	0.22	1.29
	Tobacco (agr.)	1.00	0.80	1.02	1.31
Zimbabwe	Cotton	0.99	0.56	1.58	4.76
	Mining	0.98	92.80	94.38	8.70
	Horticulture	0.97	0.86	95.24	12.24
	Tobacco (agr.)	1.00	43.93	43.93	51.08
	Tea and Coffee	1.00	1.71	45.64	7.21
Zimbabwe	Beef	0.99	0.01	45.65	1.49
	Clothing	0.87	1.50	47.15	3.36
	Non-ferrous Metals	0.80	6.57	53.72	8.44

Source: IDC, Author's estimation

Basic Iron and Steel. The countries with a comparative advantage in exports of Basic Iron and Steel were South Africa, Mozambique, Zimbabwe and Tanzania. Their respective shares of this category's exports were 86 %, 4 %, 7 % and 3 % respectively. The share of the country's total exports was highest for Mozambique (19 %), followed by 9 % for South Africa, and 13 % for Zimbabwe and 8 % for Tanzania.

Beverages. Countries with a comparative advantage in exports in the Beverages sector were Botswana and Swaziland. Their shares of SADC exports in this category were 47 % and 33 % and the share of this sector in the country's total export revenue was 3 % and 12 % respectively.

Clothing. Four countries had a comparative advantage in Clothing exports. They were Mauritius, South Africa, Zambia and Zimbabwe. Mauritius' Clothing exports constituted the largest percentage of SADC Clothing exports (79 %) and South Africa's exports were second (17 %). The value of clothing exports were just under a quarter of the value of all Mauritius' exports, the highest ratio by a large margin. The next highest was Zimbabwe (2 %).

Fabricated Metal Products. Botswana, Swaziland, Zambia, Lesotho and Namibia had a comparative advantage in Fabricated Metal Product exports. The largest producer in SADC next to South Africa, was Botswana. These two countries were also the largest exporters, exporting 51 % and 25 % respectively. Exports in the Fabricated Metals category were the largest share of all exports for Lesotho (8 %) Mozambique (4 %) and Botswana (2 %).

Food Products. The Food Products sector was amongst the top five ranked sectors by comparative advantage for Lesotho, Namibia and Swaziland. The share of Namibian and Swazi exports was the greatest in the Food Product category, 36 % and 22 % respectively. Exports in this category accounted for the largest share of all exports for Lesotho (82 %) and were high for Swaziland (67 %) and Namibia (34 %) as well. The countries with a comparative disadvantage in Food Products exports were Angola, Mauritius, Mozambique and South Africa.

Footwear. Zimbabwe was the only country with a comparative advantage in this sector (0.35) but the sectors share in total exports revenue was only 0.42 %. Their share of footwear exports was 44 %, followed by South Africa (31 %) and Mauritius (20 %).

Furniture. Zimbabwe and Namibia had a comparative advantage in this sector (0.19 and 0.02 respectively). Zimbabwean exports were 63% of SADC exports to the world. They were followed by South Africa with 21 % and Namibia had an 8 % share. However, the contribution to a country's total earnings was low. The highest contribution to total export revenue was in Zimbabwe (1 %).

Glass and Glass Products. Swaziland was the only country that emerged with a comparative advantage in Glass exports (0.27). Nevertheless, their share of SADC export revenue from this sector was only 2 %, compared with South Africa's 83 %. The share of total export revenue in each country was similar at 0.15 %.

Leather Products. Botswana and Zimbabwe showed a comparative advantage in exports from this sector of 0.29 and 0.64 respectively. South Africa, the largest exporter (80 % of exports), had an RCA indicator of - 0.03. Botswana's share of sector exports was 4 % and Zimbabwe's, 9 %. The value of export revenue from exports in this sector was the highest for Zimbabwe, at 1 % of all export revenue.

Manufactured Tobacco Products. Only Angola had a comparative advantage in the export of Manufactured Tobacco, accounting for 78 % of all exports in the sector but only 2 % of the country's exports. Angola was also the second highest producer of Manufactured Tobacco. South Africa was first and Zimbabwe was the third highest.

Measuring and Controlling Equipment. Mauritius and Botswana had a comparative advantage in this sector (0.10 and 0.41 respectively). Their export shares were 44 % and 3 % respectively. South Africa's export share was 47 %. This sector's largest contribution to total export revenue was in Mauritius, where it contributed 5 % to total export revenue. The contribution in Botswana was 0.31 % and in South Africa, 0.48 %.

Non-ferrous Metals. Three countries had a comparative advantage in exports from the Non-ferrous Metals group. They were Zimbabwe, South Africa and Mozambique. Their respective shares of SADC Non-ferrous exports were 8 %, 90 % and 1 %. The value of exports to each country was 7 %, 4 % and 2 % respectively.

Other Manufactured Products. Several countries had a comparative advantage in the export of "Other Manufactured Products"; they were Angola, Botswana, Malawi, Namibia, South Africa,

Swaziland, Zambia and Zimbabwe. This sector ranked in the top five for Angola, Namibia, South Africa and Swaziland. The share of exports from these countries was the highest, amounting to 93 % collectively. South Africa's share of exports was 80 % and the second highest was Angola's with 9 %. This sector includes the manufacture of miscellaneous items such as musical instruments, toys, sports goods, brooms, crayons, artificial flowers, etc.

Other Non-metallic Mineral Products. Mozambique was the only country with a comparative advantage in this sector (0.12). Their share of SADC export revenue from this sector was only 0.49 %, higher than any other country except South Africa. South Africa's exports at 98 % had the lion's share of SADC exports. Shares of total export revenue were 0.72 % for South Africa and 0.18 % for Mozambique.

Paper and Paper Products. Five countries had a comparative advantage for exports included in the category Paper and Paper Products. They were Botswana, Mozambique, South Africa, Swaziland and Zambia. The countries with the greatest share of the sector's exports were South Africa (86 %), Swaziland (5 %) and Botswana (3 %). The share of export revenue from this sector was the greatest for Swaziland (7 %) and similar for South Africa and Mozambique (2 %).

Printing and Publishing. South Africa was the only country with a comparative advantage in this sector (0.02). Their share of SADC exports was 99 % and the contribution of this sector to total export revenue for South Africa was 0.65 %.

Textiles. Countries with comparative advantage in Textile exports were Botswana, Lesotho, Mauritius and Swaziland. Of these countries, Mauritius's (49 %) and Botswana's (6 %) shares of Textile exports were the greatest. South Africa's Textile exports were 34 % of all Textile exports but the country had a comparative disadvantage in this sector. The sector had the greatest share of country export revenue in Mauritius (30 %).

Wood Products. A number of countries had a comparative advantage for exports in Wood Products. They were Botswana, Malawi, Mauritius, Swaziland, Tanzania and Zambia. However, none of these countries exported more than South Africa (84 %). Next to South Africa, Botswana (7 %) and Tanzania (4 %) had the highest share of Wood Product exports in the SADC. Wood Product exports were not a large share of total exports for any of the countries.

The highest share was in Tanzania (0.87 %) and Swaziland (0.71 %). In South Africa the share was only 0.62 %.

3.2.4 Other Data that Add Value to the Comparative Advantage Trade Analysis

Two dimensions of exports were used in addition to the RCA indicators, namely, the share of a sector's export in the SADC's exports, and the share of a sector's exports within a country. In addition to the RCA indicator and "share of exports", other frameworks and data can assist in evaluating comparative advantage, and will be needed when evaluating different trade options. Without proclaiming to be comprehensive, the next few paragraphs are devoted to a few types of information that could be used in addition to the data discussed above. They cover resource-use-intensity, the sector's (wo)manpower needs, inter-sectoral direct inputs and dynamic comparative advantage issues.

3.2.4.1 Resource-Use-Intensity

This section is mostly descriptive in nature, assisting in the classification of the SADC's areas of comparative advantage. As can be seen from the above discussion and Table 15, SADC countries have a comparative advantage in a cross-section of agricultural, mining and manufacturing sectors. While agricultural and mining sectors are traditionally viewed as land, unskilled labour and mineral intensive, a classification scheme identifying the chief resource base for manufactured goods is a more recent innovation. As many of the items listed in the Krause Classification of Manufactures are listed from 3 digit ISIC codes, it was only possible to gain a rough idea of the resource mix of SADC trade. The SADC region only had a comparative advantage in six manufacturing sectors (see Table 14). However, when international trade was analysed for individual member countries, the comparative advantage list spanned about 18 sectors. Therefore, the discussion of comparative advantage will refer to the larger group of industries identified in the country analyses (see Appendix 2).

According to the Krause Classification of Manufactures, it would appear that the products that are Agricultural Resource Intensive account for 5.4 % of export revenue. The list includes Beverages, Tobacco, Paper and Paper Products and Food Products. The Non-ferrous Metal industry would be classified as a Mineral Resource Intensive. About 2.6 % of SADC's export revenue was derived from these exports. Textiles (3.1 % of SADC exports), Clothing (1.5 %), certain Wood Products⁷ (0.4 %)

and certain Other Manufactured Products (7.2 %), excluding jewellery, are considered to be Unskilled Labour Intensive. As Wood Products and Other Manufactured Products are not broken down, it is not possible to say exactly what percentage of export revenue this group represented to the SADC group. We can say that this value would range between 4.6 % (excluding the two categories) and 12.1 % (all four categories included). Sectors whose output would be classified as Technology Intensive include the Measuring and Controlling Equipment sector. Botswana and Mauritius had a comparative advantage in this sector but the sector's share of total world exports was only 0.3 % for Botswana and 5 % for Mauritius. Its share in total SADC exports was only 0.6 %. Human Capital Intensive sectors include Printing and Publishing (0.4 %), certain Fabricated Metal Products and certain Other Manufactured Products, e.g. jewellery. Certain output from the Basic Iron and Steel (5.8 % of SADC exports) and Fabricated Metal Products (n.e.c.) (0.6 %) could be classified as Human Capital Intensive. Paper and Paper Products straddle the Agricultural and the Human Capital Resource Intensive classes.

In summary, the comparative advantage of countries in the region is predominantly located in Agricultural and Mineral Resource Intensive sectors. The weakest area of comparative advantage seems to lie in Technology Resource Intensive manufactures. Mauritius and Botswana are the only two countries with a comparative advantage in Measuring and Controlling Equipment manufactures, a Technology Resource Intensive sector. Countries with comparative advantage

in Human Capital Resource Intensive sectors such as Iron and Steel Basic Industries are South Africa, Mozambique, Tanzania and Zimbabwe. South Africa is the only country with a comparative advantage in Printing and Publishing, another Human Capital Resource Intensive industry.

3.2.4.2 Employment and Output Effects

The employment and indirect output effects of increased production for export are important considerations for a trade strategy. They can be extrapolated using the employment and output matrices shown in Appendix 1 and discussed in Section 1. Table 18 shows the results of the employment extrapolation, applied to the sectors that emerged with a positive comparative advantage indicator for collective SADC trade (see Table 17). The increase in employment, termed "rate of employment", for an increase in \$100 (constant Dollars) was calculated by dividing the value of output by the number of people employed in a sector. The analysis is rudimentary because it assumes no excess capacity. It does not show the employment increases across different countries in the region, nor does it consider economic growth, or the knock-on (indirect) effect on employment in up- and down- stream sectors of the economy. Even so, it provides a rudimentary estimate of potential employment creation. As might be expected, a \$100 increase in output of *agricultural* sectors is associated with the highest average increase in employment. The employment rates in the agricultural sectors were 25.6 employees per \$100 of Tobacco output, 12.8 for Tea

Table 18: Employment Potential of Increases in Exports in SADC (average 1991 - 1993)

SADC	Attributed SIC Code ^a (4 th edition)	Value of Output per Employed Person in the Sector (\$)	Average Number Employed in SADC from \$100 Increase in Value of Output
Agriculture n.e.c.	1100	1.84	1.1
Cotton	1100	10.50	9.2
Horticulture	1100	10.92	2.5
Sugar	1100	10.11	9.9
Tea and Coffee	1100	7.80	12.8
Tobacco (agr.)	1100	3.91	25.6
Mining	2100-2800	23.49	4.3
Food Products	3111-3122	39.90	1.5
Paper and Paper Products	3411,3412,3419	68.79	15.0
Non-ferrous Metals	3720	107.49	1.8
Wood Products	3310	12.60	7.9
Clothing	3220	13.25	9.5
Leather Products	3231- 3233	16.73	6.0
Other Manufactured Products	386,3902,3903,3909	87.24	0.9
Basic Iron and Steel	3710	54.16	7.5
Printing and Publishing	3420	31.10	3.2

Source: IDC, CSS, Standard Industrial Classification for all Economic Activities

and Coffee, 9.9 for Sugar and 9.2 for Cotton. In agricultural sectors, the lowest employment averages occur in Horticulture (2.5) and Agriculture n.e.c. (1.1). Average employment rate increases in the Mining sector were much lower (4.3) than in the Agricultural sector. In unskilled labour intensive manufacturing sectors such as Paper and Paper Products (15) and Clothing (9.5) average numbers employed were more than double that in the Mining sector. Manufacturing sectors with the lowest employment averages were Other Manufactured Products (0.9), Food Products (1.5) and Non-ferrous Metal Products (0.8).

For the same list of sectors used in Table 18, Table 19 shows the direct requirements from other sectors based on a 1993 input-output matrix for South Africa⁹. The sectors from Table 17 appear in columns across the top of the table. The rows are the sectors from which inputs are required. They are listed as Agriculture, Mining, Manufacturing, Electricity(Gas, Steam), Water Supply and Services. The services

sector is broken down due to its important role in the provision of infrastructure to the economy. The sectors requiring the highest levels of Agricultural inputs are: Wood Products, Food Products and the Agricultural Sector. Sectors with high input levels from the Mining sector are Basic Iron and Steel, Non-ferrous Metals and Other Manufactured Products. Manufacturing sector inputs are highest for Printing and Publishing, Leather Products, Paper and Paper Products and Clothing output. Energy input levels are markedly higher for industries such as Iron and Steel and Non-ferrous Metals and the Mining sector. Service sector inputs are lowest for manufacturing sectors Leather, Food, Clothing and Other Manufactured Products. The level of service sector input is highest for Printing and Publishing and the Mining sector. The main Service sub-sectors, by share of inputs used, are: Wholesale, Retail and Motor Trade Services; Transport and Storage Services; and Other Services. The category Other Services includes Health Services, Other Profit Seeking and

Table 19: Inter-Sectoral Direct Input Requirements for Every R1 of Output

Description	Agriculture	Mining	Other Manufactured Products	Non-ferrous Metals	Basic Iron and Steel	Clothing	Food Products	Paper and Paper Products	Leather Products	Wood Products	Printing and Publishing
Agriculture	0.07	0.00	0.00	0.00	0.00	0.00	0.26	0.03	0.00	0.16	0.00
Mining	0.00	0.00	0.29	0.09	0.11	0.00	0.60	0.00	0.00	0.00	0.00
Manufacturing	0.28	0.21	0.29	0.22	0.14	0.50	0.34	0.47	0.42	0.27	0.35
Electricity, Gas, Steam	0.01	0.06	0.00	0.09	0.08	0.01	0.01	0.02	0.00	0.02	0.01
Water Supply	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Services	0.12	0.13	0.11	0.16	0.14	0.12	0.16	0.21	0.12	0.16	0.21
Construction and	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Civil Engineering											
Wholesale, Retail and Motor Trade	0.07	0.03	0.04	0.03	0.02	0.05	0.05	0.07	0.06	0.05	0.07
Catering and Accommodation Services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transport and Storage	0.02	0.02	0.01	0.03	0.03	0.01	0.03	0.02	0.01	0.02	0.01
Communication	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Financial and Insurance Services	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.01
Real Estate	0.00	0.00	0.01	0.00	0.00	0.02	0.01	0.01	0.01	0.01	0.02
Other Business Services	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.00	0.01	0.02
Other Services	0.02	0.06	0.03	0.08	0.06	0.03	0.05	0.08	0.02	0.05	0.07
Total Intermediate Input	0.49	0.40	0.71	0.56	0.47	0.63	0.77	0.74	0.54	0.61	0.57
Value Added	0.49	0.56	0.30	0.46	0.45	0.39	0.24	0.38	0.46	0.39	0.46
Net Indirect Taxes	0.02	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.00	0.00
Net Transfers	0.00	0.02	-0.01	-0.02	0.08	-0.04	-0.01	-0.13	-0.01	-0.01	-0.02
TOTAL INPUT	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Source: CSS, Input-Output Matrices

Non-profit Seeking Services. (Appendix 2 also contains a matrix of the indirect input requirements.)

3.2.4.3 Potential Comparative Advantage

As discussed previously, the RCA indicator is a static indicator that might omit identifying potential comparative advantage. There are several ways to use the RCA indicator in a such a way that it points to the future, identifying potential comparative advantage. One way might be to consider the RCA indicators that are low negative numbers. For this reason, sectors with comparative advantage indicators up to -0.20 were reported in Table 14. Another way to mitigate this deficiency might be to calculate the "rate of change" in the RCA indicator over time. This indicator was used in the Section 4, but time series data was not available for data used in this section. Another option is to assume that sectors which have a comparative advantage in regional trade will emerge in the future with a comparative advantage in international trade. This

option is discussed at the end of Section 3. Yet another alternative is to review direct investment patterns and compare these with comparative advantage patterns. The assumption would be that if investments are being made in certain sectors, those sectors have been identified by entrepreneurs as having superior return. A problem with the assumptions of this analysis is that there is every possibility that the investment was a response to anticipated growth in the domestic market alone. Given the crudeness of the data, it was not possible to assess this aspect of investment. However, an exercise using investment patterns in this way was performed for South Africa. Unfortunately, information on direct investment was not available for the whole SADC region. If RCA Indicators also gave an indication of potential comparative advantage, one would expect sectors with a comparative advantage to have higher shares of foreign direct investment. From a qualitative point a view, there does seem to be some correlation between these sectors and sectors receiving high investment.

Table 20: Foreign Direct Investment: South Africa (3 years between May 1994 – May 1997)

Sector (ISIC)	Investment (thousands of Rand)	Investment Share (%)	RCA Indicator for South African Intra-Regional Trade: scale 0 - Infinity	RCA Indicator for South African World Trade: scale -1 to +1	RCA Indicator for the SADC and World Trade: scale -1 to +1
Agriculture	11,000	0.04	1.16	0.38	0.55
Mining	378,300	1.33	0.34	0.63	0.78
Manufacturing	11,709,050	41.20	1.02	-0.20	-0.34
Food Products	3,777,850	13.29	1.77	-0.94	0.04
Clothing	391,000	1.38	2.77	0.41	0.59
Paper and Paper Products	266,000	0.94	1.50	0.12	0.02
Printing and Publishing	376,200	1.32	1.65	0.02	-0.11
Industrial Chemicals	787,400	2.77	0.68	-0.41	-0.50
Fabricated Metal Products	454,700	1.60	1.80	-0.72	-0.60
Electrical Machinery	543,400	1.91	0.66	-0.23	-0.37
Motor Vehicle	4,161,500	14.64	1.28	-0.56	-0.77
Other Manufactured Products	951,000	3.35	0.57	0.72	0.70
Energy and oil	4,517,000	15.90	-	-	-
Services	11,796,500	41.50	-	-	-
Services: Construction	671,400	2.36	-	-	-
Services: Retail and Wholesale	157,500	0.55	-	-	-
Services: Wholesale and Retail: hotels	1,962,600	6.91	-	-	-
Services: Transport	142,000	0.50	-	-	-
Services: Telecommunication	6,436,000	22.65	-	-	-
Services: Real Estate	1,361,000	4.79	-	-	-
Business Services: IT	313,600	1.10	-	-	-
Business Services:	9,000	0.03	-	-	-
Consulting and Management					
Business Services: Investment Holdings	500,000	1.76	-	-	-
Other Business Services	243,400	0.86	-	-	-
Unclassified	5,500	0.02	-	-	-
TOTAL	28,417,350	100.00	-	-	-

Source: Business Map 1998

The investment data was for foreign direct investment for the three-year period between 1994 and 1997. During this period, an extremely small proportion of total foreign direct investment was targeted at the agricultural sector (0.04 % of all foreign investment), although South Africa had a comparative advantage in agricultural exports. The share of investment in the mining sector was also small (1.33 %). This might be explained by the long history of capital accumulation in this sector. About forty-one per cent of all investment in the three year period was in Manufacturing and 42 % in what was broadly defined as the Services sector (see Table 19). In the Manufacturing sector, six of the nine sectors sharing the highest levels of investment had positive RCA indicators for South African regional trade. Equally noteworthy is that four of the six manufacturing sectors had a comparative advantage in international trade. Next to Motor Vehicles (15 %), the Food Products sector that had a high comparative advantage in regional trade, received the second highest share of investment (13 %).

A sizeable portion of foreign capital was invested in the Energy sector (16 %). The substantial investments in energy indicate greater infra-structural support for large energy consumers such as the Iron and Steel sector. What is particularly striking is the high level of investment in Services. From Table 19 one saw that Services constitute almost 40 cents of

every R1's worth of output in Printing and Publishing and its share of mining output is also relatively high (over 30 cents).

3.3 Summary of International Comparative Advantage

The following points summarise the main findings of Section 3.2 and the following section attempts to consolidate the results obtained from the examinations of regional and international comparative advantage.

1. At an aggregate level, several, but not all countries in the region have a comparative advantage in agricultural exports to the Rest-of-the World.
2. Again at a broad sectoral level, only Botswana, Namibia and Swaziland have a comparative advantage in manufacturing exports.
3. Comparative Advantage for the region as a whole includes all agricultural sectors except for Maize and Other Grains. There was also a comparative advantage in mining exports for the region. Comparative advantage in mining was particularly high (relative to other sectors) in Angola, Botswana, Zambia and Namibia.
4. Manufacturing sectors in which the SADC has a comparative advantage are: Other Manufactured Products, Non-ferrous Metals, Basic Iron and Steel, Clothing, Food Products, Paper and Paper Products.
5. Manufacturing sectors which look promising in terms of the SADC's overall export structure because they

Figure 4: Integrating Information on Regional and International Comparative Advantage

SADC Sector with International Comparative Advantage	Countries Showing the Highest Ranked Comparative Advantage in Regional Trade	Bi-lateral Trading Partners of Countries with the Highest Ranked RCA's	Individual Countries with Comparative Advantage in International Trade
• Tobacco (agr.)	Malawi/ Zimbabwe	South Africa (SA)/ SA	Malawi, Mozambique, SA, Tanzania, Zimbabwe, Zambia
• Sugar	Mauritius	SA	Malawi, Mauritius, Mozambique, SA, Tanzania, Zimbabwe
• Tea and Coffee	Malawi/ Tanzania	SA/ SA	Malawi, Mauritius, Mozambique, SA, Tanzania, Zambia, Zimbabwe
• Mining	-	-	Angola, Botswana, Namibia, SA, Zambia
• Agriculture n.e.c.	Mozambique	SA	Angola, Malawi, Mozambique, Namibia, SA, Swaziland, Tanzania, Zambia, Zimbabwe
• Other Manufactured Products	Lesotho, Malawi	SA	Botswana, Malawi, Namibia, SA, Swaziland, Zambia, Zimbabwe
• Non-ferrous Metals	Zimbabwe/ Mozambique	SA/ Zimbabwe	Mozambique, SA, Zimbabwe
• Basic Iron and Steel	Tanzania/ Zimbabwe	Malawi/ SA	Mozambique, SA, Tanzania, Zimbabwe
• Clothing	South Africa	Zambia, Lesotho	Mauritius, SA, Zambia, Zimbabwe
• Horticulture	Malawi	SA	Malawi, Mauritius, Tanzania, Zambia, Zimbabwe
• Food Products	Botswana/ Namibia	Mozambique, SA/ SA	Botswana, Lesotho, Malawi, Namibia, Swaziland, Tanzania, Zambia, Zimbabwe
• Paper and Paper Products	Botswana/ Lesotho	Mozambique/ SA	Botswana, Mozambique, South Africa, Swaziland, Zambia, Zimbabwe
• Wood Products	Mozambique/ Zambia	Zimbabwe/ SA	Botswana, Malawi, Mauritius, Swaziland, Tanzania, Zambia
• Printing and Publishing	SA	Namibia	South Africa
• Beverages	Swaziland	SA	Botswana, Malawi, Swaziland

Source: IDC, compiled by author

may have potential comparative advantage, are Leather Products, Wood Products, Plastic Products, Printing and Publishing, and Beverages.

6. The manufacturing sectors employing the highest number of people per \$100 output are Iron and Steel (75), Paper and Paper Products (15) and Wood Products (79).

7. The manufacturing sectors that draw heaviest on other manufactured inputs are Clothing, Paper and Paper Products, Leather, and Printing and Publishing. Those drawing heaviest on services sector inputs are Paper and Paper Products and Printing and Publishing.

8. Finally, more efficient export bases could be created for the sectors of countries who are currently "competitors" in world trade i.e. those who have comparative advantage in common sectors.

3.4 Integrating Findings on Regional and International Comparative Advantage

One interesting way of using the intra-regional and international comparative advantage data would have been to compare country specific RCA indicators. This would have told one how regional export destinations fared in comparison with "the world". However, it was not possible to make this comparison because the different indices were calculated using different formulas. Nevertheless, some interesting observations can be gleaned from a qualitative assessment.

In Figure 4, the region's strongest trading partnerships are juxtaposed against the most competitive countries internationally. The list of sectors in the figure are those for which SADC collectively has an international comparative advantage. It is therefore like a priority listing of trade sectors as if the region's trade were the trade of a single country. In a sense the supplier-purchaser relationships indicated by columns 2 and 3 are examples of the most compatible trading relationships in the region. It may be worth studying different aspects of the intra-regional partnerships to see to what extent they contribute to international competitiveness. If aspects of their relationship do enhance their competitiveness, these might be replicated in for other countries in the region.

Another way of connecting intra-regional comparative advantage analysis to international comparative advantage is by using intra-regional patterns to identify potential international comparative advantage. The following countries had sectors with regional, but not international, comparative advantage. Angola had a comparative advantage in Industrial Chemicals. Botswana had a comparative advantage in Beef. Lesotho had a comparative advantage in Beef, Furniture,

Agriculture n.e.c., and Maize. Malawi had a comparative advantage in Textiles. Mozambique had a comparative advantage in Wood Products, Clothing and Textiles. Namibia had a comparative advantage in Other Chemicals. South Africa had a comparative advantage in Furniture and Beverages. Tanzania had a comparative advantage in Tobacco (manufacturing) and Fabricated Metal Products. Zambia had a comparative advantage in Tobacco (manufacturing) and Other Grains. In summary, the sectors which were not identified with an existing or potential comparative advantage in Table 14 were: Industrial Chemicals, Other Chemicals, Furniture, Fabricated Metal Products, Other Grains, Tobacco (manufacturing) and Textiles.

The trade categories used in this section were broad, making sector generalisations very difficult. In this respect, the data used in the next section are an improvement. However, the regional and international comparative advantage analyses from this section provided certain useful insights. The SADC had a comparative advantage, existing or potential, for sectors that appeared in Table 14. In addition to these, certain of the sectors listed in the preceding paragraph might warrant inclusion in that list. A point of confirmation for the results is that despite different classification schemes, many of sectors identified by the analysis in Section 3 appear to be consistent with those in Section 4.

4. INTERNATIONAL COMPARATIVE ADVANTAGE: SITC

To undertake this exercise, revealed comparative advantage indicators were estimated for SADC trade with each other country in the world for 1995, using United Nations trade data. In addition, average annualised RCA growth rates were calculated for the period, 1986 - 1995. The advantage of the data used in this section is that export categories are much more specific and the data is more up-to-date. A slight disadvantage is that not all the SADC countries were included in the data set. SADC countries covered in this analysis were: Angola, Malawi, Mauritius, Mozambique, South Africa, Zambia and Zimbabwe. The first step was to identify the commodities for which the SADC countries individually and collectively had the highest RCA indicators. Once this was completed, the commodity groups were ranked and presented in descending order by RCA indicators for each of the countries and for SADC as a whole. As in the previous section, the question one was attempting to answer was in which products did SADC have the highest comparative advantage. However, here we have

specific indicators that could identify *potential* comparative advantage. The second step was to identify comparative advantage in trade with each of the SADC's largest trading partners. In this sense, the formulation of comparative advantage describes the advantage an exporter has with regard to his competitors. The list of major trading partners was largely taken from the "1997 Official SADC Trade, Industry and Investment Review". This group included, in

alphabetical order: Brazil, China, France, Germany, Hong Kong, India, Italy, Japan, Portugal, Spain, the UK and the USA.

4.1 The SADC's Top Export Sectors

4.1.1 Individual Countries

Table 21 lists the export sectors with RCA indicators greater than 1, ranked in descending order, and

Table 21 : SADC Countries' Comparative Advantage and Change in Comparative Advantage for All Trade (using the Balassa formula)

Country	Sector/Commodity: all sectors with a comparative advantage	RCA Indicator (1995)	Sector/Commodity: top five sectors	Average Annual RCA Ind. Growth: 1986 - 1995 (%)	Share in Total Country Trade (%)
Angola	Petroleum, petroleum products and related materials	13.12	Electrical machinery, apparatus & appliances n.e.s.	19,422	0.00
	Non-metallic mineral manufactures, n.e.s.	1.54	Non-metallic mineral manufactures, n.e.s.	18,354	4.44
Malawi	Tobacco and tobacco manufactures	102.10	Crude fertilisers and crude materials (excl. coal)	2,341	0.01
	Coffee, tea, cocoa, spices, manufactures thereof	12.91	General industrial machinery & equipment and parts	1,188	0.02
	Unclassified	4.17	Vegetables and fruit	1,053	0.00
	Sugar, sugar preparations and honey	4.02	Cereals and cereal preparations	1,018	0.28
	Crude animal and vegetable materials, n.e.s.	1.50	Miscellaneous edible products and preparations	1,011	0.02
	Crude rubber (including synthetic and reclaimed)	1.45	Non-ferrous metals	893	0.01
	Articles of apparel and clothing accessories	1.30	Road vehicles (incl. air cushion vehicles)	662	0.10
	Sugar, sugar preparations and honey	50.85	Organic chemicals	620	0.01
	Animals, live, zoo animals, dogs, cats etc.	34.68			
	Articles of apparel and clothing accessories	12.11			
Mauritius	Fish, crustaceans, molluscs, preparations thereof	1.94	Petroleum, petroleum products and related materials	20,128	0.01
	Photographic apparatus, optical goods, watches	1.42	Other transport equipment	9,650	1.18
	Textile yarn, fabrics, made-up, related products	1.18	Power generating machinery and equipment	1,186	0.02
	Crude animal and vegetable materials, n.e.s.	1.04	Crude fertilisers and crude materials (excl. coal)	945	0.00
	Fish, crustaceans, molluscs, preparations thereof	26.56	Leather, leather manuf., n.e.s. and dressed fursking	551.2	0.10
	Sugar, sugar preparations and honey	23.54			
	Textile fibres (except wool tops) and their wastes	14.16			
	Unclassified	9.32			
	Oil seeds and oleaginous fruit	8.54			
	Crude fertilisers and crude materials (excl. coal)	7.17			
Mozambique	Animals, live, zoo animals, dogs, cats etc.	4.61	Petroleum, petroleum products and related materials	16,223	0.04
	Coal, coke and briquettes	4.54	Other transport equipment	1,876	0.47
	Pulp and waste paper	2.57	Photographic apparatus, optical goods, watches	1,489	-
	Cork and wood	2.34	Road vehicles (incl. air cushion vehicles)	942	0.21
	Vegetables and fruit	1.77	Non-ferrous metals	448	0.38
	Rubber manufactures, n.e.s.	1.36			
	Feeding stuff for animals, not incl. animal cereals	1.30			
	Metallic ores and metal scrap	1.13			
	Coal, coke and briquettes	10.92			
	Inorganic chemicals	4.31			
South Africa	Metallic ores and metal scrap	4.06	Arms, of war and ammunition thereof	3,473	0.00
	Animals, live, zoo animals, dogs, cats etc.	3.28	Non-metallic mineral manufactures, n.e.s.	146	9.16
	Non-metallic mineral manufactures, n.e.s.	3.19	Animal oils and fats	96	0.03
	Pulp and waste paper	3.15	Animal-vegetable oils-fats, processed, and waxes	90	0.02
	Iron and steel	2.60	Petroleum, petroleum products and related materials	83	2.07
	Crude fertilisers and crude materials (excl. coal)	2.48			
	Vegetables and fruit	1.81			
	Hides, skins and furskins, raw	1.74			
	Non-ferrous metals	1.70			
	Fertilisers, manufactured	1.44			
Zambia	Sugar, sugar preparations and honey	1.31			
	Furniture and parts thereof	1.12			
	Textile fibres (except wool tops) and their wastes	1.11			
	Non-ferrous metals	23.77	Fertilisers, manufactured	1,726	0.11
	Unclassified	17.14	Cork and wood	1,198	0.08
	Crude animal and vegetable materials, n.e.s.	1.03	Sugar, sugar preparations and honey	1,048	0.43
			Leather, leather manuf., n.e.s. and dressed fursking	765	0.12
			Electrical machinery, apparatus & appliances n.e.s.	435	0.36
			Fertilisers, manufactured	7,299	0.39
			Cork and wood	4,091	1.48
Zimbabwe	Tobacco and tobacco manufactures	42.32	Miscellaneous edible products and preparations	3,652	0.41
	Animals, live, zoo animals, dogs, cats etc.	20.50	Rubber manufactures, n.e.s.	928	0.28
	Crude fertilisers and crude materials (excl. coal)	14.20	Paper, paperboard, articles of paper, paper-pulp/board	848	0.83
	Sugar, sugar preparations and honey	9.58			
	Textile fibres (except wool tops) and their wastes	4.29			
	Crude animal and vegetable materials, n.e.s.	4.19			
	Iron and steel	3.28			
	Coffee, tea, cocoa, spices, manufactures thereof	2.58			
	Cereals and cereal preparations	2.34			
	Live animals chiefly for food	2.29			
Non-ferrous metals	2.06				
Leather, leather manuf., n.e.s. and dressed fursking	1.98				
Feeding stuff for animals, not incl. animal cereals	1.72				
Hides, skins and furskins, raw	1.50				
Cork and wood	1.48				
Coal, coke and briquettes	1.15				
Vegetables and fruit	1.13				
Meat and meat preparations	1.07				

Source: IDC

corresponding growth rates for SADC countries. As before, the comparative advantage for most economies lies in the agricultural and mining sectors, or crude manufactured goods relying mostly on these sectors for inputs. As discussed in the previous section, the RCA indicator highlights current comparative advantage but is limited in its ability to point out trends in potential comparative advantage. Another indicator, the annualised growth rate of RCA indicators, might provide an alternative and be able to identify potential comparative advantage. Without having empirical studies to support this assertion, using RCA growth rates in this way remains a hypothetical exercise. Nevertheless, if they do predict potential comparative advantage, it would appear that potential comparative advantage lies in many sectors other than those identified using the RCA indicator¹⁰. Furthermore, these sectors tend to be in higher value-added manufactures.

For reasons of space and uniformity, Table 21 shows all sectors with comparative advantage indicators greater than 1 (note that we are using the Balassa formula), but only the top 5 ranked RCA indicator growth rates. An examination of Table 21 supports the argument that different sectors come to the fore under RCA versus RCA growth rate analyses. It presents data on RCA indicators and annualised growth rates of RCA indicators. As one observes, sectors that have comparative advantage frequently do not appear in the highest ranked growth rate lists. In only a few cases, do high RCA indicator growth rates correspond to high ranked RCA indicators. This occurs in the case of Non-metallic Mineral Manufactures in Angola; Crude Rubber and Clothing in Malawi; Textiles, Coal, Crude fertilisers, Rubber Manufactures, Oil Seeds and Oleaginous Fruit, and Metalliferous Ores and Metal Scrap in Mozambique; Metalliferous Ores and Metal Scrap, Crude and Manufactured Fertilisers, Live Animals (zoo) and Furniture in South Africa; and Coal in Zimbabwe.

It may be useful to evaluate and contrast the comparative advantage indicators displayed in Table 21 with those generated by the analysis in Section 3, using ISIC coded data. In terms of international comparative advantage, several sectors that were identified in Section 3's analysis seem to be listed in Table 21. Once again, many countries have a current comparative advantage in natural resource-intensive products, e.g. Tobacco in Zimbabwe, Fish and Seafood (Agriculture n.e.c.) in Mozambique, or Sugar in

Mauritius. Zimbabwe's and South Africa's advantage in Non-ferrous metals and Iron and Steel appears in Table 21 as well as in the previous section. Mauritius, South Africa, Zambia and Zimbabwe all had a comparative advantage in Clothing exports in Section 3, but in this section, only Mauritius and Malawi have an advantage. In Food Products, only Malawi and Zimbabwe showed a comparative advantage in the previous analysis and in Table 21 "Miscellaneous Edible Products" (South Africa showed a comparative advantage in regional trade only). There appears to have been high growth in comparative advantage in Animal and Vegetable Fats exports for South Africa between 1986 and 1995. Mauritius had a comparative advantage in Textile yarns in both the previous section and Table 21. Only in Table 21 do South Africa and Zimbabwe have comparative advantage in Textile Fibres. In Section 3, South Africa, Mozambique and Zambia had a comparative advantage in Paper Product exports. In Table 21, only South Africa and Mozambique have a comparative advantage in exports of Pulp and Waste Paper. Specific sectors that did not appear in the comparative advantage list for international trade in Section 3 were Fertilisers and Petroleum Products. These categories would correspond roughly to Other Chemicals and Industrial Chemicals under the ISIC coding system. However, they appeared in the regional comparative advantage analysis performed for the ISIC coding system. Given their high growth in comparative advantage, evident in Table 21, it is possible that international exports' markets have grown out of regional trade. Other sectors not yet mentioned, that showed a high growth in comparative advantage in Table 21 were Road Vehicles (Mozambique, Malawi), Other Transport Equipment (Mauritius Mozambique), Electrical Machinery (Zambia and Angola), Power Generating Machinery and Equipment (Mauritius) and Cork and Wood (Zambia and Zimbabwe).

4.1.2 *Collective International Trade*

To calculate comparative advantage for SADC as a region, country trade was grouped together. The list of commodities in Table 22 consists of those with RCA indicators greater than 1, as well as a few regionally important sectors with RCA indicators less than 1, namely, gold (non-monetary), leather and clothing (as was done in Section 3). The export sectors showing the highest comparative advantage for the SADC included a cross-section of agricultural, mining and

manufacturing sectors. However, even the manufacturing sectors that were identified were largely agricultural or mineral resource-based, e.g. Pulp and Waste Paper, Iron and Steel. Given the size of the South African economy (reflected by the country's share of SADC exports, about 60

%), one would expect the RCA indicators for the SADC's international trade to be heavily influenced by it. A comparison of the list of sectors with comparative advantage in South Africa's trade (Table 21) with those in all SADC's trade (Table 22) seems to support this idea. The

Table 22 : Comparative Advantage for Collective SADC Trade (1995)

Rank	SITC No.	Classification Description	RCA (1995)	Average Weighted Growth in RCA (%; 1986 - 1995)	Rank of Average Weighted Growth in RCA	Rank of Growth in Share of World Trade
1	32	Coal, coke and briquettes	11.08	6.72	48	70
2	94	Animals, live, zoo animals, dogs, cats etc.	6.73	8.57	15	12
3	06	Sugar, sugar preparations and honey	5.19	-0.42	65	35
4	12	Tobacco and tobacco manufactures	4.70	4.58	55	25
5	52	Inorganic chemicals	4.34	2.24	42	64
6	28	Metalliferous ores and metal scrap	4.16	2.89	59	52
7	27	Crude fertilizers and crude materials (excl. coal)	3.56	5.17	11	65
8	66	Non-metallic mineral manufactures, n.e.s.	3.49	9.65	7	28
9	25	Pulp and waste paper	3.19	9.03	43	13
10	68	Non-ferrous metals	2.92	-2.33	66	29
11	67	Iron and steel	2.84	5.11	54	48
12	33	Petroleum, petroleum products and related materials	2.07	3.78	38	59
13	05	Vegetables and fruit	1.93	2.13	61	45
14	21	Hides, skins and furskins, raw	1.87	5.83	52	67
15	26	Textile fibres (except wool tops) and their wastes	1.59	1.91	62	60
16	56	Fertilizers, manufactured	1.58	45.36	9	63
17	82	Furniture and parts thereof	1.19	32.28	18	15
18	03	Fish, crustaceans, molluscs, preparations thereof	1.11	5.96	51	44
19	61	Leather, leather manuf., n.e.s. and dressed furskin	0.99	5.74	53	21
20	97	Gold, non-monetary (excluding gold ores and concentrates)	0.91	2172.02	1	55
21	84	Articles of apparel and clothing accessories	0.89	7.14	46	22

Source: IDC

Table 23: Export Sectors in SADC With the Highest Growth in RCA's (average 1986 - 1995)

Rank	SITC No.	Sector/Commodity	Average RCA Growth (%)	Rank of Growth in the Share of World Trade	Rank of Share of World Trade
1	97	Gold, non-monetary (excluding gold ores and concentrates)	2172.02	55	58
2	95	Arms, of war and ammunition thereof	1263.45	62	49
3	41	Animal oils and fats	128.17	53	46
4	43	Animal-vegetable oils-fats, processed, and waxes	86.94	10	48
5	04	Cereals and cereal preparations	65.39	56	23
6	66	Non-metallic mineral manufactures, n.e.s.	59.65	28	15
7	00	Live animals chiefly for food	52.92	61	61
8	56	Fertilizers, manufactured	45.36	63	56
9	34	Gas, natural and manufactured	45.21	69	34
10	27	Crude fertilizers and crude materials (excl. coal)	45.17	65	52
11	78	Road vehicles (incl. air cushion vehicles)	42.22	46	1
12	09	Miscel edible products and preparations	41.94	6	62
13	11	Beverages	38.85	26	22
14	94	Animals, live, zoo animals, dogs, cats etc.	38.57	12	47
15	02	Dairy products and birds' eggs	38.24	39	28
16	55	Essential oils & perfume mat.; toilet-cleansing mat	32.87	7	30
17	82	Furniture and parts thereof	32.28	15	33
18	59	Chemical materials and products, n.e.s.	32.13	27	24
19	74	General industrial machinery & equipment, and parts	29.62	23	5
20	81	Sanitary, plumbing, heating and lighting fixtures	29.25	11	50
21	62	Rubber manufactures, n.e.s.	27.86	30	31
22	79	Other transport equipment	27.80	50	21
23	76	Telecommunications & sound recording apparatus	27.03	19	6
24	72	Machinery specialised for particular industries	24.42	40	8
25	73	Metalworking machinery	24.40	53	40

Source: IDC

only sectors included in the SADC listing, but excluded from the South African listing were Tobacco, Petroleum and Petroleum Products and Fish and Crustaceans.

Table 22 also shows each sector's RCA indicator growth rate and its ranking. The ranks range from 1 to 67 where 1 indicates the sector with the highest growth rate. In a few cases, sectors with a comparative advantage have also shown improvements in comparative advantage. These sectors are the same as those mentioned in the country specific analysis and include: furniture, fertilisers (crude and manufactured), live animals (zoo), Non-metallic Mineral Manufactures, and gold (non-monetary). The mean rank of RCA growth indices for the RCA indicators in Table 22 for SADC was 38. As the mean rank (38) of the RCA growth indicator was averaged from the top 20 sectors, one would expect the mean to be closer to 20 if high RCA's and high growth rates were correlated. The conclusion to be drawn is that sectors in which comparative advantage grew the fastest between 1986 and 1995 were not the same as those for which the region had a comparative advantage in 1995 (see Appendix 3 for complete listing).

Table 23 on the previous page shows the top 25 ranked RCA growth indicators for collective SADC trade. The high growth rate observed for the first sector, Arms of War, might be explained by the fact that trade in arms was not previously

reported. The high growth rate observed for the second ranked sector, Gold (non-monetary), might be explained by an improvement in the extent of beneficiation in that sector, possibly following the drive for greater beneficiation that was started in the late 1980's. In contrast to the sectors with comparative advantage identified using the RCA indicator, the RCA growth indicator seems to highlight higher value-added industries. Clearly, while increases in RCA indicators may highlight emerging areas of comparative advantage, trade strategists and policy makers still need to evaluate their country's comparative advantage in terms of world trade trends. For this reason, the list of the highest ranked RCA growth indicators shown in Table 23 is complemented by information on the changing patterns of world trade. The data show a mixture of high and low rankings for the sectors listed. World trade share ranks range from 1 to 71.

4.2 Comparative Advantage with Major Trading Partners

An exploration of comparative advantage in product groups should be supplemented by an analysis of the pattern of comparative advantage that exists between SADC and its major trading partners. Table 24 shows the ranking of the average RCA indicators for the SADC's major trading partners. The RCA indicators for all trade were used in the calculation. China (and Hong

Table 24 :Ranking of the Average RCA's for the SADC's Major Trading Partners (1995)

Trading Partner	Average Weighted RCA: 1995	Rank of Average Weighted RCA	Average Weighted Growth in RCA (%: 1986-1995)	Rank of Average Weighted Growth in RCA	Share of All Exports (%)
Brazil	18.65	8	1,182.90	1	0.77
China	43.48	4	881.43	2	1.29
France	15.71	10	369.35	5	2.97
Germany	13.82	11	192.01	7	6.42
Hong Kong	44.29	3	166.56	8	1.55
India	19.90	7	640.27	3	0.60
Italy	25.88	5	155.50	9	3.36
Japan	6.44	12	417.92	4	5.76
Portugal	87.45	1	148.14	10	0.61
Spain	53.17	2	99.69	11	2.06
UK	24.42	6	196.03	6	10.43
USA	17.37	9	34.41	12	12.15
All trading partners above	-	-	-	-	47.94

Source: IDC; Author's estimation

Kong), Portugal and Brazil were ranked higher than trading partners such as India, the majority of the European Union partners, the United States and Japan. The higher levels of RCA indicators with these countries indicate that SADC has greater differentials in comparative advantage to exploit with these countries. The average growth rates of RCA's over the decade, 1986 - 1995, were highest for trade with China, Hong Kong and Brazil, while the lowest were with the UK, Germany and the United States. An analysis of the average RCA indicator for trade with different world regions, based on a very small sample consisting of the top 20 RCA indicators for all trade, found similar patterns (see Table 25).

Table 26 presents the top five ranked sectors for each of the SADC's trading partners, the RCA indicator for trade with a specific partner and the RCA indicator and its rank for all trade. Although, the SADC does have a comparative advantage with the specific countries for most sectors listed, there are a few exceptions. One of the exceptions is Gas, traded with Brazil. Its comparative advantage with respect to Brazil is the highest of all product groups traded with that country, but with respect to world trade the RCA indicator is only 0.20. Other exceptions are the export of Live Animals for Food to China, and Leather and Leather Products to Italy and Japan.

In Table 26, the highest ranked items with the greatest share of total exports to the respective trading partner are as follows. In Brazil, Coal exports at 11 % of total exports, have the highest share. In the case of China, exports of Metalliferous Ores are the highest at 28 % of exports. With France, Coal (6 %) and Metalliferous Ores (5 %) have the highest shares in the top comparative advantage listing. In Germany's case, Furniture has the highest share (12 %). In Hong Kong, Coal has the highest share (13 %). For exports to India, Iron and Steel have the highest share (23 %), followed by Inorganic Chemicals (18 %). For Italy, Inorganic Chemicals have the highest share of those listed (16 %). For Japan, Non-ferrous Metals (22 %), followed by Iron and Steel (18 %), have the highest shares. For Portugal (34 %) and Spain (29 %), Coal has the highest share of exports. The sector with the second highest share in Portugal is Sugar (21 %), while in Spain it is Fish and Sea Food (18 %). In the UK's case, Sugar exports have the highest share (10 %). In the USA, Petroleum exports have the highest share by a large margin (55 %).

The highest growth rates of RCA indicators for the major trading partners, and the ranking of the same for all trade, are shown in Table 27. Once again, there is a definite contrast between the sectors identified with existing comparative advantage (using RCA indicators) and those with improving comparative advantage (leading ranked RCA growth indicators). The main characteristic

Table 25: The Ranking of Average RCA for the SADC 's Trade with Countries in Different Regions of the World (1995)

Region	Angola	Malawi	Mauritius	Mozambique	South Africa	Zambia	Zimbabwe	All
East Asia and Pacific	4	3	3	1	1	4	3	1
West Africa	8	5	1	9	5	9	5	2
Eastern Europe and Central Asia	1	8	4	4	6	2	10	3
East Africa	7	4	7	8	4	8	8	4
North Africa	3	9	6	7	9	10	4	5
Latin America	2	1	10	3	3	1	2	6
Rest of Europe	6	6	5	5	7	5	6	7
Middle East	10	7	2	6	2	7	7	8
South Asia	9	10	8	10	8	6	9	9
Canada&US	5	2	9	2	10	3	1	10
% of Sample with RCA for all trade > 1	35	95	45	65	90	55	100	85

Source: IDC, World Bank, World Development Report 1996; Author's estimation

Table 26: Products with Highest RCA in Trade with Major Trading Partners (1995)

Destination/ Trading Partner	Classification Description	RCA Indicator for Country	RCA Indicator for All SADC Trade	RCA Rank Indicator for All SADC Trade	Share of Export to that Country (%)
Brazil	Gas, natural and manufactured	28.22	0.20	53	8.63
	Tobacco and tobacco manufactures	18.92	4.70	5	0.87
	Iron and steel	18.63	2.84	12	7.92
	Inorganic chemicals	18.46	4.34	6	7.56
	Coal, coke and briquettes	15.60	11.08	1	11.30
China	Animals, live, zoo animals, dogs, cats etc.	205.69	6.73	3	1.44
	Live animals chiefly for food	126.17	0.22	50	0.77
	Tobacco and tobacco manufactures	38.08	4.70	5	9.89
	Metalliferous ores and metal scrap	32.86	4.16	7	27.53
France	Coal, coke and briquettes	30.04	11.08	1	0.55
	Coal, coke and briquettes	40.58	11.08	1	6.35
	Animals, live, zoo animals, dogs, cats etc.	28.69	6.73	3	0.16
	Textile fibres (except wool tops) and their wastes	21.02	1.59	16	3.30
Germany	Metalliferous ores and metal scrap	17.22	4.16	7	5.00
	Sugar, sugar preparations and honey	14.77	5.19	4	1.91
	Coal, coke and briquettes	43.15	11.08	1	5.64
	Tobacco and tobacco manufactures	28.45	4.70	4	4.59
Hong Kong	Furniture and parts thereof	12.77	1.19	18	11.82
	Metalliferous ores and metal scrap	11.11	4.16	7	5.07
	Textile fibres (except wool tops) and their wastes	10.56	1.59	16	1.50
	Coal, coke and briquettes	145.57	11.08	1	12.98
India	Inorganic chemicals	41.14	4.34	6	7.31
	Pulp and waste paper	28.58	3.19	10	0.24
	Metalliferous ores and metal scrap	18.75	4.16	7	3.68
	Fertilizers, manufactured	17.46	1.58	17	0.05
Italy	Pulp and waste paper	31.37	3.19	10	11.68
	Inorganic chemicals	15.07	4.34	6	17.70
	Iron and steel	9.46	2.84	12	23.02
	Metalliferous ores and metal scrap	8.74	4.16	7	8.21
Japan	Crude fertilizers and crude materials (excl. coal)	8.29	3.56	8	5.07
	Inorganic chemicals	45.90	4.34	6	15.85
	Coal, coke and briquettes	44.77	11.08	6	11.66
	Hides, skins and furskins, raw	11.16	1.87	15	4.68
Portugal	Crude fertilizers and crude materials (excl. coal)	10.34	3.56	8	2.57
	Leather, leather manuf., n.e.s. and dressed furskins	8.88	0.99	21	5.45
	Iron and steel	20.24	2.84	12	18.08
	Sugar, sugar preparations and honey	17.32	5.19	4	2.23
Spain	Leather, leather manuf., n.e.s. and dressed furskins	17.03	0.99	21	1.39
	Non-ferrous metals	16.67	2.92	11	21.94
	Coal, coke and briquettes	11.28	11.08	1	8.97
	Coal, coke and briquettes	100.82	11.08	1	34.49
UK	Sugar, sugar preparations and honey	81.38	5.19	4	20.49
	Animals, live, zoo animals, dogs, cats etc.	25.62	6.73	3	0.13
	Textile fibres (except wool tops) and their wastes	24.27	1.59	16	12.20
	Tobacco and tobacco manufactures	21.62	4.70	5	2.09
USA	Coal, coke and briquettes	103.24	11.08	1	28.55
	Fish, crustaceans, molluscs, preparations thereof	15.68	1.12	19	18.44
	Crude fertilizers and crude materials (excl. coal)	14.22	3.56	8	2.21
	Iron and steel	6.63	2.84	12	10.61
UK	Tobacco and tobacco manufactures	4.96	4.70	5	1.53
	Sugar, sugar preparations and honey	43.15	5.19	4	10.03
	Animals, live, zoo animals, dogs, cats etc.	40.32	6.73	3	0.09
	Non-metallic mineral manufactures, n.e.s.	26.34	3.49	9	33.98
USA	Tobacco and tobacco manufactures	14.68	4.70	5	1.97
	Metalliferous ores and metal scrap	10.90	4.16	7	3.68
	Tobacco and tobacco manufactures	18.57	4.70	5	0.90
	Inorganic chemicals	15.904	4.34	6	4.44
USA	Petroleum, petroleum products and related materials	14.90	2.07	13	54.96
	Hides, skins and furskins, raw	11.17	1.87	15	0.17
	Non-ferrous metals	10.77	2.92	11	9.30

Source: IDC

Table 27: Growth Rates of RCA's for the Major Trading Partners (average 1986 - 1995)

Destination	Description	RCA Rank Indicator Growth Rate	RCA Indicator Rank - all trade
Brazil	Metalworking machinery	26,266.67	26
	Other transport equipment	2,416.75	23
	Professional,scientific & controlling instruments	1,800.20	37
	Power generating machinery and equipment	1,550.70	32
	Road vehicles (incl. air cushion vehicles)	893.58	12
China	Iron and steel	9,692.56	54
	Pulp and waste paper	5,819.99	43
	Miscellaneous manufactured articles,n.e.s.	2,084.94	36
	Non-metallic mineral manufactures,n.e.s.	566.10	7
	Petroleum,petroleum products and related materials	538.39	38
France	Animal oils and fats	1,940.47	4
	Other transport equipment	1,264.80	23
	Oil seeds and oleaginous fruit	1,251.67	49
	Fertilizers,manufactured	730.84	9
	Crude rubber (including synthetic and reclaimed)	436.91	35
Germany	Crude rubber (including synthetic and reclaimed)	869.64	35
	Cereals and cereal preparations	795.35	6
	Gold, non-monetary (excluding gold ores and concentrates)	278.73	1
	Other transport equipment	270.33	23
	Furniture and parts thereof	205.18	18
Hong Kong	Fertilizers,manufactured	3,585.30	9
	Pulp and waste paper	1,022.00	43
	Articles of apparel and clothing accessories	884.59	46
	Arms,of war and ammunition therefor	874.10	3
	Essential oils & perfume mat.;toilet-cleansing mat	783.22	17
India	Road vehicles (incl. air cushion vehicles)	1,315.80	12
	Iron and steel	825.11	54
	Crude rubber (including synthetic and reclaimed)	808.52	35
	Telecommunications & sound recording apparatus	411.57	24
	Petroleum,petroleum products and related materials	377.07	38
Italy	Fixed vegetable oils and fats	10,840.22	64
	Other transport equipment	868.19	23
	Essential oils & perfume mat.;toilet-cleansing mat	467.25	17
	Inorganic chemicals	336.21	42
	Meat and meat preparations	286.81	58
Japan	Fertilizers, manufactured	2364.68	9
	Cork and wood	1,341.33	28
	Dyeing,tanning and colouring materials	1,157.37	47
	Feeding stuff for animals,not incl.unmil.cereals	738.62	60
	Other transport equipment	375.18	23
Portugal	Petroleum,petroleum products and related materials	1,713.10	38
	Essential oils & perfume mat.;toilet-cleansing mat	762.14	17
	Non-metallic mineral manufactures,n.e.s.	573.40	7
	Furniture and parts thereof	278.47	18
	Telecommunications & sound recording apparatus	255.56	24
Spain	Feeding stuff for animals,not incl.unmil.cereals	2,118.06	60
	Furniture and parts thereof	1,142.63	18
	Dyeing,tanning and colouring materials	1,139.13	47
	Metalworking machinery	1,014.61	26
	Cereals and cereal preparations	986.19	6
UK	Dairy products and birds'eggs	1,819.26	16
	Cereal and cereal preparations	499.97	9
	Non-metallic mineral manufactures,n.e.s.	307.52	7
	Live animals chiefly for food	277.46	8
	Animals,live,zoo animals,dogs,cats etc.	228.73	15
USA	Oil seeds and oleaginous fruit	288.24	49
	Animal-vegetable oils-fats,processed,and waxes	259.56	5
	Textile fibres (except wool tops) and their wastes	231.60	62
	Crude rubber (including synthetic and reclaimed)	227.76	35
	Beverages	221.52	14

Source: IDC

4.3 An Exercise in Identifying Potential Comparative Advantage in International Trade

The aim of this section is to summarise both current and potential comparative advantage patterns for the SADC. The best way to do this is not to use RCA indicators alone, but to incorporate indicators of potential comparative advantage and world trade trends. These additional features are incorporated here through the RCA indicator's growth rate and the growth of the sector's share in world trade. The sectors with the highest growth in share of world trade are listed in Table 28. The top five commodities include Electrical machinery, Office machinery, Miscellaneous edible products, Essential oils and Medicinal products (these five sectors together account for about 15 % of world trade).

As can be seen in Table 28, the SADC has a comparative advantage in very few sectors, when comparative advantage is measured using the RCA indicator alone. For this reason, a different expression of comparative advantage was developed and is presented in Table 29. This expression is what is termed a 'composite' comparative advantage indicator, derived from a weighted summation of the

standardised RCA indicator (0.45), the natural log of the RCA indicator growth rate¹¹ (0.35), and the growth in share of world trade (0.25). The standardised scale that was developed ranged from 1 to 10.

Several of the sectors that dominated comparative advantage when RCA indicators were used still rank as priorities under the new composite RCA indicator listing. However, given the changes in comparative advantage in different sectors over the decade 1986 - 1995 and the rate of growth of certain world markets, the composite indicator suggests that the SADC has a potential comparative advantage in several additional sectors. Several higher value-added sectors, also complemented by the region's comparative advantage in minerals and agriculture, include gold (non-monetary), edible products, essential oils, medicinal products, chemical materials, processed animal oils and waxes and cereal preparations. All in this list, except for gold and cereal preparations, are sectors whose shares of world trade have averaged positive growth rates over the period 1986 to 1995. Other sectors which bear consideration are those for which the SADC's current comparative advantage is small, but which show potential based on their high growth in world share of trade. They

Table 28: World Trade Growth, Share and Growth in Share by Commodities

Description	Growth in Share of World Trade (% , average 1986 - 1995)	Share of World Trade (%)	SADC's Current Comparative Advantage (+)	Rank of SADC's Growth in RCA Indicator Rank
Machinery and Transport Equipment	17.32	-	-	-
Electrical machinery, apparatus & appliances n.e.s.	6.58	8.00	-	31
Office machines & automatic data processing equip.	4.60	5.00	-	40
Miscel. edible products and preparations	4.20	-	-	13
Essential oils & perfume mat.; toilet-cleansing mat	4.01	1.00	-	17
Medicinal and pharmaceutical products	3.51	1.00	-	29
Travel goods, handbags and similar containers	3.48	-	-	50
Animal-vegetable oils-fats, processed, and waxes	3.44	-	-	5
Sanitary, plumbing, heating and lighting fixtures	3.18	-	-	21
Animals, live, zoo animals, dogs, cats etc.	2.72	-	+	15
Pulp and waste paper	2.57	1.00	+	43
Artif. resins, plastic mat., cellulose esters/ethers	2.54	2.00	-	33
Furniture and parts thereof	2.51	1.00	+	18
Miscellaneous manufactured articles, n.e.s.	2.34	4.00	-	33
Fixed vegetable oils and fats	2.33	-	-	64
Cork and wood manufactures (excl. furniture)	2.32	1.00	-	39
Telecommunications & sound recording apparatus	2.32	4.00	-	24
Paper, paperboard, artic. of paper, paper-pulp/board	1.69	2.00	-	44
Leather, leather manuf., n.e.s. and dressed furskisking	1.58	-	+-	53
Articles of apparel and clothing accessories	1.51	3.00	+-	46
General industrial machinery & equipment, and parts	1.37	4.00	-	20

Source: IDC

Table 29: Composite RCA Indicators for SADC Exports (1995)

Rank	SITC No.	Description	RCA Indicator (1995)	RCA Indicator Growth: 1986 - 1995 (%)	World Trade Share Growth (%)	Ln of RCA Indicator Growth (%)	RCA Composite Indicator	SADC Comparative Advantage (+)
1	94	Animals, live, zoo animals, dogs, cats etc	6.73	38.57	2.72	3.65	4.79	+
2	32	Coal, coke and briquettes	11.08	6.72	-7.50	1.90	4.29	+
3	97	Gold, non-monetary (excluding gold ores and concentrates)	0.91	2,172.02	-2.46	7.68	3.51	-
4	66	Non-metallic mineral manufactures, n.e.s.	3.49	59.65	0.98	4.09	3.42	+
5	12	Tobacco and tobacco manufactures	4.70	4.58	1.22	1.52	2.78	+
6	25	Pulp and waste paper	3.19	9.03	2.57	2.20	2.67	+
7	95	Arms, of war and ammunition therefor	0.02	1,263.45	-4.25	7.14	2.65	-
8	43	Animal-vegetable oils-fats, processed, and waxes	0.19	86.94	3.44	4.47	2.61	-
9	09	Miscel. edible products and preparations	0.73	41.94	4.20	3.74	2.60	-
10	82	Furniture and parts thereof	1.19	32.28	2.51	3.47	2.43	+
11	27	Crude fertilizers and crude materials (excl. coal)	3.56	45.17	-5.49	3.81	2.39	+
12	77	Electrical machinery, apparatus & appliances n.e.s.	0.10	18.77	6.58	2.93	2.33	-
13	55	Essential oils & perfume mat.; toilet-cleansing mat	0.36	32.87	4.01	3.49	2.32	-
14	06	Sugar, sugar preparations and honey	5.19	-0.42	0.30	0.00	2.15	+
15	11	Beverages	0.78	38.83	1.14	3.66	2.15	+
16	52	Inorganic chemicals	4.34	12.24	-5.25	2.50	2.15	+
17	41	Animal oils and fats	0.60	128.17	-2.36	4.85	2.12	-
18	81	Sanitary, plumbing, heating and lighting fixtures	0.19	29.25	3.18	3.38	2.08	-
19	59	Chemical materials and products, n.e.s.	0.61	32.13	1.02	3.47	1.98	-
20	54	Medicinal and pharmaceutical products	0.11	20.31	3.51	3.01	1.93	-
21	74	General industrial machinery & equipment, and parts	0.32	29.62	1.37	3.39	1.87	-
22	76	Telecommunications & sound recording apparatus	0.07	27.03	2.32	3.30	1.87	-
23	28	Metalliferous ores and metal scrap	4.16	2.89	-2.13	1.06	1.87	+
24	04	Cereals and cereal preparations	0.78	65.39	-2.59	4.18	1.85	-
25	75	Office machines & automatic data processing equip	0.05	12.65	4.60	2.54	1.84	-

Source: ITC, Author's estimations

Table 30: Summary of Sectors with Comparative Advantage for ISIC and SITC Coded Data

Sector (ISIC)	RCA Indicator (average 1991 -1993 trade)	Commodity (SITC)	RCA Indicator (1995)
Tobacco (agr.)	0.97	Coal, coke and briquettes	11.08
Sugar	0.91	Animals, live, zoo animals, dogs, cats etc.	6.73
Tea and Coffee	0.82	Sugar, sugar preparations and honey	5.19
Mining	0.78	Tobacco and tobacco manufactures	4.70
Agriculture n.e.c.	0.74	Inorganic chemicals	4.34
Other Manufactured Products	0.70	Metalliferous ores and metal scrap	4.16
Non-ferrous Metals	0.68	Crude fertilizers and crude materials (excl. coal)	3.56
Basic Iron and Steel	0.66	Non-metallic mineral manufactures, n.e.s.	3.49
Clothing	0.59	Pulp and waste paper	3.19
Cotton	0.30	Non-ferrous metals	2.92
Horticulture	0.27	Iron and steel	2.84
Food Products	0.04	Petroleum, petroleum products and related materials	2.07
Paper and Paper Products	0.02	Vegetables and fruit	1.93
Leather Products	-0.08	Hides, skins and furskins, raw	1.87
Wood Products	-0.09	Textile fibres (except wool tops) and their wastes	1.59
Printing and Publishing	-0.11	Fertilizers, manufactured	1.58
Beverages	-0.18	Furniture and parts thereof	1.19
		Fish, crustaceans, molluscs, preparations thereof	1.11
		Leather, leather manuf., n.e.s. and dressed furskins	0.99
		Gold, non-monetary (excluding gold ores and concentrates)	0.91
		Articles of apparel and clothing accessories	0.89

Source: ITC, Section 3 and Section 4

are Office Machines and Automatic Data Processing Equip., Electrical Machinery, Apparatus & Appliances (n.e.s.) and Sanitary, Plumbing, Heating and Lighting Fixtures.

5. SUMMARY AND RECOMMENDATIONS

This study has presented a large quantity of data on the trading patterns of SADC countries. Hopefully, the results of the revealed comparative advantage analyses will provide information that is useful for trade strategy and future trade and industrial research. In summarising the work, the most important points to cover in this section were judged to be the following: a summary of the pattern of the SADC's existing comparative advantage identified in Section 3 and 4; a summary of the sectors recommended for further research; implications for the development of a regional industrial strategy; and finally, further uses for the RCA analysis.

5.1 Existing Comparative Advantage: ISIC and SITC coded data

Table 30 presents a summary of the sectors which emerged from both analyses as having a comparative

advantage for the SADC's international trade. It summarises the RCA indicators from the analyses of both the ISIC and SITC data sets. The first point to be made is that the cut-off points of 0 and 1 were not strictly adhered to. The area around the cut-off points were considered grey areas and, to be conservative, sectors were included from either side. The second point is a qualification of the presentation below. For, while comparative advantage for most SADC countries is in agricultural and mineral resource intensive products, there has been a growth of comparative advantage in higher value-added manufacturing products since 1986.

5.2 Sectors Recommended for Further Research

In recommending sectors for further research in this section, it was necessary to leave out many of the details accompanying their presentation in this paper. There was no easy solution to this problem as one is caught between presenting a succinct summary of the results and conclusions, while at the same time not wanting to lose detail. For more detail, readers would be advised to consult the relevant sections of the paper. In addition, much of the choice between sectors comes down to a qualitative analysis that would require more information than it was possible to cover in the time allocated to the research. This detail will form part of the work for the main project.

Figure 5: Sectors Recommended for Further Research (1998)

ISIC Coded Sectors	SITC Coded Sectors
Agriculture n.e.c.	Animal-vegetable oils-fats,processed.and waxes
Beverages	Animal oils and fats
Clothing	Animals, live, zoo animals, dogs, cats etc.
Fabricated Metal Products	Arms of war and ammunition therefore
Food Products	Beverages
Furniture	Cereals and cereal preparations
Industrial Chemicals	Chemical materials and products, n.e.s.
Other Chemicals	Coal, coke and briquettes
Other Grains	Crude fertilizers and crude materials (excl. coal)
Other Manufactured Products	Electrical machinery, apparatus & appliances n.e.s.
Paper and Paper Products	Essential oils & perfume mat.; toilet-cleansing mat
Plastic Products	Furniture and parts thereof
Printing and Publishing	General industrial machinery & equipment, and parts
Printing and Publishing	Gold, non-monetary (excluding gold ores and concentrates)
Textiles	Inorganic chemicals
Tobacco (manufacturing)	Medicinal and pharmaceutical products
Wood Products	Metaliferous ores and metal scrap
	Miscel. edible products and preparations
	Non-metallic mineral manufactures, n.e.s.
	Office machines & automatic data processing equip.
	Pulp and waste paper
	Sanitary, plumbing, heating and lighting fixtures
	Sugar, sugar preparations and honey
	Telecommunications & sound recording apparatus
	Tobacco and tobacco manufactures

Source: Author's formulation

It is recommended that the sectors listed in Figure 5 are researched in greater depth in the process of designing an industrial strategy for the SADC region. They emerged from analysing both data sets, and are listed by data set in alphabetical order. Their selection was based on factors such as the RCA indicators, regional trade patterns, their employment potential, growth in comparative advantage, and growth in the share of world trade. The SITC coded list was taken directly from Table 29. The summary of sectors in Figure 5 is for the SADC as a region, so it is possible that sectors important to a particular country might not be listed here. In this case, it would be appropriate to consult the country-specific data that was provided in Section 4, but were not repeated here for lack of space.

5.3 Some Implications for a Regional Industrial Strategy

All countries in the region share a comparative advantage in agricultural exports with the rest-of-the-world. Several countries show significantly higher comparative advantage rates in mining sector exports over other exports. In general, the comparative advantage in certain light manufacturing sectors is promising, but the region's comparative advantage in technology resource-intensive manufacturing sectors (including service sectors, apart from tourism) is especially weak. In the light of these comparative advantage patterns, one policy option might be to maintain and consolidate high levels of exports in natural resource-intensive exports, i.e. existing strengths, while gradually developing more technology or human capital resource-intensive sectors. However, even the consolidation of existing strengths should be done with a view to adding value. If the skills to do so do not reside in the country where the natural resources are, the regional industrial strategy should facilitate their match across countries in the region. Examples of activities which would add value to agricultural sector exports would be exporting dried flower marketed as being unique to Southern Africa; making plant extractions; improving the quality of products (e.g. size of Perlemoen); or improving the reliability of the delivery system (e.g. the delivery of fresh flowers over night).

Another policy option might be to build a common industrial framework on the basis of similar concerns. For example, of all the agricultural sectors, comparative advantage in "Agriculture-Not-elsewhere classified" includes the largest number of SADC countries and it has the highest share for all agricultural sectors in international trade. The

category includes resources such as forestry and fishing. Given that the continued prosperity of many SADC countries is tied to a common habitat, it might be worth exploring regional collaboration on common production and environmental policies for this sector.

An important issue which the above analysis failed to consider is whether the promotion of any two sectors is internally consistent. One example of a potentially inconsistent plan would be the simultaneous promotion of the Gas and Fishing industries. Such conflicts already have a history within South Africa. Fish are peculiar to particular habitats and in those areas, fishing trawlers require fairways clear of obstruction to operate efficiently. Due to sea-based mining, the number of fairways off the southern South African coast has decreased dramatically in recent years. But innovations such as over-trawlable pipelines may go some way to mitigate the conflict.

5.4 Further Research Using the Revealed Comparative Advantage Approach

The use of the revealed-comparative advantage approach has not been totally exhausted for the SADC by the work covered in this study. In particular, the changing pattern of comparative advantage in specific trading partnerships warrants more research. A contrast of the growth rates in RCA's between the USA and Brazil (see Table 27) shows that growth in the comparative advantage of SADC countries with respect to Brazil covers more technology resource intensive sectors while that with the USA is biased towards agricultural and mineral resource-intensive sectors. The analysis of growth in comparative advantage for specific trading partnerships suggested that there might be a convergence between the type of commodities traded with non-traditional trading partners, and the sectors to target for development.

Finally, another area for research using RCA's would be a more in-depth analysis of trade in services.

5.5 In Conclusion

The process of developing an industrial strategy for the region is a huge task. Its development will require skill and insight. It will also in all likelihood need to be developed gradually as a small proportion of the total trade occurs regionally (about 20 %). This paper provides background data on trade and an analysis of comparative advantage for the region that aims to help in this process. Both intra-regional and

international comparative advantage patterns were analysed. Apart from the analyses conducted here, the data in the paper could be used to answer country and sector specific inquiries. A summary of all the analyses suggests that one of the goals of trade strategy should be to wean countries off existing dependencies on certain products and trading partnerships that have developed over the years. Their existing patterns of comparative advantage are by no means the recommended blue-print for future trade and industrialisation. The SADC economies are unnecessarily reliant on international trade in natural resource-based products to which little value has been added. In addition, the established trading partnerships that have developed between countries in the region and the rest-of-the-world seem to perpetuate this tendency. In contrast, intra-regional trade seems to be encouraging the emergence of industrial, higher value-added sectors. The way forward that was adopted as a framework in this report, was to identify areas of potential comparative advantage. These analyses showed that growth in the comparative advantage of manufacturing sector exports has been occurring consistently across all countries in the region. An industrial strategy should aim to encourage these trends in the sectors identified in this paper, while maintaining stability in foreign exchange earnings. From the analysis of average and potential comparative advantage of trade with different trading partners, it was concluded that trade partnerships with other less-developed countries, like ourselves, should also be encouraged. In addition it seems that higher comparative advantage rates prevail in higher value-added sectors for trade with countries in East Asia, Latin America and other parts of Africa.

FOOTNOTES

¹The group classification used for countries in the world was taken from the World Bank's Development Report's classification of economies by income (World Bank 1996).

²Note that exports and imports of goods are to and from countries outside of the SADC, while services trade is for all exports and imports to and from SADC countries. The inclusion of intra-regional trade for trade in services will inflate the share of trade in services as a percentage of total trade. It was not possible to show trade in services with the rest-of-the world alone, as the data did not show export (import) destination (origin).

³The trade figures include intra-regional trade.

⁴Zambian services trade only went up to 1991 and so the data in this year was used instead of the average of 1991 - 1993.

⁵For Malawi, Mozambique and Tanzanian services trade, there were no statistics on the contribution of government to service trade. While for all the other countries, the government's share was deducted from "Business" services, it was not done for these countries. This might explain why Mozambique and Tanzania, who have fairly undeveloped private sectors, have high shares of service exports.

⁶To maintain consistency when working with a large number of matrices, the numbering of the original trade matrices was retained. The sub-total for the Manufacturing sector was added later as it was not included in the original matrices. Hence, it has no number.

⁷ISIC 331: Rest of Wood, cork excluding furniture and excluding 33111-3.

⁸The SIC is "attributed" because SIC codes had to be attributed to the existing ISIC coded categories.

⁹The IDC is in the process of collecting input-output tables for all SADC countries.

¹⁰The results of a simple correlation seem to support this as it produced a weak correlation coefficient between RCA indicators and RCA growth indicators (logarithms or otherwise). The correlation coefficient for collective SADC trade was 0.22.

¹¹Logarithms were used to convert the growth scale of RCA indicators from an exponential one to a linear one like for the other variables being summed.

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Appendix 1: Overview of Production, Employment and Trade in the SADC

Table 1: SADC Gross Output (US \$ millions, averages for 1991 - 1993)

SECTOR	Angola	Botswana	Lesotho	Malawi	Mauritius	Mozambique	Namibia	RSA	Swaziland	Tanzania	Zambia	Zimbabwe	SADC
AGRICULTURE	1951.6	237.0	125.7	893.7	413.3	861.7	390.3	9354.6	223.7	2822.2	556.1	1393.6	19723.5
Maize	0.0	0.0	25.1	178.7	6.3	5.0	0.0	654.8	0.0	423.3	83.4	139.4	1516.1
Other grains	0.0	23.7	6.3	0.0	0.0	140.3	0.0	561.3	0.0	423.3	7.8	11.5	1174.2
Tobacco	0.0	0.0	0.0	354.9	0.0	12.0	0.0	280.6	0.0	262.2	20.0	303.0	1432.8
Sugar	0.0	0.0	0.0	17.9	373.6	15.0	0.0	467.7	0.0	26.0	111.2	97.6	1103.0
Beef	0.0	106.6	75.4	80.4	2.0	172.4	292.7	1122.6	0.0	353.5	76.2	181.2	2465.1
Horticulture	0.0	23.7	0.0	6.0	12.0	10.0	0.0	2151.6	0.0	50.0	35.0	55.7	2344.0
Cotton	0.0	0.0	0.0	20.0	3.0	25.0	0.0	28.1	0.0	125.0	55.6	139.4	396.0
Tea & coffee	0.0	0.0	0.0	107.2	10.0	8.0	0.0	46.8	0.0	175.0	26.0	41.8	414.8
Aggr. n.e.c.	1931.6	82.9	18.9	128.5	6.3	473.9	97.6	4041.2	223.7	987.8	140.8	224.2	8377.3
MINING	8376.9	1358.7	1.5	0.0	3.6	3.6	627.3	14668.3	21.7	31.8	1028.3	478.2	26550.1
TOTAL MANUFACTURING	1346.3	789.7	450.9	891.8	1896.4	900.5	815.1	84142.3	1162.1	503.2	1403.0	3485.1	97986.3
Food Products	237.9	300.1	368.1	285.6	90.8	271.6	585.5	14048.8	537.7	86.6	234.7	770.1	17837.5
Beverages	0.0	116.0	0.0	131.1	98.5	33.4	0.0	4159.1	224.0	224.0	195.9	269.6	5227.5
Tobacco	116.8	0.0	0.0	67.3	39.5	44.9	0.0	524.0	0.0	29.4	87.9	102.7	1072.6
Textiles	115.2	76.5	26.6	86.3	540.6	131.6	48.1	2235.6	65.9	80.9	98.3	348.1	3853.5
Clothing	99.0	0.0	0.0	27.9	665.9	82.7	0.0	2211.7	0.0	5.6	104.6	131.9	3329.3
Leather Products	18.4	9.9	0.0	0.0	14.6	4.0	0.0	355.7	0.0	3.5	7.4	17.7	431.2
Footwear	0.0	0.0	0.0	0.0	6.9	13.6	0.0	1066.4	0.0	8.2	31.4	82.0	1208.4
Wood Products	37.3	13.4	0.0	15.8	7.1	12.4	0.0	1055.2	31.8	8.0	31.0	56.0	1268.1
Furniture	0.0	0.0	5.1	0.0	19.5	10.6	9.0	928.3	0.0	4.6	27.6	43.0	1047.6
Paper	12.1	46.4	0.0	44.1	12.7	16.3	0.0	4454.2	129.5	11.2	18.4	95.0	4840.9
Printing	17.1	0.0	6.1	0.0	29.0	17.7	11.1	2322.7	0.0	14.4	32.9	79.3	2530.3
Industrial Chemicals	46.9	41.6	0.0	0.0	38.9	38.9	0.0	10272.8	14.8	23.6	63.7	163.9	10705.0
Other Chemicals	0.0	0.0	24.4	101.6	40.7	12.7	44.2	4402.6	0.0	32.0	130.8	153.4	4942.3
Rubber Products	65.7	0.0	0.0	27.2	5.6	22.7	0.0	1075.1	0.0	18.9	41.7	73.7	1330.7
Plastic Products	76.0	0.0	0.0	0.0	18.8	7.3	0.0	2139.2	0.0	3.9	16.7	74.3	2336.2
Ceramics	0.0	0.0	0.0	0.0	0.7	0.1	0.0	94.9	0.0	0.0	2.3	3.2	101.2
Glass	0.0	0.0	0.0	0.0	5.5	11.8	0.0	876.9	12.2	1.1	5.3	15.6	928.4
Other non-metallic	0.5	0.0	5.4	53.3	41.9	14.3	9.8	1680.5	0.0	32.8	62.6	87.1	1988.3
Basic Iron and Steel	30.4	0.0	0.0	0.0	19.7	70.5	0.0	5108.5	0.0	48.7	9.2	337.2	5624.2
Non-ferrous metals	0.0	0.0	0.0	0.0	0.0	11.9	0.0	2038.7	0.0	0.0	2.5	166.8	2219.9
Iron Metal Pits	24.2	102.0	10.5	19.3	31.4	21.1	18.9	4850.9	31.5	16.4	77.6	51.3	5255.2
Machinery	16.7	0.0	0.0	0.0	26.1	7.1	0.0	4842.4	11.5	17.8	16.5	35.3	4973.4
Electrical Machinery	18.1	0.0	0.0	0.0	7.4	13.6	0.0	3475.2	0.0	10.7	22.1	98.4	3645.5
Motor vehicle	95.5	0.0	0.0	0.0	8.3	16.6	0.0	6656.2	0.0	32.6	50.9	180.3	7040.5
Transport Equipment	0.0	0.0	0.0	0.0	4.0	7.2	0.0	865.1	0.0	0.0	0.0	12.9	889.4
Measuring equip.	0.0	19.0	1.1	7.3	80.3	2.4	11.9	273.5	10.8	0.5	0.2	13.4	420.5
Other Manuf.	518.5	64.8	3.6	24.9	42.0	3.5	76.6	2127.9	72.6	11.8	30.7	21.7	2998.4
Unclassified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SERVICES	3765.5	2948.3	763.3	1759.3	2835.9	663.8	2364.2	118904.6	740.6	1472.2	1852.5	2442.4	140512.4
TOTAL	15640.2	5333.7	1341.3	3544.8	5149.3	2429.6	4196.8	227059.8	2147.9	4829.4	6839.9	7749.4	284772.3

Source: IDC

Table 2: SADC Gross Domestic Product (US \$ millions, %, averages for 1991 - 1993)

	Angola	Botswana	Lesotho	Malawi	Mauritius	Mozambique	Namibia	RSA	Swaziland	Tanzania	Zambia	Zimbabwe	SADC
Agriculture	1,002.40	178.10	64.60	619.70	263.00	442.60	200.50	4,805.10	114.90	1,449.60	285.60	715.80	10,141.90
Mining	5,302.80	1,239.40	0.90	-	3.30	2.30	397.10	9,285.40	13.70	20.10	416.80	271.10	16,952.90
Manufacturing	307.00	190.10	86.40	263.50	551.20	265.30	156.30	25,315.00	287.60	102.90	585.70	1,853.80	29,964.80
Food, tobacco, bev	85.30	90.40	60.30	131.80	171.70	105.60	109.20	3,802.40	178.90	28.00	251.20	615.30	5,630.10
Textiles	32.10	23.30	8.00	30.80	22.20	36.60	14.40	736.70	21.70	14.00	33.20	166.40	1,139.40
Clothing	23.60	-	-	6.90	220.80	19.70	-	771.70	-	0.90	22.90	72.90	1,139.40
Other Manufacturing	166.00	76.40	18.10	94.00	136.50	103.40	32.70	20,004.20	87.00	60.00	278.40	999.20	22,055.90
Services	2,633.70	1,755.20	421.10	1,052.90	1,613.10	366.20	1,304.30	65,601.20	408.60	812.20	1,022.10	1,347.50	78,238.10
Total	9,245.90	3,362.80	573.00	1,936.10	2,430.60	1,076.40	2,058.20	105,006.70	824.80	2,384.80	2,310.20	4,188.20	135,397.70
Gross Domestic Product - share of each sector (%)													
Agriculture	10.84	5.30	11.27	32.01	10.82	41.12	9.74	4.58	13.93	60.78	12.36	17.09	7.49
Mining	57.35	36.86	0.16	0.00	0.14	0.21	19.29	8.84	1.66	0.84	18.04	6.47	12.52
Manufacturing	3.32	5.65	15.08	13.61	22.68	24.65	7.59	24.11	34.87	4.31	25.35	44.26	22.13
Food, tobacco, bev	0.92	2.69	10.52	6.81	7.06	9.81	5.31	3.62	21.69	1.17	10.87	14.69	4.16
Textiles	0.35	0.69	1.40	1.59	0.91	3.40	0.70	0.70	2.63	0.59	1.44	3.97	0.84
Clothing	0.26	0.00	0.00	0.36	9.08	1.83	0.00	0.73	0.00	0.04	0.99	1.74	0.84
Other Manufacturing	1.80	2.27	3.16	4.86	5.62	9.61	1.59	19.03	10.55	2.52	12.05	23.86	16.29
Manufacturing Services	28.49	52.19	73.49	54.38	66.37	34.02	63.37	62.47	49.54	34.06	44.24	32.17	57.86
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: IDC

Table 3: SADC Employment¹ ('000's, averages for 1991 – 1993)

SECTOR	Angola**	Botswana	Lesotho**	Malawi	Mauritius	Mozambique	Namibia**	RSA	Swaziland	Tanzania**	Zambia	Zimbabwe	SADC
AGRICULTURE	3192	6	577	330	44	8	195	877	23	1818	41	310	7421
Maize	0	0	115	66	4	0	0	61	0	273	6	31	557
Other grains	0	1	29	0	0	2	0	53	0	273	2	25	383
Tobacco	0	0	0	109	0	0	0	26	0	182	0	50	366
Sugar	0	0	0	29	7	0	0	44	0	0	8	22	109
Beef	0	3	346	90	7	2	146	105	0	454	8	40	1142
Horsethroat	0	1	0	0	0	0	0	202	0	0	0	12	215
Cotton	0	0	0	0	0	0	0	3	0	0	4	31	38
Tea & coffee	0	0	0	40	0	0	0	4	0	0	0	9	53
Argie n.e.c.	3192	2	87	79	4	4	49	379	23	636	12	90	4558
MINING	213	8	6	1	0	3	15	668	0	106	60	50	1130
TOTAL MANUFACTURING	128	24	12	79	106	58	24	1494	17	199	196	197	2534
Food Products	31	5	12	31	11	24	24	200	8	54	49	28	447
Beverages	0	1	0	3	2	1	1	38	0	7	11	7	72
Tobacco	5	0	0	10	0	0	0	0	0	0	2	2	37
Textiles	13	4	7	8	5	8	13	90	2	58	19	25	254
Clothing	8	0	4	4	70	3	3	121	0	21	0	20	251
Leather Products	2	1	2	0	1	0	3	11	0	3	1	2	26
Footwear	0	0	0	1	3	1	0	28	0	6	4	7	47
Wood Products	0	1	0	6	1	2	0	61	2	6	7	6	101
Pumiture	1	1	0	0	1	1	0	43	0	3	6	5	61
Paper	1	1	0	0	1	1	0	51	3	4	3	4	70
Printing	3	0	0	2	1	2	0	54	0	5	8	6	81
Industrial Chemicals	6	1	0	1	1	0	0	38	0	3	7	3	59
Other Chemicals	3	0	0	1	1	2	0	88	0	6	12	6	120
Rubber Products	7	0	0	7	1	1	0	17	0	2	5	3	35
Plastic Products	16	0	0	1	1	1	0	48	0	1	2	4	74
Ceramics	0	0	0	0	0	0	0	6	0	0	0	1	8
Glass	0	0	0	0	0	1	0	10	1	1	1	1	14
Other non-metallic	0	0	0	1	1	2	0	99	0	8	9	7	97
Basic Iron and Steel	3	0	0	0	1	2	0	75	0	2	4	17	104
Non-ferrous metals	0	0	0	0	0	0	0	19	0	0	0	2	21
Fab. Metal Pits	5	4	0	5	1	3	0	128	1	6	14	15	182
Machinery	1	0	0	1	0	1	0	71	0	2	4	3	84
Electrical Machinery	6	0	0	0	1	1	0	97	0	3	3	7	118
Motor vehicle	10	0	0	3	1	1	0	77	0	4	4	7	105
Transport Equipment	0	0	0	0	0	0	0	16	0	0	0	0	17
Measuring equip.	0	2	0	0	1	0	0	10	0	0	0	1	14
Other Manuf.	0	4	1	0	2	0	1	23	0	1	0	2	34
SERVICES	723	188	247	201	136	31	171	4831	52	1472	83	684	8821
TOTAL	4256	226	843	610	287	100	405	7870	93	3596	380	1240	19906

NOTE: ** Labour force (as no employment data was available)

Source: compiled by IDC

¹ Sources used by IDC for Appendix 1: International Labour Organisation - 1996; UNIDO : International Yearbook of Industrial Statistics - 1997; Central Statistical Services , Labour Statistics - 1995

Table 4: SADC Exports and Imports (US \$ millions, average 1991 - 1993)

	Sectors	SADC-X	ROW-X	TOTAL -X	SADC-M	ROW-M	TOTAL M
1	Agriculture	702.89	2,596.51	3,299.40	702.89	755.18	1,458.07
2	maize	100.96	16.47	117.43	100.96	293.28	394.23
3	other grains	35.91	89.16	125.07	35.91	137.70	173.61
4	tobacco	46.65	734.69	781.34	46.65	12.91	59.56
5	sugar	30.50	454.87	485.37	30.50	20.50	51.00
6	beef	170.73	7.69	178.42	170.73	15.94	186.67
7	horticulture	31.27	85.11	116.38	31.27	48.65	79.92
8	cotton	15.19	143.10	158.29	15.19	77.55	92.74
9	tea and coffee	24.95	202.45	227.39	24.95	19.44	44.39
10	agrculture n.s.c.	246.73	862.97	1,109.70	246.73	129.22	375.95
11	Mining	116.66	12,912.62	13,029.27	116.66	1,582.21	1,698.87
	Manufacturing	6,179.50	10,176.32	16,355.81	6,179.50	17,177.27	23,356.77
12	Food Products	1,101.36	853.04	1,954.40	1,101.36	782.39	1,883.75
13	Beverages	293.67	105.10	398.77	293.67	150.47	444.14
14	Tobacco	73.59	84.22	157.80	73.59	137.66	211.25
15	Textiles	549.27	798.39	1,347.65	549.27	1,248.55	1,797.82
16	Clothing	183.92	380.89	564.81	183.92	98.48	282.40
17	Leather Products	16.76	94.51	111.27	16.76	110.57	127.33
18	Footwear	81.48	8.27	89.74	81.48	125.68	207.15
19	Wood Products	104.95	108.76	213.71	104.95	131.49	236.44
20	Furniture	128.17	13.84	142.01	128.17	90.41	218.58
21	Paper and Paper Products	213.02	349.55	562.57	213.02	333.91	546.94
22	Printing and Publishing	79.50	96.52	176.02	79.50	120.23	199.73
23	Industrial Chemicals	341.49	607.11	948.60	341.49	1,821.24	2,162.73
24	Other Chemicals	238.65	23.79	262.44	238.65	752.13	990.78
25	Rubber Products	81.21	36.82	118.03	81.21	258.42	339.63
26	Plastic Products	65.72	5.84	71.56	65.72	142.12	207.84
27	Potterv.China and Earthenware	10.64	2.98	13.62	10.64	34.19	44.83
28	Glass and Glass Products	30.93	28.22	59.15	30.93	90.77	121.70
29	Other non-metallic mineral products	173.29	107.89	281.18	173.29	199.17	372.46
30	Basic Iron and Steel	181.46	1,476.33	1,657.79	181.46	305.62	487.08
31	Non-ferrous metals	97.05	664.79	761.84	97.05	124.54	221.59
32	Fabricated Metal Products	577.04	148.85	725.89	577.04	811.09	1,388.13
33	Machinery	562.82	1,167.28	1,730.09	562.82	4,870.85	5,433.67
34	Electrical Machinery	267.10	714.30	981.40	267.10	1,566.27	1,833.36
35	Motor vehicle	595.41	214.39	809.81	595.41	1,640.16	2,235.57
36	Transport Equipment	17.60	79.09	96.69	17.60	298.48	316.07
37	Measuring and controlling equipment	60.26	150.37	210.62	60.26	606.06	666.32
38	Other Manufactured Products	53.15	1,855.19	1,908.34	53.15	326.04	379.19
39	Unclassified	-	-	-	-	0.27	0.27
40	Total	6,999.04	25,685.45	32,684.49	7,701.93	19,514.66	27,216.59

Table 5: SADC Export Sectors in Order of Size (US \$ millions, averages for 1991 - 1993)

EXPORTS TO REST-OF-WORLD	ROW (millions \$)	% TOTAL	CUMULATIVE %
Other Manufactured Products	1,855.19	7.22	7.22
Basic Iron and Steel	1,476.33	5.75	12.97
Machinery	1,167.28	4.54	17.51
Agriculture n.e.c.	862.97	3.36	20.87
Food Products	853.04	3.32	24.20
Textiles	798.39	3.11	27.30
Tobacco	734.69	2.86	30.16
Electrical Machinery	714.30	2.78	32.95
Non-ferrous metals	664.79	2.59	35.53
Industrial Chemicals	607.11	2.36	37.90
Sugar	454.87	1.77	39.67
Clothing	380.89	1.48	41.15
Paper and Paper Products	349.55	1.36	42.51
Motor vehicle	214.39	0.83	43.35
tea and coffee	202.45	0.79	44.13
Measuring and controlling equipment	150.37	0.59	44.72
Fabricated Metal Products	148.85	0.58	45.30
cotton	143.10	0.56	45.86
Wood Products	108.76	0.42	46.28
Other non-metallic mineral products	107.89	0.42	46.70
Beverages	105.10	0.41	47.11
Printing and Publishing	96.52	0.38	47.49
Leather Products	94.51	0.37	47.85
other grains	89.16	0.35	48.20
horticulture	85.11	0.33	48.53
Tobacco	84.22	0.33	48.86
Transport Equipment	79.09	0.31	49.17
Rubber Products	36.82	0.14	49.31
Glass and Glass Products	28.22	0.11	49.42
Other Chemicals	23.79	0.09	49.51
mazoe	16.47	0.06	49.58
Furniture	13.84	0.05	49.63
Footwear	8.27	0.03	49.66
beef	7.69	0.03	49.69
Plastic Products	5.84	0.02	49.72
Pottery, China and Earthenware	2.98	0.01	49.73
Unclassified	-	-	49.73
MINING	12,912.62	50.27	100.00
TOTAL	25,685.45	100.00	
EXPORTS TO SADC	SADC (millions \$)	% TOTAL	CUMULATIVE %
Food Products	1,101.36	15.74	15.74
Motor vehicle	595.41	8.51	24.24
Fabricated Metal Products	577.04	8.24	32.49
Machinery	562.82	8.04	40.53
Textiles	549.27	7.85	48.38
Industrial Chemicals	341.49	4.88	53.26
Beverages	293.67	4.20	57.45
Electrical Machinery	267.10	3.82	61.27
Agriculture n.e.c.	246.73	3.53	64.79
Other Chemicals	238.65	3.41	68.20
Paper and Paper Products	213.02	3.04	71.23
Clothing	183.92	2.63	73.87
Basic Iron and Steel	181.46	2.59	76.47
Other non-metallic mineral products	173.29	2.48	78.94
beef	170.73	2.44	81.38
Furniture	128.17	1.83	83.21
Wood Products	104.95	1.50	84.71
mazoe	100.96	1.44	86.16
Non-ferrous metals	97.05	1.39	87.54
Footwear	81.48	1.16	88.71
Rubber Products	81.21	1.16	89.87
Printing and Publishing	79.50	1.14	91.00
Tobacco	73.59	1.05	92.05
Plastic Products	65.72	0.94	92.99
Measuring and controlling equipment	60.26	0.86	93.85
Other Manufactured Products	53.15	0.76	94.61
tobacco	46.65	0.67	95.28
other grains	35.91	0.51	95.79
horticulture	31.27	0.45	96.24
Glass and Glass Products	30.93	0.44	96.68
sugar	30.50	0.44	97.12
tea and coffee	24.95	0.36	97.47
Transport Equipment	17.60	0.25	97.72
Leather Products	16.76	0.24	97.96
cotton	15.19	0.22	98.18
Pottery, China and Earthenware	10.64	0.15	98.33
Unclassified	-	-	98.33
MINING	116.66	1.67	100.00
TOTAL	6,999.04	100.00	

Source: IDC

Table 6: All SADC Exports (US \$ millions, average 1991 - 1993)

Sectors	Angola	Botswana	Lesotho	Malawi	Mauritius	Mozambique	Namibia	RSA	Swaziland	Tanzania	Zambia	Zimbabwe	SADC
Agriculture	16.87	30.00	13.36	391.76	384.20	160.24	197.40	1,199.11	30.50	286.26	42.71	547.00	3,299.40
maize	-	-	2.68	0.00	0.06	0.00	-	84.02	-	0.00	0.42	30.24	117.43
other grains	-	3.00	0.61	-	-	0.00	-	118.15	-	0.00	1.89	1.35	125.07
tobacco	-	-	-	322.18	-	5.24	-	14.77	-	26.06	10.69	402.40	781.34
sugar	-	-	-	17.01	367.78	6.57	-	77.69	-	5.25	4.85	6.22	485.37
beef	-	13.50	3.70	-	0.07	0.05	148.05	10.86	-	-	0.02	2.18	178.42
horticulture	-	3.00	-	2.43	7.21	3.80	-	44.91	-	18.25	11.78	25.00	116.38
cotton	0.01	-	-	6.84	0.30	15.76	-	15.25	-	75.03	7.69	38.60	158.29
tea and coffee	-	-	-	40.80	6.70	0.91	-	30.20	-	126.60	2.63	20.06	227.39
agriculture n e c	16.86	10.50	6.31	2.50	2.59	127.91	49.35	803.25	30.50	35.06	3.33	21.55	1,109.70
mining	3,353.96	1,214.90	-	-	0.06	0.53	528.60	6,725.02	6.40	1.12	1,123.39	75.29	13,029.27
Food Products	0.13	205.12	67.13	11.70	38.20	29.76	463.28	694.61	294.28	82.60	2.61	65.59	1,954.40
Beverages	0.02	51.96	-	0.42	1.19	0.15	-	205.60	132.66	-	0.02	6.76	398.77
Tobacco	67.34	-	-	0.16	7.25	2.12	-	70.08	-	3.67	0.98	6.20	157.80
Textiles	0.04	56.95	11.86	14.43	467.86	6.11	25.50	602.99	40.50	31.20	13.60	74.62	1,347.65
Clothing	0.00	-	-	1.94	302.22	1.98	-	224.54	-	0.96	2.16	31.01	564.81
Leather Products	0.00	3.97	-	-	4.20	0.14	-	89.48	-	1.63	1.17	10.92	111.27
Footwear	-	-	-	-	1.90	0.31	-	78.12	-	0.01	0.01	9.32	89.74
Wood Products	0.10	9.45	-	2.65	2.90	2.91	-	160.07	13.63	4.22	5.05	12.73	213.71
Furniture	0.01	-	4.39	-	0.70	0.06	-	122.98	-	0.07	0.02	10.03	142.01
Paper and Paper Products	0.01	19.97	-	0.08	2.29	7.39	-	466.63	49.89	3.79	0.65	11.87	562.57
Printing and Publishing	-	-	0.14	-	0.31	0.01	-	171.74	-	0.03	0.03	1.38	176.02
Industrial Chemicals	40.82	28.43	-	-	17.97	11.24	-	812.07	3.30	6.92	4.77	23.08	948.60
Other Chemicals	-	-	0.21	0.81	4.58	0.14	27.17	213.73	-	0.50	0.27	15.02	262.64
Rubber Products	0.01	-	-	0.64	0.72	1.80	-	111.40	-	0.03	0.09	3.91	118.03
Plastic Products	0.00	-	-	-	1.33	0.00	-	57.57	-	0.04	0.05	2.57	71.56
Pottery, China and Earthenware	-	-	-	-	0.07	0.02	-	12.63	-	0.63	0.04	0.86	13.62
Glass and Glass Products	-	-	-	-	1.44	0.37	-	50.07	3.94	0.74	0.39	2.20	59.15
Other non-metallic mineral products	0.02	-	0.16	0.30	0.42	0.53	2.44	238.09	-	0.09	2.10	17.02	281.18
Basic Iron and Steel	0.30	-	-	-	1.90	57.46	-	3,395.18	-	41.98	2.81	158.16	1,657.79
Non-ferrous metals	-	-	-	-	-	9.32	-	653.16	-	0.00	0.00	99.36	761.84
Fabricated Metal Products	0.17	52.08	4.32	10.18	10.70	12.28	7.76	598.27	7.71	2.00	3.04	17.39	725.89
Machinery	7.67	-	-	-	15.38	3.13	-	1,660.87	3.81	11.99	8.35	18.90	1,730.09
Electrical Machinery	0.49	-	-	-	3.81	0.57	-	963.47	-	1.36	1.34	10.36	981.40
Motor vehicle	0.95	-	-	-	3.05	4.89	-	790.15	-	1.30	2.05	7.42	809.81
Transport Equipment	0.01	-	-	-	1.15	4.45	-	83.66	-	0.02	0.00	5.39	96.69
Measuring and controlling equipment	-	-	5.82	0.12	66.82	0.63	4.93	125.57	0.19	0.48	0.00	5.91	210.62
Other Manufactured Products	173.86	40.02	1.88	13.19	30.23	1.52	52.39	1,529.17	25.71	7.34	19.26	13.78	1,908.34
Unclassified	-	-	-	-	-	-	-	-	-	-	-	-	-
Total or average	3,662.79	1,718.66	103.56	447.79	1,372.87	320.01	1,315.59	20,138.03	612.53	491.74	1,236.79	1,264.05	32,684.49

Source: IDC

Appendix 2: Revealed Comparative Advantage Analysis Using ISIC Coded Data

Table 1: Intra-SADC Exports as Share of Total Exports (%), average 1991 - 1993

Sectors	Angola	Botswana	Lesotho	Malawi	Mauritius	Mozambique	Namibia	South Africa	Swaziland	Tanzania	Zambia	Zimbabwe	SADC
Agriculture	0.11	57.42	97.93	6.61	0.78	4.19	87.69	29.36	87.79	0.91	22.89	13.28	21.30
maize			100.00					91.01			36.47	71.62	85.97
other grains		0.96	100.00					21.55			74.62	92.88	28.71
tobacco				4.45		1.76		27.25			9.92	6.74	5.97
sugar				0.31	0.79			29.22			99.83		6.28
beef		58.90	96.65			94.52	95.69	92.38				94.72	95.69
horticulture		14.63			0.14	8.73		53.58		1.09	11.55	15.73	26.87
cotton				1.95				82.99		2.80	4.01	0.03	9.60
tea and coffee				23.84	0.84			32.05		0.01	0.48	27.24	10.97
agriculture n.e.c.	0.11	32.45	97.58	28.81	1.82	4.88	63.67	19.90	87.79	0.85	19.42	51.74	22.23
Mining		0.38			10.78	0.74	1.33	1.28	76.37	0.31	0.05	18.14	0.90
Manufacturing	1.14	33.38	37.51	60.22	8.41	7.89	35.73	40.96	50.95	3.95	23.33	50.40	37.78
Food Products		48.41	30.73	32.34	2.26	4.78	32.92	98.64	35.02	0.72	62.92	49.39	56.35
Beverages		5.91			12.91	1.19		90.51	73.77		40.90	91.55	73.64
Tobacco	2.91			73.60	0.62	14.47		92.68		66.52	86.51	47.11	46.63
Textiles		22.09	62.45	99.77	16.14	67.72	94.37	54.89	77.34	1.01	7.79	63.66	40.76
Clothing		13.70		98.14	0.05	74.30		71.66			58.30	19.03	32.56
Leather Products					0.86			15.76				15.06	
Footwear					12.84			96.67			0.01	61.29	90.79
Wood Products		23.64		78.13	52.42	71.75		42.94	85.03	0.58	86.38	96.79	49.11
Furniture					1.14		68.63	97.67				13.46	90.25
Paper and Paper Products		42.35		84.87	4.84			35.92	62.39	10.68	21.72	43.93	37.87
Printing and Publishing					4.98	52.93	85.44	44.37			35.07	80.76	45.17
Industrial Chemicals	3.15	54.05		89.48	1.36	1.74		37.59	41.78	17.98	26.80	65.88	36.00
Other Chemicals			61.83		3.27	6.38	60.96	97.93		1.24	80.53	78.20	90.94
Rubber Products				35.58	10.05	17.49		70.07		99.50	83.54	67.15	68.80
Plastic Products					1.60			94.14			89.36	79.89	91.84
Pottery, China and Earthenware					2.26			79.94				63.56	78.14
Glass and Glass Products						0.72		53.24	89.19		95.58	17.51	52.29
Other non-metallic mineral products			85.59		1.53		90.40	58.98		22.36	87.12	97.40	61.63
Basic Iron and Steel					1.54	0.01		9.30		3.27	4.13	31.76	10.95
Non-ferrous metals						21.49		7.93		0.04	0.26	43.55	12.74
Fabricated Metal Products		29.20		88.38	1.54		85.94	87.24	74.35	69.96	5.33	96.31	79.49
Machinery	0.04				4.21	7.08		31.04	91.59	0.48	5.29	48.36	32.53
Electrical Machinery	0.12				17.23	3.54		26.48		0.60	71.73	99.20	27.22
Motor vehicle	7.85				60.62	2.08		74.08		9.68	78.26	85.57	73.53
Transport Equipment	0.06				0.72	4.60		17.18			17.63	49.48	18.20
Measuring and controlling equipment		19.14	21.91		0.70	5.12	63.01	43.79	55.96	3.01	3.42	6.51	28.61
Other Manufactured Products	0.01	0.72	66.46	9.64	0.72	0.33	1.77	2.92	16.09	0.27	0.27	2.72	2.79
Average	0.09	10.47	45.30	13.32	6.28	6.03	29.70	27.02	53.05	2.17	2.17	32.42	21.41

Source: IDC: Author's calculations

Table 2: Commodity's Share of Exports to the Rest-of-the-World (% , average 1991 - 1993)

Sectors	Angola	Botswana	Lesotho	Malawi	Mauritius	Mozambique	Namibia	RSA	Swaziland	Tanzania	Zambia	Zimbabwe	SADC
Agriculture	0.46	0.83	0.49	94.26	29.63	51.04	2.63	5.76	1.30	58.96	2.72	55.53	10.11
maize	-	-	-	0.00	0.00	0.00	-	0.05	-	0.00	0.02	1.00	0.06
other grains	-	0.19	-	-	-	0.00	-	0.58	-	0.00	0.04	0.01	0.35
tobacco	-	-	-	79.31	-	1.71	-	0.07	-	5.42	0.80	43.93	2.86
sugar	-	-	-	4.37	28.36	2.19	-	0.37	-	1.09	0.00	0.73	1.77
beef	-	0.01	-	-	0.01	0.00	0.69	0.01	-	-	0.00	0.01	0.03
horticulture	-	0.17	-	0.39	0.56	1.15	-	0.14	-	3.75	0.86	2.47	0.33
cotton	0.00	-	-	1.73	0.02	5.24	-	0.02	-	15.16	0.56	4.45	0.56
tea and coffee	-	-	-	8.01	0.48	0.30	-	0.14	-	26.31	0.22	1.71	0.79
apparel n.e.c.	0.46	0.46	0.27	0.46	0.20	40.45	1.94	4.38	1.30	7.23	0.22	1.22	3.36
Mining	91.65	78.66	-	99.51	0.00	0.17	56.40	45.17	0.53	0.23	92.80	7.22	50.27
Manufacturing	7.89	20.51	-	5.74	70.37	48.78	40.98	49.06	98.18	40.81	4.48	37.26	39.62
Food Products	0.00	6.88	82.09	2.04	2.90	9.42	33.60	0.06	66.50	16.92	0.08	3.89	3.32
Beverages	0.00	3.18	-	0.03	0.08	0.05	-	0.13	12.10	-	0.00	0.07	0.41
Tobacco	1.79	-	-	0.01	0.56	0.60	-	0.03	-	0.26	0.01	0.38	0.33
Textiles	0.00	2.88	7.86	0.01	30.49	0.66	0.16	1.85	3.19	6.83	1.04	3.17	3.11
Clouthing	0.00	-	-	0.01	23.48	0.17	-	0.43	-	0.20	0.07	1.50	1.48
Leather Products	0.00	0.22	-	-	0.32	0.05	-	0.51	-	0.34	0.08	1.04	0.37
Footwear	0.00	-	-	-	0.13	0.11	-	0.02	-	0.00	0.01	0.42	0.03
Wood Products	0.00	0.47	-	0.15	0.11	0.27	-	0.62	0.71	0.87	0.06	0.05	0.42
Furniture	0.00	-	0.46	-	0.05	0.02	0.13	0.02	-	0.01	0.00	1.02	0.05
Paper and Paper Products	0.00	0.75	-	0.00	0.17	2.46	-	2.03	6.52	0.70	0.04	0.79	1.36
Printing and Publishing	-	-	0.03	-	0.02	0.00	0.04	0.65	-	0.01	0.00	0.03	0.38
Industrial Chemicals	1.08	0.85	-	-	1.38	3.67	-	3.45	0.67	1.18	0.29	0.92	2.36
Other Chemicals	-	-	0.14	0.08	0.34	0.04	1.15	0.03	-	0.10	0.00	0.38	0.09
Rubber Products	0.00	-	-	0.01	0.05	0.49	-	0.23	-	0.00	0.00	0.15	0.14
Plastic Products	0.00	-	-	-	0.10	0.00	-	0.03	-	0.01	0.00	0.06	0.02
Pottery, China and Earthenware	-	-	-	-	0.01	0.01	-	0.02	-	0.00	0.00	0.04	0.01
Glass and Glass Products	-	-	-	-	0.11	0.12	-	0.16	0.15	0.15	0.00	0.21	0.11
Other non-metallic mineral products	0.00	-	0.04	-	0.03	0.18	0.03	0.72	-	0.02	0.02	0.05	0.42
Basic Iron and Steel	0.01	-	-	-	0.15	19.10	-	8.61	-	8.44	0.22	12.63	5.75
Non-ferrous metals	-	-	-	-	-	2.43	-	4.09	-	0.00	0.00	6.57	2.59
Fabricated Metal Products	0.00	2.40	7.63	0.30	0.82	4.08	0.12	0.52	0.69	0.12	0.24	0.08	0.58
Machinery	0.21	-	-	-	1.14	0.97	-	7.57	0.11	2.48	0.63	1.14	4.54
Electrical Machinery	0.01	-	-	-	0.25	0.18	-	4.82	-	0.28	0.03	0.01	2.78
Motor vehicle	0.02	-	-	-	0.09	1.59	-	1.39	-	0.24	0.04	0.13	0.83
Transport Equipment	0.00	-	-	-	0.09	1.41	-	0.48	-	0.00	0.00	0.32	0.31
Measuring and controlling equipment	-	0.31	0.16	0.04	5.16	0.20	0.20	0.48	0.03	0.10	0.00	0.65	0.59
Other Manufactured Products	4.75	2.58	1.11	3.07	2.33	0.50	5.56	10.10	7.51	1.53	1.59	1.57	7.22
Unclassified	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: IDC, Author's calculations

Table 3: Share of SADC Exports to the Rest-of-the-World for Each Commodity from Each Country: average 1991 - 1993

Sectors	Angola	Botswana	Lesotho	Malawi	Mauritius	Mozambique	Namibia	RSA	Swaziland	Tanzania	Zambia	Zimbabwe	SADC
Agriculture	0.65	0.49	0.01	14.09	14.68	5.91	0.94	32.62	0.14	10.92	1.27	18.27	100.00
maize	-	-	-	0.01	0.36	0.01	-	45.86	-	-	0.01	1.63	52.12
other grains	-	3.33	-	-	-	0.00	-	96.01	-	0.00	0.54	0.11	100.00
tobacco	-	-	-	41.90	-	0.70	-	1.46	-	3.55	1.31	51.08	100.00
sugar	-	-	-	3.73	80.22	1.44	-	12.09	-	1.15	0.00	1.37	100.00
beef	-	1.93	1.61	-	0.94	0.03	82.96	10.76	-	-	0.28	1.49	100.00
horticulture	-	3.01	-	1.76	8.46	4.07	-	24.51	-	21.21	12.24	24.75	100.00
cotton	0.01	-	-	4.69	0.21	11.01	-	1.81	-	50.97	4.76	26.55	100.00
tea and coffee	-	-	-	15.35	3.03	0.45	-	10.14	-	62.53	1.29	7.21	100.00
agriculture n.e.c.	1.95	0.82	0.02	0.21	0.29	14.10	2.08	74.56	0.43	4.03	0.31	1.20	100.00
Mining	25.97	9.37	-	-	0.00	0.00	4.04	51.42	0.01	0.01	8.70	0.48	100.00
Manufacturing	-	-	-	-	-	-	-	-	-	-	-	-	-
Food Products	0.01	17.40	-	5.45	4.38	3.32	36.43	1.11	22.42	9.54	0.11	3.89	100.00
Beverages	0.01	46.51	-	0.11	0.99	0.14	-	18.57	33.11	-	0.01	0.54	100.00
Tobacco	77.64	-	-	0.05	8.56	2.15	-	6.09	-	1.46	0.16	3.89	100.00
Textiles	0.01	5.56	-	0.56	49.14	0.25	0.18	34.07	1.15	4.12	1.57	3.40	100.00
Clothing	0.00	-	-	0.01	79.30	0.13	-	16.70	-	0.25	0.24	3.36	100.00
Leather Products	0.00	3.63	-	-	4.40	0.15	-	79.76	-	1.73	0.98	9.36	100.00
Footwear	-	-	-	-	20.05	3.80	-	31.46	-	0.16	0.90	43.63	100.00
Wood Products	0.09	6.64	-	0.53	1.27	0.76	-	83.97	1.88	3.86	0.63	0.38	100.00
Furniture	0.11	-	-	1.88	5.03	0.43	8.49	20.69	-	0.51	0.17	62.68	100.00
Paper and Paper Products	0.00	3.29	-	0.00	0.62	2.12	-	85.54	5.37	0.97	0.15	1.94	100.00
Printing and Publishing	-	-	-	0.01	0.31	0.00	0.36	98.98	-	0.03	0.03	0.27	100.00
Industrial Chemicals	6.51	2.15	-	-	2.92	1.82	-	2.92	0.32	0.94	0.57	1.30	100.00
Other Chemicals	-	-	-	0.33	18.64	0.56	44.59	18.58	-	2.08	0.22	13.76	100.00
Rubber Products	0.02	-	-	0.07	1.77	4.04	-	90.56	-	0.00	0.04	3.51	100.00
Plastic Products	0.04	-	-	-	22.36	0.08	-	67.88	-	0.70	0.10	8.84	100.00
Pottery, China and Earthenware	-	-	-	-	2.42	0.54	-	85.07	-	0.04	1.42	10.51	100.00
Glass and Glass Products	-	-	-	-	5.11	1.30	-	82.97	1.51	2.62	0.06	6.42	100.00
Other non-metallic mineral products	0.02	-	0.02	-	0.38	0.49	0.22	98.14	-	0.07	0.25	0.41	100.00
Basic Iron and Steel	-	-	-	-	0.13	3.89	-	85.72	-	2.75	0.18	7.31	100.00
Non-ferrous metals	-	-	-	-	-	1.10	-	90.46	-	0.00	0.00	8.44	100.00
Fabricated Metal Products	0.12	24.77	-	0.79	7.08	8.74	0.73	51.27	1.33	0.40	1.93	0.43	100.00
Machinery	0.66	-	-	-	1.26	0.25	-	95.27	0.03	1.02	0.68	0.84	100.00
Electrical Machinery	0.07	-	-	-	0.44	0.08	-	99.16	-	0.19	0.05	0.01	100.00
Motor vehicle	0.41	-	-	-	0.56	2.23	-	95.54	-	0.55	0.21	0.59	100.00
Transport Equipment	0.02	-	-	-	1.45	5.37	-	89.70	-	0.02	0.00	3.44	100.00
Measuring and controlling equipment	-	3.13	-	0.06	44.13	0.40	1.21	46.94	0.06	0.31	0.00	3.67	100.00
Other Manufactured Products	9.37	2.14	-	0.03	1.62	0.08	2.77	80.02	1.16	0.40	1.04	0.72	100.00
Unclassified	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	14.25	5.99	0.22	1.51	5.01	1.17	3.60	57.22	1.12	1.87	4.71	3.33	100.00

Source: IDC, Author's calculations

Table 4: Intra-SADC Revealed Comparative Advantage Indicators (RCA's): each country with respect to the SADC Group (average trade 1991 - 1993)

Sectors	Angola	Botswana	Lesotho	Malawi	Mauritius	Mozambique	Namibia	RSA	Swaziland	Tanzania	Zambia	Zimbabwe
Agriculture	0.10	1.72	5.02	7.81	6.26	7.97	1.16	1.48	4.40	6.55	3.19	
maize			3.89				0.96			0.39	3.60	
other grains		0.02	2.16				0.90			7.95	0.46	
tobacco				105.69	2.10		0.33			17.35	29.11	
sugar				0.45	17.25		2.14			92.59		
beef		10.40	10.68				0.26				0.70	
horticulture		0.80		5.11	0.04		1.45		6.10	16.61	3.15	
cotton				0.63	5.64		0.60		55.49	2.99	0.01	
tea and coffee				92.49			1.01		0.68	0.27	7.56	
agriculture n.c	0.38	1.26	8.73	0.80	21.55		1.96	5.48	1.85	1.60	1.81	
Mining		0.39			0.00		0.28	0.23	0.00	0.34	0.51	
Manufacturing	1.10	0.97	0.80	0.63	0.72		1.02	1.00	0.84	0.68	0.87	
Food Products		7.75	6.17	0.89	1.03		5.48	4.45	0.78	0.96	1.11	
Beverages		1.03		0.30	0.01			18.24		0.02	0.91	
Tobacco	66.36			0.22	1.81		1.36		25.95	3.59	0.81	
Textiles		1.03	2.32	3.55	3.15		0.89	1.42	0.46	0.58	1.70	
Clothing				2.99	7.19		2.77		4.40		4.17	
Leather Products		0.62					0.53				1.04	
Footwear							1.75				0.63	
Wood Products		1.37		3.82	11.90		1.39	3.92	0.25	17.86	3.31	
Furniture			10.00				0.75			0.37		
Paper and Paper Products		2.29		0.05			1.50	4.67	1.85	0.26	0.61	
Printing and Publishing			0.30				1.65			0.06	0.32	
Industrial Chemicals	4.67	1.04			0.03		0.68	0.05	1.42	0.58	0.45	
Other Chemicals			0.07	0.23	0.05		1.13		0.02	0.22	0.76	
Rubber Products				0.02	1.26		1.11		0.19	0.23	0.50	
Plastic Products							1.50			0.23	0.64	
Pottery and Earthenware							1.10				0.79	
Glass and Glass Products							1.01	2.23		2.87	0.19	
Oth. Non-Met Min. Products			0.21	0.35			0.39		0.13	4.70	2.79	
Basic Iron and Steel							1.31		7.06	0.24	6.73	
Non-Ferrous Metals							0.98		0.00	0.00	10.84	
Fab. Metal Products		1.58		2.82	0.02		1.80	0.33	2.45	0.11	0.77	
Machinery	0.00				0.04		0.49	0.05	0.03	0.08	0.11	
Electrical Machinery	0.00				0.11		0.66		0.01	0.50	0.35	
Motor Vehicle	0.26				0.26		1.28		0.14	0.71	0.18	
Transport Equipment	0.00				0.01		0.22			0.00	0.53	
Measuring Equipment		0.24	0.02	0.01	0.07		0.31	0.01	0.05	0.00	0.04	
Oth. Manuf. Products	0.29	0.11	1.84	1.47	0.02		0.16	0.57	0.88	0.14	0.06	

Source: IDC, Author's estimations

Table 5: Comparative Advantage for SADC's World Trade by Country (average trade 1991 - 1993)

Sectors	Angola	Botswana	Lesotho	Malawi	Mauritius	Mozambique	Namibia	RSA	Swaziland	Tanzania	Zambia	Zimbabwe	SADC
1 Agriculture	-0.27	-0.29	-0.97	0.94	0.68	0.32	0.68	0.38	-0.34	0.91	0.01	0.66	0.55
2 maize	-1.00	-1.00	-1.00	-1.00	-0.96	-1.00	-1.00	-0.86	-1.00	-1.00	-0.98	-0.75	-0.89
3 other grains	-1.00	-0.24	-1.00	-1.00	-1.00	-1.00	-1.00	-0.05	-1.00	-0.99	-0.52	-0.98	-0.21
4 tobacco	-1.00	-1.00	-1.00	0.99	1.00	1.00	1.00	0.09	-1.00	0.99	1.00	1.00	0.97
5 sugar	-1.00	-1.00	-1.00	1.00	1.00	0.06	1.00	0.98	-1.00	0.13	-0.68	0.50	0.91
6 beef	-1.00	-0.88	-0.94	0.69	-0.95	-0.60	0.88	-0.03	-1.00	-1.00	0.91	0.99	-0.35
7 horticulture	-1.00	0.73	-1.00	0.69	0.52	-0.37	-1.00	-0.09	-1.00	0.95	0.97	0.34	0.27
8 cotton	-0.78	-1.00	-1.00	1.00	-0.91	0.95	-1.00	-0.92	-1.00	1.00	0.99	0.76	0.30
9 tea and coffee	-1.00	-1.00	-1.00	1.00	0.93	0.34	-1.00	0.07	-1.00	1.00	1.00	1.00	0.82
10 agriculture n.e.c.	0.53	-0.23	-0.74	0.96	-0.85	1.00	0.96	0.63	0.36	-0.80	0.98	0.70	0.78
11 Mining	1.00	1.00	-1.00	-1.00	0.90	-0.10	0.96	-0.20	0.80	-0.70	-0.80	-0.50	-0.26
12 Manufacturing	-0.70	0.10	-0.10	-0.80	-0.20	-0.59	0.50	-0.20	0.80	-0.70	-0.80	-0.50	-0.26
13 Food Products	-1.00	0.67	0.49	0.82	-0.49	-0.18	0.78	-0.94	1.00	0.14	0.19	0.33	0.04
14 Beverages	-1.00	0.94	-1.00	0.69	-0.67	-0.61	-1.00	-0.37	0.95	-1.00	-0.92	0.95	-0.18
15 Tobacco	0.76	-1.00	-1.00	-0.97	-0.72	-0.60	-1.00	-0.24	-1.00	-0.89	-0.94	-0.66	-0.24
16 Textiles	-1.00	0.55	0.21	-0.99	0.03	-0.89	-0.52	-0.40	0.92	-0.37	-0.07	-0.14	-0.22
17 Clothing	-1.00	-1.00	-1.00	-0.87	0.93	-0.59	-1.00	0.41	-1.00	-0.93	0.42	0.87	0.59
18 Leather Products	-1.00	0.29	-1.00	-1.00	-0.48	-0.80	-1.00	-0.03	-1.00	-0.45	-0.17	0.64	-0.08
19 Footwear	-1.00	-1.00	-1.00	-1.00	-0.51	-0.84	-1.00	-0.86	-1.00	-1.00	-0.97	0.35	-0.88
20 Wood Products	-0.99	0.90	-1.00	0.81	0.29	-0.66	-1.00	-0.07	0.94	0.12	0.55	-0.10	-0.09
21 Furniture	-1.00	-1.00	-0.82	1.00	-0.66	-0.98	0.02	-0.81	-1.00	-0.97	-0.98	0.19	-0.73
22 Paper and Paper Products	-1.00	0.92	-1.00	-1.00	-0.80	0.36	-1.00	0.12	0.99	-0.71	0.03	-0.43	0.02
23 Printing and Publishing	-1.00	-1.00	-0.77	-1.00	-0.91	-0.99	-0.65	0.02	-1.00	-0.99	-0.97	-0.34	-0.11
24 Industrial Chemicals	-0.01	-0.37	-1.00	-1.00	-0.70	-0.52	-1.00	-0.41	-0.38	-0.89	-0.89	-0.92	-0.30
25 Other Chemicals	-1.00	-1.00	-0.98	-0.95	-0.79	-0.98	-0.05	-0.98	-1.00	-0.97	-0.99	-0.72	-0.94
26 Rubber Products	-1.00	-1.00	-1.00	-1.00	-0.90	-0.33	-1.00	-0.63	-1.00	-1.00	-1.00	-0.86	-0.75
27 Plastic Products	-1.00	-1.00	-1.00	-1.00	-0.88	-1.00	-1.00	-0.91	-1.00	-0.99	-0.99	-0.66	-0.92
28 Pottery, China and Earthenware	-1.00	-1.00	-1.00	-1.00	-0.96	-0.95	-1.00	-0.76	-1.00	-1.00	-0.87	-0.11	-0.84
29 Glass and Glass Products	-1.00	-1.00	-1.00	-1.00	-0.79	-0.77	-1.00	-0.37	0.27	-0.73	-0.99	-0.61	-0.33
30 Other non-metallic mineral products	-0.99	-1.00	-0.98	-1.00	-0.97	0.12	-0.29	-0.15	-1.00	-0.97	-0.79	-0.85	-0.30
31 Basic Iron and Steel	-0.98	-1.00	-1.00	-1.00	-0.82	0.76	-1.00	0.81	-1.00	0.09	-0.62	0.35	0.66
32 Non-ferrous metals	-1.00	-1.00	-1.00	-1.00	-1.00	0.68	-1.00	0.76	-1.00	-1.00	-1.00	0.80	0.68
33 Fabricated Metal Products	-1.00	0.98	0.71	-0.51	-0.64	-0.43	-0.35	-0.77	0.96	-0.98	0.76	-0.68	-0.69
34 Machinery	-0.95	-1.00	-1.00	-1.00	-0.86	-0.86	-1.00	-0.51	-0.97	-0.89	-0.89	-0.95	-0.61
35 Electrical Machinery	-0.99	-1.00	-1.00	-1.00	-0.92	-0.91	-1.00	-0.23	-1.00	-0.96	-0.97	-1.00	-0.37
36 Motor vehicle	-0.99	-1.00	-1.00	-1.00	-0.97	-0.87	-1.00	-0.56	-1.00	-0.99	-0.99	-0.99	-0.77
37 Transport Equipment	-1.00	-1.00	-1.00	-1.00	-0.85	-0.78	-1.00	-0.14	-1.00	-1.00	-1.00	-0.71	-0.58
38 Measuring and controlling equipment	-1.00	0.41	-0.60	-0.96	0.10	-0.85	-0.02	-0.73	-1.00	-0.24	-0.95	-1.00	-0.60
39 Other Manufactured Products	0.92	0.81	-0.76	0.58	-0.15	-0.20	0.98	0.72	0.98	-0.03	0.66	0.44	0.70
40 Unclassified	-1.00												
Average	0.40	0.71	-0.23	0.16	-0.05	-0.25	0.75	0.08	0.72	-0.39	0.45	-0.16	0.14

Source: IDC, Author's calculation

Table 6: Comparative Advantage Indicators for Total Country Trade (average trade 1991 - 1993)

Sectors	Angola	Botswana	Lesotho	Malawi	Mauritius	Mozambique	Namibia	RSA	Swaziland	Tanzania	Zambia	Zimbabwe
Goods	0.33	-0.01	-0.80	-0.03	-0.07	-0.42	0.04	0.19	-0.13	-0.39	0.22	-0.13
Agriculture	-0.39	-0.61	-0.76	0.00	0.71	0.18	0.52	0.27	-0.43	0.90	-0.04	0.05
maize	-1.00	-1.00	-0.88	-1.00	-0.98	-1.00	-1.00	-0.13	-1.00	-1.00	-0.98	-0.38
other grains	-1.00	-0.73	-1.00	-1.00	-1.00	-1.00	-1.00	0.09	-1.00	-0.99	-0.04	-0.80
tobacco	-1.00	-1.00	-1.00	0.98	-1.00	0.57	-1.00	-0.52	-1.00	0.99	0.99	0.99
sugar	-1.00	-1.00	-1.00	1.00	1.00	-0.21	-1.00	0.94	-1.00	0.03	-0.12	-0.06
beef	-1.00	0.39	-0.28	-1.00	-0.97	-0.42	0.99	-0.87	-1.00	-1.00	-0.91	1.00
horticulture	-1.00	-0.39	-1.00	0.41	-0.48	-0.41	-1.00	0.20	-1.00	0.95	0.95	0.40
cotton	-0.78	-1.00	-1.00	1.00	-0.92	0.94	-1.00	-0.62	-1.00	1.00	0.98	0.69
tea and coffee	-1.00	-1.00	-1.00	1.00	0.91	-0.08	-1.00	-0.03	-1.00	1.00	0.94	1.00
agriculture n.e.c	0.34	-0.70	-0.70	0.06	0.86	0.88	0.20	0.70	-0.04	0.79	0.04	0.30
Mining	1.00	0.99	-1.00	-1.00	-0.97	-0.70	0.93	0.62	-0.02	-0.80	0.93	0.24
Manufacturing	-0.72	-0.55	-0.80	-0.78	-0.21	-0.62	-0.37	0.04	-0.10	-0.68	-0.82	-0.60
Food Products	-1.00	0.12	-0.22	-0.49	-0.22	-0.63	0.50	0.08	0.48	0.14	-0.85	0.32
Beverages	-1.00	0.21	-1.00	-0.75	-0.78	-0.99	-1.00	0.25	0.70	-1.00	-1.00	0.05
Tobacco	0.74	-1.00	-1.00	-0.91	-0.73	-0.70	-1.00	0.78	-1.00	-1.00	-0.61	-0.48
Textiles	-1.00	-0.16	-0.77	-0.30	0.10	-0.75	-0.37	-0.13	-0.19	-0.37	-0.43	0.00
Clothing	-1.00	-1.00	-1.00	-0.17	0.92	-0.62	-1.00	0.67	-1.00	-1.00	-0.28	0.91
Leather Products	-1.00	-0.13	-1.00	-1.00	-0.47	-0.82	-1.00	0.05	-1.00	-0.45	-0.25	0.68
Footwear	-1.00	-1.00	-1.00	-1.00	-0.46	-0.87	-1.00	0.32	-1.00	-1.00	-0.97	0.68
Wood Products	-0.99	-0.48	-1.00	0.38	-0.69	-0.32	-1.00	0.10	0.35	0.11	0.56	0.64
Furniture	-1.00	-1.00	-0.77	-1.00	-0.75	-0.98	-1.00	0.37	-1.00	-0.97	-0.99	0.23
Paper and Paper Products	-1.00	-0.40	-1.00	-0.99	-0.85	-0.14	-1.00	0.27	0.24	-0.69	-0.92	-0.51
Printing and Publishing	-1.00	-1.00	-0.96	-1.00	-0.93	-0.98	-1.00	0.29	-1.00	-0.85	-0.99	-0.37
Industrial Chemicals	0.00	-0.55	-1.00	-1.00	-0.71	-0.55	-1.00	-0.20	-0.90	-0.87	-0.90	-0.82
Other Chemicals	-1.00	-1.00	-0.99	-0.91	-0.81	-0.33	-1.00	-0.33	-1.00	-1.00	-0.98	-0.51
Rubber Products	-1.00	-1.00	-1.00	-0.99	-0.89	-1.00	-1.00	-0.15	-1.00	-1.00	-0.99	-0.65
Plastic Products	-1.00	-1.00	-1.00	-1.00	-0.89	-1.00	-1.00	-0.13	-1.00	-0.99	-0.98	-0.53
Pottery, China and Earthenware	-1.00	-1.00	-1.00	-1.00	-0.97	-0.97	-1.00	-0.19	-1.00	-1.00	-0.94	-0.19
Glass and Glass Products	-1.00	-1.00	-1.00	-1.00	-0.79	-0.77	-1.00	-0.05	-1.00	-0.05	-0.76	-0.56
Other non-metallic mineral products	-1.00	-1.00	-0.99	-0.82	-0.97	-0.70	-1.00	0.25	-1.00	-0.96	-0.96	0.05
Basic Iron and Steel	-0.98	-1.00	-1.00	-1.00	-0.89	0.54	-1.00	0.78	-1.00	0.09	-0.79	0.43
Non-ferrous metals	-1.00	-1.00	-1.00	-1.00	-1.00	0.66	-1.00	0.68	-1.00	-1.00	-1.00	0.74
Fabricated Metal Products	-1.00	-0.55	-0.89	-0.46	-0.70	-0.31	-1.00	-0.83	-0.01	-0.80	-0.92	-0.52
Machinery	-0.95	-1.00	-1.00	-1.00	-0.95	-0.95	-1.00	-0.34	-0.90	-0.89	-0.91	-0.92
Electrical Machinery	-0.99	-1.00	-1.00	-1.00	-0.91	-0.97	-1.00	-0.08	-1.00	-0.96	-0.94	-0.82
Motor vehicle	-0.99	-1.00	-1.00	-1.00	-0.94	-0.90	-1.00	0.04	-1.00	-0.90	-0.96	-0.93
Transport Equipment	-1.00	-1.00	-1.00	-1.00	-0.85	-0.78	-1.00	-0.05	-1.00	-1.00	-1.00	-0.51
Measuring and controlling equipment	-1.00	-0.57	-0.94	-0.96	-0.96	-0.89	-0.89	-0.48	-1.00	-0.95	-1.00	-0.71
Other Manufactured Products	0.92	0.52	-0.82	0.59	-0.15	-0.25	0.73	0.72	0.36	-0.03	0.63	0.30
Unclassified	-1.00											
Services	-0.89	-0.33	-0.24	-0.82	0.07	-0.21	-0.87	-0.14	-0.44	-0.34	-0.67	-0.32
Transport	-0.68	-0.06	-0.09	-0.78	0.42	0.11	-0.72	0.23	0.63	0.01	-0.49	-0.03
Travel	-0.21	-0.31	-0.57	-0.13	0.15	-1.00	-1.00	-0.10	-0.28	-0.59	-0.28	0.27
Business	-1.00	0.20	0.58	-0.64	0.38	-1.00	-0.87	0.33	-0.67	-0.17	-0.72	-0.31
Good and Services	0.02	-0.95	-0.76	-0.25	-0.04	-0.37	-0.11	0.13	-0.19	-0.37	0.07	-0.18

Source: IDC; IMF, Balance of Payments Statistics Yearbook, 1997; Author's estimation

Table 7: Direct Requirements Table for Sectors Showing Comparative Advantage (South Africa, 1993)

Description	SIC code (4th ed.)	Agr/cultures	Mining	Other Manuf. Products	Non-Ferrous Metals	Basic Iron and Steel	Clothing	Food Products	Paper Products	Leather Products	Wood Products	Printing and Publishing	
Agricultures	1100	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.01	0.00	0.16	0.00
Mining	2100-2800	0.00	0.00	0.29	0.09	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manufacturing	3000-3900	0.38	0.71	0.29	0.27	0.18	0.10	0.27	0.14	0.47	0.27	0.27	0.31
Food Products	3111-3122	0.11	0.00	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.00	0.00
Beverages	3131-3134	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tobacco	3140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Textiles	3211-3219	0.01	0.00	0.01	0.00	0.00	0.37	0.00	0.00	0.06	0.00	0.00	0.00
Clothing	3220	0.00	0.00	0.08	0.00	0.01	0.04	0.00	0.00	0.00	0.01	0.01	0.03
Leather Products	3231-3233	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.14	0.00	0.00
Footwear	3240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wood Products	3310	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
Furniture	3320	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paper & Paper Prod	3411-3419	0.01	0.00	0.01	0.00	0.00	0.01	0.01	0.03	0.31	0.02	0.01	0.18
Printing & Publishing	3420	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.06
Industrial Chem	3511-3538	0.02	0.02	0.02	0.03	0.01	0.01	0.01	0.02	0.07	0.07	0.01	0.00
Other Chem	3539	0.00	0.02	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.01
Rubber Prod	3551-3559	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Plastic Prod	3564-3566	0.05	0.03	0.02	0.01	0.01	0.01	0.01	0.02	0.03	0.05	0.01	0.01
Pottery, China, Earthenware	3610	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Glass and Glass Prod	3620	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-met. Min Prod	3691-3692, 3699	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Basic Iron & Steel	3710	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-Ferrous Metals	3720	0.00	0.00	0.07	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Fabricated Met. Prod	3811-3819	0.01	0.02	0.04	0.00	0.02	0.00	0.00	0.02	0.00	0.01	0.04	0.00
Machinery	3821-3829	0.01	0.06	0.01	0.01	0.03	0.01	0.01	0.02	0.02	0.01	0.03	0.01
Electrical Machinery	3831-3839	0.00	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motor Vehicle	3840/1/2/3	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transport Equipment	3851/2/4/5/9	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other manufactured goods	3901/2/3/5/366	0.00	0.00	0.04	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Electricity, Gas, Steam	4100	0.01	0.06	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.00	0.02	0.01
Water Supply	4200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Services	5000-5900	0.12	0.13	0.17	0.16	0.14	0.12	0.16	0.16	0.21	0.12	0.16	0.21
Construction and Civil Engineering	5100, 5200, 5300	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wholesale, Retail and Motor Trade	61, 620, 621, 622	0.01	0.03	0.04	0.03	0.02	0.01	0.05	0.05	0.07	0.06	0.05	0.07
Printing and Accommodation	6300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transport and Storage	7100	0.02	0.02	0.01	0.03	0.01	0.01	0.01	0.03	0.02	0.03	0.02	0.01
Communication	7200	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Financial and Insurance Services	81, 82, 800	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01
Real Estate	8310	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02
Other Business Services	8320-8330	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.01	0.02
Health Services	9130	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Services	9200, 9600, 9900	0.01	0.06	0.03	0.08	0.06	0.03	0.03	0.05	0.08	0.02	0.05	0.02
Total Intermediate Input		0.69	0.40	0.71	0.56	0.47	0.63	0.71	0.74	0.74	0.54	0.61	0.57
Value Added		0.49	0.56	0.30	0.46	0.45	0.39	0.46	0.24	0.38	0.24	0.39	0.46
Net Indirect Taxes		0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Transfers		0.00	0.02	-0.01	-0.02	0.00	-0.04	-0.01	-0.01	-0.13	-0.01	0.01	0.00
Total Input		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Source: CSS

Appendix 3: Revealed Comparative Advantage Analysis Using SITC Coded Data

Table 1: Complete Ranking of RCA's for SADC Exports (1995)

SITC No.	Description	RCA Indicator (1995)	Ave. Growth: 1986-1995
41	Coal, coke and briquettes	11.081	6.72
92	Special transactions and commodities not classified according to kind	8.245	2,138.63
43	Animals, (live, zoo animals, dogs, cats etc)	6.726	38.57
95	Sugar, sugar preparations and honey	5.187	-0.42
84	Tobacco and tobacco manufactures	4.701	4.58
58	Inorganic chemicals	4.339	12.24
11	Metalliferous ores and metal scrap	4.161	2.89
04	Crude fertilizers and crude materials (excl. coal)	3.561	45.17
59	Non-metallic mineral manufactures n.e.s	3.491	59.65
32	Pulp and waste paper	3.185	9.03
24	Non-ferrous metals	2.921	-2.33
63	Iron and steel	2.841	5.11
29	Petroleum, petroleum products and related materials	2.069	13.78
27	Vegetables and fruit	1.930	2.13
23	Hides, skins and furskins, raw	1.872	5.83
53	Textile fibres (except wool tops) and their wastes	1.593	1.91
02	Fertilizers manufactured	1.577	45.36
77	Furniture and parts thereof	1.193	32.28
55	Fish, crustaceans, molluscs, preparations thereof	1.109	5.96
08	Unclassified	1.016	20.30
56	Leather, leather manuf. n.e.s and dressed furskin	0.991	5.74
07	Gold, non-monetary (excluding gold ores and concentrates)	0.906	2,172.02
03	Articles of apparel and clothing accessories	0.888	7.14
42	Crude animal and vegetable materials n.e.s	0.862	7.15
82	Paper, paperboard, etc. of paper, paper-pulp/board	0.822	8.72
85	Cereals and cereal preparations	0.784	65.39
34	Beverages	0.777	38.83
74	Miscel. edible products and preparations	0.728	41.94
21	Cork and wood	0.699	21.08
52	Chemical materials and products n.e.s.	0.613	32.13
97	Animal oils and fats	0.601	128.17
67	Coffee, tea, cocoa, spices, manufactures thereof	0.598	1.10
61	Manufactures of metal n.e.s.	0.545	17.25
00	Cork and wood manufactures (excl. furniture)	0.448	13.08
72	Oil seeds and oleaginous fruit	0.425	6.58
54	Dyes, tanning and colouring materials	0.402	6.98
69	Rubber manufactures n.e.s.	0.392	27.86
01	Machinery specialized for particular industries	0.386	24.42
73	Textile yarn, fabrics, made-up, related products	0.386	4.10
09	Organic chemicals	0.366	12.64
28	Essential oils & perfume mat., toilet-cleansing mat.	0.364	32.87
68	Meat and meat preparations	0.321	3.55
80	General industrial machinery & equipment, and parts	0.318	29.62
75	Feeding stuff for animals, not incl. animal cereals	0.291	2.67
66	Dairy products and birds' eggs	0.271	38.24
79	Fixed vegetable oils and fats	0.271	0.39
22	Road vehicles (incl. air cushion vehicles)	0.236	42.22
71	Miscellaneous manufactured articles n.e.s.	0.221	14.90
88	Artif. resins, plastic mat., cellulose esters/ethers	0.219	17.64
64	Live animals chiefly for food	0.218	52.92
87	Other transport equipment	0.206	27.80
62	Travel goods, handbags and similar containers	0.198	6.48
33	Gas, natural and manufactured	0.197	45.21
78	Crude rubber (including synthetic and reclaimed)	0.191	16.31
25	Sanitary, plumbing, heating and lighting fixtures	0.191	29.25
51	Animal-vegetable oils-fats processed and waxes	0.187	86.94
81	Professional, scientific & controlling instruments	0.148	14.45
93	Power generating machinery and equipment	0.133	18.42
65	Photographic apparatus, optical goods, watches	0.129	3.58
06	Footwear	0.126	24.15
76	Metalworking machinery	0.122	24.40
26	Medicinal and pharmaceutical products	0.114	20.31
12	Electrical machinery, apparatus & appliances n.e.s	0.097	18.77
83	Telecommunications & sound recording apparatus	0.073	27.03
99	Office machines & automatic data processing equip.	0.047	12.65
35	Arms of war and ammunition thereof	0.016	1,263.45
05	Electric current	0.000	-100.00

Table 2: Complete Ranking of RCA Average Annual Growth Rates for SADC: 1986 - 1995

SITC No	Description	Ave Growth: 1986 - 1995	RCA Indicator (1995)
07	Gold, non-monetary (excluding gold ores and concentrates)	2172.023	0.906
94	Special transactions and commodities not classified according to kind	2138.627	8.245
35	Arms of war and ammunition therefor	1263.447	0.016
97	Animal oils and fats	128.165	0.601
51	Animal-vegetable oils-fats, processed, and waxes	86.938	0.187
85	Cereals and cereal preparations	65.385	0.784
59	Non-metallic mineral manufactures, n.e.s.	59.650	3.491
64	Live animals chiefly for food	52.924	0.218
02	Fertilizers, manufactured	45.361	1.577
33	Gas, natural and manufactured	45.211	0.197
04	Crude fertilizers and crude materials (excl. coal)	45.166	3.561
22	Road vehicles (incl. air cushion vehicles)	42.218	0.236
74	Miscel. edible products and preparations	41.938	0.728
34	Beverages	38.827	0.777
43	Animals live, zoo animals, dogs, cats etc	38.571	6.726
66	Dairy products and birds' eggs	38.243	0.271
28	Essential oils & perfume mat., toilet-cleansing mat.	32.872	0.364
77	Furniture and parts thereof	32.284	1.193
52	Chemical materials and products, n.e.s.	32.131	0.613
80	General industrial machinery & equipment, and parts	29.623	0.318
25	Sanitary, plumbing, heating and lighting fixtures	29.249	0.191
69	Rubber manufactures, n.e.s.	27.863	0.392
87	Other transport equipment	27.799	0.206
83	Telecommunications & sound recording apparatus	27.031	0.073
01	Machinery specialized for particular industries	24.415	0.386
76	Metalworking machinery	24.401	0.125
06	Footwear	24.147	0.126
21	Cork and wood	21.078	0.699
26	Medicinal and pharmaceutical products	20.305	0.114
08	Unclassified	20.299	1.016
12	Electrical machinery, apparatus & appliances, n.e.s.	18.769	0.097
93	Power generating machinery and equipment	18.416	0.133
88	Artif. resins, plastic mat., cellulose esters/ethers	17.640	0.219
61	Manufactures of metal, n.e.s.	17.252	0.545
78	Crude rubber (including synthetic and reclaimed)	16.310	0.191
71	Miscellaneous manufactured articles, n.e.s.	14.899	0.221
81	Professional, scientific & controlling instruments	14.452	0.148
29	Petroleum, petroleum products and related materials	13.778	2.069
00	Cork and wood manufactures (excl. furniture)	13.084	0.448
99	Office machines & automatic data processing equip	12.650	0.047
09	Organic chemicals	12.639	0.366
58	Inorganic chemicals	12.242	4.339
32	Pulp and waste paper	9.033	3.185
82	Paper, paperboard, artic. of paper, paper-pulp/board	8.715	0.822
42	Crude animal and vegetable materials, n.e.s.	7.147	0.862
03	Articles of apparel and clothing accessories	7.136	0.888
54	Dyeing, tanning and colouring materials	6.977	0.402
41	Coal, coke and briquettes	6.719	11.081
72	Oil seeds and oleaginous fruit	6.579	0.425
62	Travel goods, handbags and similar containers	6.476	0.198
35	Fish, crustaceans, molluscs, preparations thereof	5.963	1.109
23	Hides, skins and furskins, raw	5.829	1.872
56	Leather, leather manuf., n.e.s. and dressed furskin	5.742	0.991
63	Iron and steel	5.114	2.841
84	Tobacco and tobacco manufactures	4.578	4.701
73	Textile yarn, fabrics, made-up art., related products	4.100	0.386
65	Photographic apparatus, optical goods, watches	3.579	0.129
68	Meat and meat preparations	3.547	0.321
11	Metalliferous ores and metal scrap	2.885	4.161
75	Feeding stuff for animals, not incl. unmi. cereals	2.667	0.291
27	Vegetables and fruit	2.129	1.930
53	Textile fibres (except wool tops) and their wastes	1.906	1.593
67	Coffee, tea, cocoa, spices, manufactures thereof	1.102	0.598
79	Fixed vegetable oils and fats	0.390	0.271
95	Sugar, sugar preparations and honey	-0.417	5.187
24	Non-ferrous metals	-2.328	2.921
05	Electric current	-100.000	0.000

Source: IDC (1998)

Table 3: Share of Different Commodities in Total Exports for Each SADC Country (1995)¹

Country (SADC)	SITC Code	Description	1995 Exports (millions of US \$)	Share (%)
ANGOLA	00	Live animals chiefly for food	-	-
ANGOLA	01	Meat and meat preparations	-	-
ANGOLA	02	Dairy products and birds' eggs	-	-
ANGOLA	03	Fish, crustaceans, molluscs, preparations thereof	28,312	0.28
ANGOLA	04	Cereals and cereal preparations	-	-
ANGOLA	05	Vegetables and fruit	32	0.00
ANGOLA	06	Sugar, sugar preparations and honey	-	-
ANGOLA	07	Coffee, tea, cocoa, spices, manufactures thereof	4,707	0.13
ANGOLA	08	Feeding stuff for animals, not incl. tritic. cereals	-	-
ANGOLA	09	Miscel. edible products and preparations	-	-
ANGOLA	11	Beverages	61	0.00
ANGOLA	12	Tobacco and tobacco manufactures	-	-
ANGOLA	21	Hides, skins and furskins, raw	48	0.00
ANGOLA	22	Oil seeds and oleaginous fruit	-	-
ANGOLA	23	Crude rubber (including synthetic and reclaimed)	-	-
ANGOLA	24	Cork and wood	1,571	0.04
ANGOLA	25	Pulp and waste paper	-	-
ANGOLA	26	Textile fibres (except wool tops) and their wastes	205	0.01
ANGOLA	27	Crude fertilizers and crude materials (excl. coal)	302	0.02
ANGOLA	28	Metaliferous ores and metal scrap	4,686	0.13
ANGOLA	29	Crude animal and vegetable materials, n.e.s.	-	-
ANGOLA	32	Coal, coke and briquettes	-	-
ANGOLA	33	Petroleum, petroleum products and related materials	3,368,227	92.30
ANGOLA	34	Gas, natural and manufactured	23,987	0.66
ANGOLA	41	Animal oils and fats	-	-
ANGOLA	42	Fixed vegetable oils and fats	-	-
ANGOLA	43	Animal-vegetable oils-fats, processed, and waxes	-	-
ANGOLA	51	Organic chemicals	-	-
ANGOLA	52	Inorganic chemicals	-	-
ANGOLA	53	Dyeing, tanning and colouring materials	-	-
ANGOLA	54	Medicinal and pharmaceutical products	13	0.00
ANGOLA	55	Essential oils & perfume mat.; toilet-cleaning mat.	-	-
ANGOLA	56	Fertilizers, manufactured	-	-
ANGOLA	58	Artif. resins, plastic mat., cellulose esters/ethers	-	-
ANGOLA	59	Chemical materials and products, n.e.s.	-	-
ANGOLA	62	Rubber manufactures, n.e.s.	13	0.00
ANGOLA	63	Cork and wood manufactures (excl. furniture)	229	0.01
ANGOLA	64	Paper, paperboard, art. of paper, paper-pulp/board	5	0.00
ANGOLA	65	Textile yarn, fabrics, made-up art., related products	111	0.00
ANGOLA	66	Non-metallic mineral manufactures, n.e.s.	161,862	4.44
ANGOLA	67	Iron and steel	-	-
ANGOLA	68	Non-ferrous metals	-	-
ANGOLA	69	Manufactures of metal, n.e.s.	221	0.01
ANGOLA	71	Power generating machinery and equipment	2,893	0.08
ANGOLA	72	Machinery specialized for particular industries	1,357	0.04
ANGOLA	73	Metal-working machinery	-	-
ANGOLA	74	General industrial machinery & equipment, and parts	636	0.02
ANGOLA	75	Office machines & automatic data processing equip.	24	0.00
ANGOLA	76	Telecommunications & sound recording apparatus	591	0.02
ANGOLA	77	Electrical machinery, apparatus & appliances, n.e.s.	151	0.00
ANGOLA	78	Road vehicles (incl. air cushion vehicles)	229	0.01
ANGOLA	79	Other transport equipment	1,650	0.05
ANGOLA	81	Sanitary, plumbing, heating and lighting fixtures	-	-
ANGOLA	82	Furniture and parts thereof	225	0.01
ANGOLA	83	Travel goods, handbags and similar containers	-	-
ANGOLA	84	Articles of apparel and clothing accessories	90	0.00
ANGOLA	85	Footwear	13	0.00
ANGOLA	87	Professional, scientific & controlling instruments	649	0.02
ANGOLA	88	Photographic apparatus, optical goods, watches	116	0.00
ANGOLA	89	Miscellaneous manufactured articles, n.e.s.	13	0.00
ANGOLA	93	Special transactions and commodities not classified according to kind	5,829	0.16
ANGOLA	94	Animals, live, zoo animals, dogs, cats, etc.	-	-
ANGOLA	95	Arms, of war and ammunition therefor	-	-
ANGOLA	97	Gold, non-monetary (excluding gold ores and concentrates)	181	0.00
ANGOLA	99	Unclassified	39,581	1.08
ANGOLA	TO	TOTAL	3,649,102	100.00
MALAWI	00	Live animals chiefly for food	-	-
MALAWI	01	Meat and meat preparations	20	0.00
MALAWI	02	Dairy products and birds' eggs	-	-
MALAWI	03	Fish, crustaceans, molluscs, preparations thereof	410	0.10

¹ This table includes data for The Seychelles and Zaire for the reader's information, even though these countries were not included in the main analysis.

MALAWI	04	Cereals and cereal preparations	1,163	0.28
MALAWI	05	Vegetables and fruit	5,406	1.31
MALAWI	06	Sugar,sugar preparations and honey	7,977	1.93
MALAWI	07	Coffee,tea,cocoa,spices,manufactures thereof	47,105	11.38
MALAWI	08	Feeding stuff for animals,not incl. animal cereals	980	0.24
MALAWI	09	Miscel edible products and preparations	83	0.02
MALAWI	11	Beverages	8	0.00
MALAWI	12	Tobacco and tobacco manufactures	263,965	63.78
MALAWI	21	Hides,skins and furskins,raw	570	0.14
MALAWI	22	Oil seeds and oleaginous fruit	1,257	0.30
MALAWI	23	Crude rubber (including synthetic and reclaimed)	2,218	0.54
MALAWI	24	Cork and wood	625	0.15
MALAWI	25	Pulp and waste paper	15	0.00
MALAWI	26	Textile fibres (except wool tops) and their wastes	2,461	0.59
MALAWI	27	Crude fertilizers and crude materials (excl. coal)	59	0.01
MALAWI	28	Metalliferous ores and metal scrap	481	0.12
MALAWI	29	Crude animal and vegetable materials,n.e.s.	3,103	0.75
MALAWI	33	Petroleum,petroleum products and related materials	-	-
MALAWI	35	Electric current	-	-
MALAWI	42	Fixed vegetable oils and fats	139	0.03
MALAWI	43	Animal-vegetable oils-fats,processed, and wastes	-	-
MALAWI	51	Organic chemicals	135	0.03
MALAWI	52	Inorganic chemicals	52	0.01
MALAWI	53	Dyes, tanning and colouring materials	-	-
MALAWI	54	Medicinal and pharmaceutical products	29	0.01
MALAWI	55	Essential oils & perfume mat.;toilet-cleaning mat	21	0.01
MALAWI	56	Fertilizers,manufactured	41	0.01
MALAWI	58	Artif.resins,plastic mat.,cellulose esters/ethers	54	0.01
MALAWI	59	Chemical materials and products,n.e.s.	55	0.01
MALAWI	61	Leather,leather manuf.,n.e.s. and dressed fursking	-	-
MALAWI	62	Rubber manufactures,n.e.s.	-	-
MALAWI	63	Cork and wood manufactures (excl.furniture)	2,117	0.51
MALAWI	64	Paper,osberboard,artic. of paper,paper,pulp/board	109	0.03
MALAWI	65	Textile yarn,fabrics,made-upart.,related products	16,481	3.98
MALAWI	66	Non-metallic mineral manufactures,n.e.s.	43	0.01
MALAWI	67	Iron and steel	6	0.00
MALAWI	68	Non-ferrous metals	49	0.01
MALAWI	69	Manufactures of metal,n.e.s.	177	0.04
MALAWI	71	Power generating machinery and equipment	534	0.13
MALAWI	72	Machinery specialized for particular industries	99	0.02
MALAWI	73	Metalworking machinery	-	-
MALAWI	74	General industrial machinery & equipment and parts	53	0.01
MALAWI	75	Office machines & automatic data processing equip.	84	0.02
MALAWI	76	Telecommunications & sound recording apparatus	1,240	0.30
MALAWI	77	Electrical machinery,apparatus & appliances n.e.s.	238	0.06
MALAWI	78	Road vehicles (incl. air cushion vehicles)	423	0.10
MALAWI	79	Other transport equipment	46	0.01
MALAWI	81	Sanitary,plumbing,heating and lighting fixtures	-	-
MALAWI	82	Furniture and parts thereof	136	0.03
MALAWI	83	Travel goods,handbags and similar containers	44	0.01
MALAWI	84	Articles of apparel and clothing accessories	23,254	5.62
MALAWI	85	Footwear	5	0.00
MALAWI	87	Professional,scientific & controlling instruments	43	0.01
MALAWI	88	Photographic apparatus,optical goods,watches	-	-
MALAWI	89	Miscellaneous manufactured articles,n.e.s.	216	0.05
MALAWI	93	Special transactions and commodities not classified according to kind	1,623	0.39
MALAWI	94	Animals,live,zoo animals,dogs,cats etc.	-	-
MALAWI	99	Unclassified	28,402	6.86
MALAWI	TO	TOTAL	413,854	100.00
MAURITIUS	00	Live animals chiefly for food	109	0.01
MAURITIUS	01	Meat and meat preparations	14,543	0.94
MAURITIUS	02	Dairy products and birds'eggs	86	0.01
MAURITIUS	03	Fish,crustaceans,molluscs,preparations thereof	37,812	2.43
MAURITIUS	04	Cereals and cereal preparations	2,590	0.17
MAURITIUS	05	Vegetables and fruit	1,130	0.07
MAURITIUS	06	Sugar,sugar preparations and honey	375,446	24.37
MAURITIUS	07	Coffee,tea,cocoa,spices,manufactures thereof	3,924	0.25
MAURITIUS	08	Feeding stuff for animals,not incl. animal cereals	4,070	0.26
MAURITIUS	09	Miscel edible products and preparations	207	0.01
MAURITIUS	11	Beverages	1,836	0.12
MAURITIUS	12	Tobacco and tobacco manufactures	56	0.00
MAURITIUS	21	Hides,skins and furskins,raw	-	-
MAURITIUS	22	Oil seeds and oleaginous fruit	81	0.01
MAURITIUS	23	Crude rubber (including synthetic and reclaimed)	-	-
MAURITIUS	24	Cork and wood	22	0.00
MAURITIUS	25	Pulp and waste paper	518	0.03

MAURITIUS	25	Textile fibres (except wool tops) and their wastes	1,608	0 10
MAURITIUS	27	Crude fertilizers and crude materials (excl. coal)	14	0 00
MAURITIUS	28	Metalliferous ores and metal scrap	2,772	0 18
MAURITIUS	29	Crude animal and vegetable materials, n.e.s.	7,980	0 52
MAURITIUS	32	Coal, coke and briquettes	-	-
MAURITIUS	33	Petroleum, petroleum products and related materials	87	0 01
MAURITIUS	34	Gum, natural and manufactured	21	0 00
MAURITIUS	41	Animal oils and fats	-	-
MAURITIUS	42	Fixed vegetable oils and fats	366	0 02
MAURITIUS	43	Animal-vegetable oils-fats, processed and waxes	44	0 00
MAURITIUS	51	Organic chemicals	509	0 03
MAURITIUS	52	Inorganic chemicals	561	0 00
MAURITIUS	53	Dyeing, tanning and colouring materials	729	0 05
MAURITIUS	54	Medicinal and pharmaceutical products	2,246	0 15
MAURITIUS	55	Essential oils & perfumes mat.; toilet-cleansing mat.	1,053	0 07
MAURITIUS	56	Fertilizers, manufactured	5,939	0 39
MAURITIUS	58	Artificial resins, plastic mat., cellulose esters/ethers	339	0 02
MAURITIUS	59	Chemical materials and products, n.e.s.	694	0 05
MAURITIUS	61	Leather, leather manuf., n.e.s. and dressed furskins	1,609	0 10
MAURITIUS	62	Rubber manufactures, n.e.s.	233	0 02
MAURITIUS	63	Cork and wood manufactures (excl. furniture)	1,702	0 11
MAURITIUS	64	Paper, paperboard, art. of paper, paper-pulp/board	1,368	0 09
MAURITIUS	65	Textile yarn, fabrics, made-up art., related products	77,205	5 01
MAURITIUS	66	Non-metallic mineral manufactures, n.e.s.	33,309	2 16
MAURITIUS	67	Iron and steel	105	0 01
MAURITIUS	68	Non-ferrous metals	65	0 00
MAURITIUS	69	Manufactures of metal, n.e.s.	1,800	0 12
MAURITIUS	71	Power generating machinery and equipment	255	0 02
MAURITIUS	72	Machinery specialized for particular industries	7,585	0 49
MAURITIUS	73	Metalworking machinery	174	0 01
MAURITIUS	74	General industrial machinery & equipment and parts	4,684	0 30
MAURITIUS	75	Office machines & automatic data processing equip.	863	0 06
MAURITIUS	76	Telecommunications & sound recording apparatus	803	0 05
MAURITIUS	77	Electrical machinery, apparatus & appliances, n.e.s.	1,049	0 07
MAURITIUS	78	Road vehicles (incl. air cushion vehicles)	910	0 06
MAURITIUS	79	Other transport equipment	18,133	1 18
MAURITIUS	81	Sanitary, plumbing, heating and lighting fixtures	43	0 00
MAURITIUS	82	Furniture and parts thereof	859	0 06
MAURITIUS	83	Travel goods, handbags and similar containers	4,641	0 30
MAURITIUS	84	Articles of apparel and clothing accessories	810,007	52 57
MAURITIUS	85	Footwear	1,295	0 08
MAURITIUS	87	Professional, scientific & controlling instruments	6,811	0 44
MAURITIUS	88	Photographic apparatus, optical goods, watches	41,925	2 72
MAURITIUS	89	Miscellaneous manufactured articles, n.e.s.	50,642	3 29
MAURITIUS	93	Special transactions and commodities not classified according to kind	-	-
MAURITIUS	94	Animals, live, zoo animals, dogs, cats etc.	5,236	0 34
MAURITIUS	95	Arms, of war and ammunition therefor	-	-
MAURITIUS	97	Gold, non-monetary (excluding gold ores and concentrates)	600	0 04
MAURITIUS	99	Unclassified	-	-
MAURITIUS	TO	TOTAL	1,540,798	100 00
MOZAMBIQUE	00	Live animals chiefly for food	25	0 01
MOZAMBIQUE	01	Meat and meat preparations	75	0 03
MOZAMBIQUE	02	Dairy products and birds/eggs	-	-
MOZAMBIQUE	03	Fish, crustaceans, molluscs, preparations thereof	87,800	33 61
MOZAMBIQUE	04	Cereals and cereal preparations	49	0 02
MOZAMBIQUE	05	Vegetables and fruit	8,668	3 32
MOZAMBIQUE	06	Sugar, sugar preparations and honey	29,466	11 28
MOZAMBIQUE	07	Coffee, tea, cocoa, spices, manufactures thereof	266	0 10
MOZAMBIQUE	08	Feeding stuff for animals, not incl. animal cereals	1,845	0 71
MOZAMBIQUE	09	Miscel. edible products and preparations	25	0 01
MOZAMBIQUE	11	Beverages	109	0 04
MOZAMBIQUE	12	Tobacco and tobacco manufactures	1,331	0 51
MOZAMBIQUE	21	Hides, skins and furskins, raw	230	0 09
MOZAMBIQUE	22	Oil seeds and oleaginous fruit	7,543	2 89
MOZAMBIQUE	23	Crude rubber (including synthetic and reclaimed)	450	0 17
MOZAMBIQUE	24	Cork and wood	6,122	2 34
MOZAMBIQUE	25	Pulp and waste paper	4,863	1 86
MOZAMBIQUE	26	Textile fibres (except wool tops) and their wastes	25,727	9 85
MOZAMBIQUE	27	Crude fertilizers and crude materials (excl. coal)	6,849	2 62
MOZAMBIQUE	28	Metalliferous ores and metal scrap	3,551	1 36
MOZAMBIQUE	29	Crude animal and vegetable materials, n.e.s.	238	0 09
MOZAMBIQUE	32	Coal, coke and briquettes	6,392	2 45
MOZAMBIQUE	33	Petroleum, petroleum products and related materials	101	0 04
MOZAMBIQUE	41	Animal oils and fats	65	0 02
MOZAMBIQUE	42	Fixed vegetable oils and fats	18	0 01
MOZAMBIQUE	43	Animal-vegetable oils-fats, processed and waxes	8	0 00

MOZAMBIQUE	51	Organic chemicals	18	0.01
MOZAMBIQUE	52	Inorganic chemicals	-	-
MOZAMBIQUE	53	Dyeing,tanning and colouring materials	254	0.10
MOZAMBIQUE	54	Medicinal and pharmaceutical products	5	0.00
MOZAMBIQUE	55	Essential oils & perfume mat.:toilet-cleansing mat	54	0.02
MOZAMBIQUE	56	Fertilizers,manufactured	237	0.09
MOZAMBIQUE	58	Artif.resins,plastic mat.,cellulose esters/ethers	65	0.02
MOZAMBIQUE	59	Chemical materials and products,n.e.s.	57	0.02
MOZAMBIQUE	61	Leather,leather manuf.,n.e.s.and dressed furskins	-	-
MOZAMBIQUE	62	Rubber manufactures,n.e.s.	3,576	1.37
MOZAMBIQUE	63	Cork and wood manufactures (excl.furniture)	1,445	0.55
MOZAMBIQUE	64	Paper,paperboard,artic.of paper,paper-pulp/board	8	0.00
MOZAMBIQUE	65	Textile yarn,fabrics,made-upart.,related products	3,449	1.32
MOZAMBIQUE	66	Non-metallic mineral manufactures,n.e.s.	1,419	0.54
MOZAMBIQUE	67	Iron and steel	2,513	0.96
MOZAMBIQUE	68	Non-ferrous metals	1,001	0.38
MOZAMBIQUE	69	Manufactures of metal,n.e.s.	24	0.01
MOZAMBIQUE	71	Power generating machinery and equipment	49	0.02
MOZAMBIQUE	72	Machinery specialized for particular industries	319	0.12
MOZAMBIQUE	73	Metalworking machinery	12	0.00
MOZAMBIQUE	74	General industrial machinery & equipment, and parts	305	0.12
MOZAMBIQUE	75	Office machines & automatic data processing equip.	1,987	0.76
MOZAMBIQUE	76	Telecommunications & sound recording apparatus	29	0.01
MOZAMBIQUE	77	Electrical machinery,apparatus & appliances n.e.s.	405	0.16
MOZAMBIQUE	78	Road vehicles (incl. air cushion vehicles)	556	0.21
MOZAMBIQUE	79	Other transport equipment	1,225	0.47
MOZAMBIQUE	81	Sanitary,plumbing,heating and lighting fixtures	18	0.01
MOZAMBIQUE	82	Furniture and parts thereof	50	0.02
MOZAMBIQUE	83	Travel goods,handbags and similar containers	8	0.00
MOZAMBIQUE	84	Articles of apparel and clothing accessories	1,202	0.46
MOZAMBIQUE	85	Footwear	20	0.01
MOZAMBIQUE	87	Professional,scientific & controlling instruments	67	0.03
MOZAMBIQUE	88	Photographic apparatus,optical goods,watches	-	-
MOZAMBIQUE	89	Miscellaneous manufactured articles,n.e.s.	112	0.04
MOZAMBIQUE	93	Special transactions and commodities not classified according to kind	3,412	1.31
MOZAMBIQUE	94	Animals, live, zoo animals, dogs, cats etc.	118	0.05
MOZAMBIQUE	97	Gold, non-monetary (excluding gold ores and concentrates)	5,312	2.03
MOZAMBIQUE	99	Unclassified	40,086	15.34
MOZAMBIQUE	100	TOTAL	261,233	100.00
SEYCHELLES	01	Meat and meat preparations	-	-
SEYCHELLES	02	Dairy products and birds'eggs	-	-
SEYCHELLES	03	Fish,crustaceans,molluscs,preparations thereof	20,923	40.72
SEYCHELLES	05	Vegetables and fruit	17	0.03
SEYCHELLES	07	Coffee,tea,cocoa,spices,manufactures thereof	717	1.40
SEYCHELLES	08	Feeding stuff for animals,not incl.unmil.cereals	-	-
SEYCHELLES	09	Miscel.edible products and preparations	8	0.02
SEYCHELLES	11	Beverages	438	0.85
SEYCHELLES	12	Tobacco and tobacco manufactures	239	0.47
SEYCHELLES	22	Oil seeds and oleaginous fruit	175	0.34
SEYCHELLES	24	Cork and wood	-	-
SEYCHELLES	27	Crude fertilizers and crude materials (excl.coal)	6	0.01
SEYCHELLES	28	Metalliferous ores and metal scrap	27	0.05
SEYCHELLES	29	Crude animal and vegetable materials,n.e.s.	18	0.04
SEYCHELLES	33	Petroleum,petroleum products and related materials	25,390	49.22
SEYCHELLES	34	Gas,natural and manufactured	-	-
SEYCHELLES	42	Fixed vegetable oils and fats	-	-
SEYCHELLES	51	Organic chemicals	-	-
SEYCHELLES	52	Inorganic chemicals	-	-
SEYCHELLES	53	Dyeing,tanning and colouring materials	-	-
SEYCHELLES	54	Medicinal and pharmaceutical products	13	0.03
SEYCHELLES	55	Essential oils & perfume mat.:toilet-cleansing mat	234	0.46
SEYCHELLES	56	Fertilizers,manufactured	-	-
SEYCHELLES	58	Artif.resins,plastic mat.,cellulose esters/ethers	-	-
SEYCHELLES	59	Chemical materials and products,n.e.s.	-	-
SEYCHELLES	62	Rubber manufactures,n.e.s.	-	-
SEYCHELLES	63	Cork and wood manufactures (excl.furniture)	15	0.03
SEYCHELLES	64	Paper,paperboard,artic.of paper,paper-pulp/board	-	-
SEYCHELLES	65	Textile yarn,fabrics,made-upart.,related products	6	0.01
SEYCHELLES	66	Non-metallic mineral manufactures,n.e.s.	295	0.57
SEYCHELLES	67	Iron and steel	-	-
SEYCHELLES	68	Non-ferrous metals	-	-
SEYCHELLES	69	Manufactures of metal,n.e.s.	25	0.05
SEYCHELLES	71	Power generating machinery and equipment	73	0.14
SEYCHELLES	72	Machinery specialized for particular industries	26	0.05
SEYCHELLES	73	Metalworking machinery	6	0.01
SEYCHELLES	74	General industrial machinery & equipment and parts	706	1.37

SEYCHELLES	75	Office machines & automatic data processing equip	46	0.09
SEYCHELLES	76	Telecommunications & sound recording apparatus	152	0.30
SEYCHELLES	77	Electrical machinery, apparatus & appliances n.e.s.	551	0.11
SEYCHELLES	78	Road vehicles (incl. air cushion vehicles)	16	0.03
SEYCHELLES	79	Other transport equipment	354	0.69
SEYCHELLES	81	Sanitary, plumbing, heating and lighting fixtures	-	-
SEYCHELLES	82	Furniture and parts thereof	18	0.04
SEYCHELLES	83	Travel goods, handbags and similar containers	-	-
SEYCHELLES	84	Articles of apparel and clothing accessories	6	0.01
SEYCHELLES	85	Footwear	-	-
SEYCHELLES	87	Professional scientific & controlling instruments	1,085	2.11
SEYCHELLES	88	Photographic apparatus, optical goods, watches	161	0.31
SEYCHELLES	89	Miscellaneous manufactured articles, n.e.s.	230	0.45
SEYCHELLES	93	Special transactions and commodities not classified according to kind	-	-
SEYCHELLES	94	Animals, live, zoo animals, dogs, cats, etc.	-	-
SEYCHELLES	TO	TOTAL	51,380	100.00
SOUTH AFRICA	00	Live animals chiefly for food	4,256	0.02
SOUTH AFRICA	01	Meat and meat preparations	70,413	0.26
SOUTH AFRICA	02	Dairy products and birds' eggs	45,521	0.17
SOUTH AFRICA	03	Fish, crustaceans, molluscs, preparations thereof	224,676	0.83
SOUTH AFRICA	04	Cereals and cereal preparations	251,140	0.92
SOUTH AFRICA	05	Vegetables and fruit	923,787	3.40
SOUTH AFRICA	06	Sugar, sugar preparations and honey	170,385	0.63
SOUTH AFRICA	07	Coffee, tea, cocoa, spices, manufactures thereof	38,395	0.14
SOUTH AFRICA	08	Feeding stuff for animals, not incl. unmil. cereals	18,545	0.07
SOUTH AFRICA	09	Miscel. edible products and preparations	83,189	0.31
SOUTH AFRICA	11	Beverages	173,481	0.64
SOUTH AFRICA	12	Tobacco and tobacco manufactures	37,002	0.14
SOUTH AFRICA	21	Hides, skins and furskins, raw	92,935	0.34
SOUTH AFRICA	22	Oil seeds and oleaginous fruit	22,954	0.08
SOUTH AFRICA	23	Crude rubber (including synthetic and reclaimed)	16,368	0.06
SOUTH AFRICA	24	Cork and wood	152,542	0.56
SOUTH AFRICA	25	Pulp and waste paper	620,704	2.28
SOUTH AFRICA	26	Textile fibres (except wool tops) and their wastes	208,995	0.77
SOUTH AFRICA	27	Crude fertilizers and crude materials (excl. coal)	247,153	0.91
SOUTH AFRICA	28	Metalliferous ores and metal scrap	1,331,965	4.90
SOUTH AFRICA	29	Crude animal and vegetable materials, n.e.s.	60,135	0.22
SOUTH AFRICA	32	Coal, coke and briquettes	1,601,318	5.89
SOUTH AFRICA	33	Petroleum, petroleum products and related materials	561,571	2.07
SOUTH AFRICA	34	Gas, natural and manufactured	20,702	0.08
SOUTH AFRICA	35	Electric current	-	-
SOUTH AFRICA	41	Animal oils and fats	8,455	0.03
SOUTH AFRICA	42	Fixed vegetable oils and fats	34,634	0.13
SOUTH AFRICA	43	Animal-vegetable oils-fats, processed, and waxes	5,283	0.02
SOUTH AFRICA	51	Organic chemicals	288,578	1.06
SOUTH AFRICA	52	Inorganic chemicals	1,005,451	3.70
SOUTH AFRICA	53	Dyeing, tanning and colouring materials	73,488	0.27
SOUTH AFRICA	54	Medicinal and pharmaceutical products	50,737	0.19
SOUTH AFRICA	55	Essential oils & perfume mat., toilet-cleansing mat.	83,125	0.31
SOUTH AFRICA	56	Fertilizers, manufactured	156,632	0.58
SOUTH AFRICA	58	Artif. resins, plastic mat., cellulose esters/ethers	172,403	0.63
SOUTH AFRICA	59	Chemical materials and products, n.e.s.	250,669	0.92
SOUTH AFRICA	61	Leather, leather manuf., n.e.s. and dressed furskins	138,065	0.51
SOUTH AFRICA	62	Rubber manufactures, n.e.s.	97,622	0.36
SOUTH AFRICA	63	Cork and wood manufactures (excl. furniture)	75,771	0.28
SOUTH AFRICA	64	Paper, paperboard, artic. of paper, paper-pulp/board	571,683	2.10
SOUTH AFRICA	65	Textile varn, fabrics, made-up art., related products	248,984	0.92
SOUTH AFRICA	66	Non-metallic mineral manufactures, n.e.s.	2,489,953	9.16
SOUTH AFRICA	67	Iron and steel	2,785,984	10.25
SOUTH AFRICA	68	Non-ferrous metals	1,210,790	4.45
SOUTH AFRICA	69	Manufactures of metal, n.e.s.	352,182	1.30
SOUTH AFRICA	71	Power generating machinery and equipment	100,243	0.37
SOUTH AFRICA	72	Machinery specialized for particular industries	472,623	1.74
SOUTH AFRICA	73	Metalworking machinery	28,352	0.10
SOUTH AFRICA	74	General industrial machinery & equipment and parts	422,564	1.55
SOUTH AFRICA	75	Office machines & automatic data processing equip.	76,239	0.28
SOUTH AFRICA	76	Telecommunications & sound recording apparatus	94,901	0.35
SOUTH AFRICA	77	Electrical machinery, apparatus & appliances n.e.s.	283,692	1.04
SOUTH AFRICA	78	Road vehicles (incl. air cushion vehicles)	745,331	2.74
SOUTH AFRICA	79	Other transport equipment	147,769	0.54
SOUTH AFRICA	81	Sanitary, plumbing, heating and lighting fixtures	14,585	0.05
SOUTH AFRICA	82	Furniture and parts thereof	381,990	1.40
SOUTH AFRICA	83	Travel goods, handbags and similar containers	12,512	0.05
SOUTH AFRICA	84	Articles of apparel and clothing accessories	146,937	0.54
SOUTH AFRICA	85	Footwear	21,879	0.08
SOUTH AFRICA	87	Professional scientific & controlling instruments	83,772	0.31

SOUTH AFRICA	88	Photographic apparatus, optical goods, watches	24,648	0.09
SOUTH AFRICA	89	Miscellaneous manufactured articles, n.e.s.	225,694	0.83
SOUTH AFRICA	93	Special transactions and commodities not classified according to kind	6,691,000	24.61
SOUTH AFRICA	94	Animals, live, zoo animals, dogs, cats etc.	8,741	0.03
SOUTH AFRICA	95	Arms of war and ammunition therefor	48	0.00
SOUTH AFRICA	97	Gold, non-monetary (excluding gold ores and concentrates)	130,367	0.48
SOUTH AFRICA	99	Unclassified	-	-
SOUTH AFRICA	TO	TOTAL	27,192,510	100.00
ZAIRE	00	Live animals chiefly for food	-	-
ZAIRE	01	Meat and meat preparations	-	-
ZAIRE	02	Dairy products and birds' eggs	-	-
ZAIRE	03	Fish, crustaceans, molluscs, preparations thereof	1,152	0.07
ZAIRE	04	Cereals and cereal preparations	545	0.03
ZAIRE	05	Vegetables and fruit	761	0.05
ZAIRE	06	Sugar, sugar preparations and honey	-	-
ZAIRE	07	Coffee, tea, cocoa, spices, manufactures thereof	214,897	13.33
ZAIRE	08	Feeding stuff for animals, not incl. unml. cereals	2,527	0.16
ZAIRE	09	Miscel. edible products and preparations	-	-
ZAIRE	11	Beverages	12	0.00
ZAIRE	12	Tobacco and tobacco manufactures	3,809	0.24
ZAIRE	21	Hides, skins and furskins, raw	991	0.06
ZAIRE	22	Oil seeds and oleaginous fruit	50	0.00
ZAIRE	23	Crude rubber (including synthetic and reclaimed)	10,165	0.63
ZAIRE	24	Cork and wood	79,881	4.95
ZAIRE	26	Textile fibres (except wool tops) and their wastes	1,697	0.11
ZAIRE	27	Crude fertilizers and crude materials (excl. coal)	9,690	0.60
ZAIRE	28	Metalliferous ores and metal scrap	47,191	2.93
ZAIRE	29	Crude animal and vegetable materials, n.e.s.	17,160	1.06
ZAIRE	33	Petroleum, petroleum products and related materials	152,203	9.44
ZAIRE	34	Gas, natural and manufactured	-	-
ZAIRE	42	Fixed vegetable oils and fats	2,813	0.17
ZAIRE	43	Animal-vegetable oils-fats, processed and waxes	-	-
ZAIRE	51	Organic chemicals	1,898	0.12
ZAIRE	52	Inorganic chemicals	1,008	0.06
ZAIRE	53	Dyeing, tanning and colouring materials	-	-
ZAIRE	54	Medicinal and pharmaceutical products	-	-
ZAIRE	55	Essential oils & perfume mat., toilet-cleansing mat.	12	0.00
ZAIRE	56	Fertilizers, manufactured	-	-
ZAIRE	58	Artif. resins, plastic mat., cellulose esters/ethers	-	-
ZAIRE	59	Chemical materials and products, n.e.s.	12	0.00
ZAIRE	61	Leather, leather manuf., n.e.s. and dressed furskin	-	-
ZAIRE	62	Rubber manufactures, n.e.s.	-	-
ZAIRE	63	Cork and wood manufactures (excl. furniture)	7,864	0.49
ZAIRE	64	Paper, paperboard, artic. of paper, paper-pulp/board	34	0.00
ZAIRE	65	Textile yarn, fabrics, made-up, related products	851	0.05
ZAIRE	66	Non-metallic mineral manufactures, n.e.s.	822,124	50.98
ZAIRE	67	Iron and steel	71	0.00
ZAIRE	68	Non-ferrous metals	213,629	13.25
ZAIRE	69	Manufactures of metal, n.e.s.	8,730	0.54
ZAIRE	71	Power generating machinery and equipment	402	0.02
ZAIRE	72	Machinery specialized for particular industries	936	0.06
ZAIRE	73	Metalworking machinery	-	-
ZAIRE	74	General industrial machinery & equipment and parts	415	0.03
ZAIRE	75	Office machines & automatic data processing equip.	86	0.01
ZAIRE	76	Telecommunications & sound recording apparatus	137	0.01
ZAIRE	77	Electrical machinery, apparatus & appliances, n.e.s.	174	0.01
ZAIRE	78	Road vehicles (incl. air cushion vehicles)	336	0.02
ZAIRE	79	Other transport equipment	20	0.00
ZAIRE	81	Sanitary, plumbing, heating and lighting fixtures	21	0.00
ZAIRE	82	Furniture and parts thereof	31	0.00
ZAIRE	83	Travel goods, handbags and similar containers	-	-
ZAIRE	84	Articles of apparel and clothing accessories	7	0.00
ZAIRE	85	Footwear	17	0.00
ZAIRE	87	Professional scientific & controlling instruments	282	0.02
ZAIRE	88	Photographic apparatus, optical goods, watches	137	0.01
ZAIRE	89	Miscellaneous manufactured articles, n.e.s.	1,276	0.08
ZAIRE	93	Special transactions and commodities not classified according to kind	366	0.02
ZAIRE	94	Animals, live, zoo animals, dogs, cats etc.	1,186	0.07
ZAIRE	95	Arms of war and ammunition therefor	-	-
ZAIRE	97	Gold, non-monetary (excluding gold ores and concentrates)	5,056	0.31
ZAIRE	99	Unclassified	-	-
ZAIRE	TO	TOTAL	1,612,662	100.00
ZAMBIA	00	Live animals chiefly for food	8	0.00
ZAMBIA	01	Meat and meat preparations	-	-
ZAMBIA	02	Dairy products and birds' eggs	-	-
ZAMBIA	03	Fish, crustaceans, molluscs, preparations thereof	508	0.04

ZAMBIA	04	Cereals and cereal preparations	859	0.07
ZAMBIA	05	Vegetables and fruit	3,495	0.29
ZAMBIA	06	Sugar, sugar preparations and honey	5,274	0.43
ZAMBIA	07	Coffee, tea, cocoa, spices, manufactures thereof	6,409	0.52
ZAMBIA	08	Feeding stuff for animals, not incl. unml. cereals	184	0.02
ZAMBIA	09	Miscel. edible products and preparations	-	-
ZAMBIA	11	Beverages	38	0.00
ZAMBIA	12	Tobacco and tobacco manufactures	3,750	0.31
ZAMBIA	21	Hides, skins and furskins, raw	651	0.05
ZAMBIA	22	Oil seeds and oleaginous fruit	2,682	0.22
ZAMBIA	23	Crude rubber (including synthetic and reclaimed)	-	-
ZAMBIA	24	Cork and wood	976	0.08
ZAMBIA	25	Pulp and waste paper	-	-
ZAMBIA	26	Textile fibres (except wool tops) and their wastes	6,105	0.50
ZAMBIA	27	Crude fertilizers and crude materials (excl. coal)	2,044	0.17
ZAMBIA	28	Metaliferous ores and metal scrap	10,402	0.85
ZAMBIA	29	Crude animal and vegetable materials, n.e.s.	6,305	0.52
ZAMBIA	32	Coal, coke and briquettes	-	-
ZAMBIA	33	Petroleum, petroleum products and related materials	5	0.00
ZAMBIA	34	Gas, natural and manufactured	-	-
ZAMBIA	35	Electric current	-	-
ZAMBIA	41	Animal oils and fats	-	-
ZAMBIA	42	Fixed vegetable oils and fats	-	-
ZAMBIA	43	Animal-vegetable oils-fats, processed, and wastes	78	0.01
ZAMBIA	51	Organic chemicals	34	0.00
ZAMBIA	52	Inorganic chemicals	1,542	0.13
ZAMBIA	53	Dyeing, tanning and colouring materials	111	0.01
ZAMBIA	54	Medicinal and pharmaceutical products	44	0.00
ZAMBIA	55	Essential oils & perfume mat.; toilet-cleansing mat.	117	0.01
ZAMBIA	56	Fertilizers, manufactured	1,315	0.11
ZAMBIA	58	Artif. resins, plastic mat., cellulose esters/ethers	-	-
ZAMBIA	59	Chemical materials and products, n.e.s.	491	0.04
ZAMBIA	61	Leather, leather manuf., n.e.s. and dressed furskin	1,508	0.12
ZAMBIA	62	Rubber manufactures, n.e.s.	372	0.03
ZAMBIA	63	Cork and wood manufactures (excl. furniture)	233	0.02
ZAMBIA	64	Paper, paperboard, art. of paper, paper-pulp/board	104	0.01
ZAMBIA	65	Textile yarn, fabrics, made-up art., related products	35,586	2.91
ZAMBIA	66	Non-metallic mineral manufactures, n.e.s.	5,700	0.47
ZAMBIA	67	Iron and steel	1,231	0.10
ZAMBIA	68	Non-ferrous metals	762,100	62.26
ZAMBIA	69	Manufactures of metal, n.e.s.	3,131	0.26
ZAMBIA	71	Power generating machinery and equipment	344	0.03
ZAMBIA	72	Machinery specialized for particular industries	621	0.05
ZAMBIA	73	Metalworking machinery	-	-
ZAMBIA	74	General industrial machinery & equipment, and parts	505	0.04
ZAMBIA	75	Office machines & automatic data processing equip.	309	0.03
ZAMBIA	76	Telecommunications & sound recording apparatus	739	0.06
ZAMBIA	77	Electrical machinery, apparatus & appliances, n.e.s.	4,397	0.36
ZAMBIA	78	Road vehicles (incl. air cushion vehicles)	1,410	0.12
ZAMBIA	79	Other transport equipment	3,568	0.29
ZAMBIA	81	Sanitary, plumbing, heating and lighting fixtures	-	-
ZAMBIA	82	Furniture and parts thereof	32	0.00
ZAMBIA	83	Travel goods, handbags and similar containers	27	0.00
ZAMBIA	84	Articles of apparel and clothing accessories	522	0.04
ZAMBIA	85	Footwear	60	0.00
ZAMBIA	87	Professional, scientific & controlling instruments	1,314	0.11
ZAMBIA	88	Photographic apparatus, optical goods, watches	54	0.00
ZAMBIA	89	Miscellaneous manufactured articles, n.e.s.	350	0.03
ZAMBIA	93	Special transactions and commodities not classified according to kind	893	0.07
ZAMBIA	94	Animals, live, zoo animals, dogs, cats etc.	44	0.00
ZAMBIA	95	Arms of war and ammunition therefor	-	-
ZAMBIA	97	Gold, non-monetary (excluding gold ores and concentrates)	-	-
ZAMBIA	99	Unclassified	345,502	28.23
ZAMBIA	TO	TOTAL	1,224,083	100.00
ZIMBABWE	00	Live animals chiefly for food	11,241	0.61
ZIMBABWE	01	Meat and meat preparations	25,126	1.36
ZIMBABWE	02	Dairy products and birds' eggs	14,255	0.77
ZIMBABWE	03	Fish, crustaceans, molluscs, preparations thereof	658	0.04
ZIMBABWE	04	Cereals and cereal preparations	65,620	3.54
ZIMBABWE	05	Vegetables and fruit	39,409	2.13
ZIMBABWE	06	Sugar, sugar preparations and honey	85,030	4.59
ZIMBABWE	07	Coffee, tea, cocoa, spices, manufactures thereof	42,099	2.27
ZIMBABWE	08	Feeding stuff for animals, not incl. unml. cereals	17,341	0.94
ZIMBABWE	09	Miscel. edible products and preparations	7,583	0.41
ZIMBABWE	11	Beverages	3,426	0.18
ZIMBABWE	12	Tobacco and tobacco manufactures	489,709	26.44

ZIMBABWE	21	Hides skins and furskins raw	5,464	0.39
ZIMBABWE	22	Oil seeds and oleaginous fruit	4,444	0.24
ZIMBABWE	23	Crude rubber (including synthetic and reclaimed)	31	0.00
ZIMBABWE	24	Cork and wood	27,464	1.48
ZIMBABWE	25	Pulp and waste paper	10	0.00
ZIMBABWE	26	Textile fibres (except wool tops) and their wastes	55,268	2.98
ZIMBABWE	27	Crude fertilizers and crude materials (excl.coal)	96,257	5.20
ZIMBABWE	28	Metalliferous ores and metal scrap	7,569	0.41
ZIMBABWE	29	Crude animal and vegetable materials.n.e.s	38,702	2.09
ZIMBABWE	32	Coal,coke and briquettes	11,459	0.62
ZIMBABWE	33	Petroleum,petroleum products and related materials	12,678	0.68
ZIMBABWE	34	Gas,natural and manufactured	58	0.00
ZIMBABWE	35	Electric current	-	-
ZIMBABWE	41	Animal oils and fats	-	-
ZIMBABWE	42	Fixed vegetable oils and fats	2,135	0.12
ZIMBABWE	43	Animal-vegetable oils-fats,processed and waxes	421	0.02
ZIMBABWE	51	Organic chemicals	6,722	0.36
ZIMBABWE	52	Inorganic chemicals	1,451	0.08
ZIMBABWE	53	Dyeing,tanning and colouring materials	8,755	0.47
ZIMBABWE	54	Medicinal and pharmaceutical products	5,993	0.32
ZIMBABWE	55	Essential oils & perfume mat.,toilet-cleansing mat.	9,519	0.51
ZIMBABWE	56	Fertilizers,manufactured	7,263	0.39
ZIMBABWE	58	Artif.resins,plastic mat.,cellulose esters/ethers	2,478	0.13
ZIMBABWE	59	Chemical materials and products.n.e.s.	5,434	0.29
ZIMBABWE	61	Leather,leather manuf.,n.e.s.and dressed fursking	22,370	1.21
ZIMBABWE	62	Rubber manufactures.n.e.s.	5,143	0.28
ZIMBABWE	63	Cork and wood manufactures (excl.furniture)	12,285	0.66
ZIMBABWE	64	Paper,paperboard,artic.of paper,paper-pulp/board	15,451	0.83
ZIMBABWE	65	Textile yarn,fabrics,made-up art.,related products	63,422	3.42
ZIMBABWE	66	Non-metallic mineral manufactures.n.e.s.	26,428	1.43
ZIMBABWE	67	Iron and steel	238,672	12.89
ZIMBABWE	68	Non-ferrous metals	99,687	5.38
ZIMBABWE	69	Manufactures of metal.n.e.s.	44,349	2.39
ZIMBABWE	71	Power generating machinery and equipment	7,987	0.43
ZIMBABWE	72	Machinery specialized for particular industries	9,749	0.53
ZIMBABWE	73	Metalworking machinery	1,075	0.06
ZIMBABWE	74	General industrial machinery & equipment, and parts	6,617	0.36
ZIMBABWE	75	Office machines & automatic data processing equip.	821	0.04
ZIMBABWE	76	Telecommunications & sound recording apparatus	515	0.03
ZIMBABWE	77	Electrical machinery,apparatus & appliances.n.e.s.	7,401	0.40
ZIMBABWE	78	Road vehicles (incl. air cushion vehicles)	10,186	0.55
ZIMBABWE	79	Other transport equipment	5,049	0.27
ZIMBABWE	81	Sanitary,plumbing,heating and lighting fixtures	8,009	0.43
ZIMBABWE	82	Furniture and parts thereof	21,802	1.18
ZIMBABWE	83	Travel goods,handbags and similar containers	4,127	0.22
ZIMBABWE	84	Articles of apparel and clothing accessories	62,412	3.37
ZIMBABWE	85	Footwear	14,009	0.76
ZIMBABWE	87	Professional,scientific & controlling instruments	798	0.04
ZIMBABWE	88	Photographic apparatus,optical goods,watches	304	0.02
ZIMBABWE	89	Miscellaneous manufactured articles.n.e.s.	45,860	2.48
ZIMBABWE	93	Special transactions and commodities not classified according to kind	1,670	0.09
ZIMBABWE	94	Animals, live, zoo animals, dogs, cats etc.	3,721	0.20
ZIMBABWE	95	Arms of war and ammunition therefor	773	0.04
ZIMBABWE	97	Gold, non-monetary (excluding gold ores and concentrates)	445	0.02
ZIMBABWE	99	Unclassified	-	-
ZIMBABWE	TO	TOTAL	1,852,209	100.00

Source: IDC

Table 4: Estimation of the Composite RCA Indicator for SADC's International Trade

SITC Code	Description	a	b	c	d	e	f	g	h	i
		RCA_95	RCA_GROW	Growth Share	Gr_ln	W_RCA	W_growth	W_Gr	W_gr_ln	RCA_comp
94	Animals live, zoo animals, dogs, cats etc	6.73	38.57	2.72	3.65	6.07	0.17	1.57	4.76	4.79
32	Coal, coke and briquettes	11.08	6.72	-7.50	1.90	10.00	0.03	-4.33	2.48	4.29
97	Gold, non-monetary (including gold ores and concentrates)	0.91	2,172.02	-2.46	7.68	0.82	9.56	-1.42	10.00	3.51
66	Non-metallic mineral manufactures, n.e.s.	3.49	59.65	0.98	4.09	3.15	0.26	0.57	5.32	3.42
12	Tobacco and tobacco manufactures	4.70	4.58	1.22	1.52	4.24	0.02	0.70	1.98	2.78
25	Pulp and waste paper	3.19	9.03	2.37	2.20	2.87	0.04	1.48	2.87	2.67
95	Arms, of war and ammunition therefor	0.02	1,263.45	-4.25	7.14	0.01	3.56	-2.45	9.30	2.65
43	Animal-vegetable oils, fats, processed and wastes	0.19	86.94	3.44	4.47	0.17	0.38	1.99	5.81	2.61
09	Miscellaneous edible products and preparations	0.73	41.94	4.20	3.74	0.66	0.18	2.42	4.86	2.60
70	Machinery and Transport Equipment			17.32		0.60	0.00	10.00	0.00	2.50
82	Furniture and parts thereof	1.19	32.28	2.51	3.47	1.08	0.14	1.45	4.52	2.43
27	Crude ferrous and crude materials (excl. coal)	3.56	45.17	-5.49	3.81	3.21	0.20	-3.17	4.96	2.39
77	Electrical machinery, apparatus & appliances n.e.s.	0.10	18.77	6.58	2.93	0.09	0.08	3.80	3.82	2.33
55	Essential oils & perfume mat. toilet-cleaning mat	0.36	32.87	4.01	3.49	0.33	0.14	2.32	4.53	2.32
06	Sugar, sugar preparations and honey	3.19	(0.42)	0.30	0.00	4.68	0.00	0.17	0.00	2.15
11	Beverages	0.78	38.83	1.14	3.66	0.70	0.17	0.66	4.76	2.15
57	Inorganic chemicals	4.34	12.24	-5.25	2.50	3.92	0.05	-3.03	3.26	2.12
41	Animal oils and fats	0.60	128.17	-2.36	4.85	0.54	0.56	-1.36	6.32	2.12
81	Sanitary plumbing, heating and lighting fixtures	0.19	29.25	3.18	3.38	0.17	0.13	1.84	4.40	2.08
59	Chemical materials and products, n.e.s.	0.61	32.13	1.02	3.47	0.55	0.14	0.59	4.52	1.98
54	Medicinal and pharmaceutical products	0.11	20.31	3.51	3.01	0.10	0.09	2.03	3.92	1.93
74	General industrial machinery & equipment, and parts	0.32	29.62	1.37	3.39	0.29	0.13	0.79	4.41	1.87
76	Telecommunications & sound recording apparatus	0.07	27.03	2.32	3.30	0.07	0.12	1.34	4.29	1.87
28	Metalliferous ores and metal scrap	4.16	2.89	-2.13	1.06	3.76	0.01	-1.23	1.38	1.87
04	Cereals and cereal preparations	0.78	65.39	-2.59	4.18	0.71	0.29	-1.50	5.44	1.85
75	Office machines & automatic data processing equip	0.05	12.65	4.60	2.54	0.04	0.06	2.66	3.30	1.84
62	Rubber manufactures, n.e.s.	0.39	27.86	0.77	3.33	0.35	0.12	0.44	4.33	1.79
58	Artificially plastic mat., cellulose esters/ethers	0.22	17.64	2.54	2.87	0.20	0.08	1.47	3.74	1.76
67	Iron and steel	2.84	5.11	-1.27	1.63	2.56	0.02	-0.73	2.12	1.71
02	Dairy products and birds' eggs	0.27	38.24	-0.47	3.64	0.24	0.17	-0.27	4.74	1.70
56	Fertilizers, manufactured	1.58	45.36	-4.71	3.81	1.42	0.20	-2.72	4.97	1.70
63	Cork and wood manufactures (excl. furniture)	0.45	13.08	2.32	2.57	0.40	0.06	1.34	3.35	1.69
78	Road vehicles (incl. air cushion vehicles)	0.24	42.22	-1.09	3.74	0.21	0.19	-0.63	4.87	1.64
64	Paper, paperboard, article of paper, paper/pulp/board	0.82	8.72	1.69	2.17	0.74	0.04	0.98	2.82	1.56
69	Manufactures of metal, n.e.s.	0.55	17.25	0.18	2.85	0.49	0.08	0.10	3.71	1.55
72	Machinery specialized for particular industries	0.39	24.42	-0.62	3.30	0.35	0.11	-0.36	4.16	1.52
24	Cork and wood	0.70	21.08	-1.25	3.05	0.63	0.09	-0.72	3.97	1.49
84	Articles of apparel and clothing accessories	0.89	7.14	1.51	1.97	0.80	0.03	0.87	2.56	1.47
33	Petroleum, petroleum products and related materials	2.07	13.78	-4.03	2.62	1.87	0.06	-2.33	3.42	1.45
71	Power generating machinery and equipment	0.13	18.42	0.40	2.91	0.12	0.08	0.23	3.79	1.44
83	Travel goods, handbags and similar containers	0.20	6.48	3.48	1.87	0.18	0.03	2.01	2.43	1.43
61	Leather, leather manufactures and dressed furskins	0.99	5.74	1.58	1.75	0.89	0.03	0.91	2.78	1.43
85	Footwear	0.13	24.15	-0.54	3.18	0.11	0.11	-0.31	4.15	1.42
51	Organic chemicals	0.37	12.64	0.70	2.54	0.33	0.06	0.40	3.30	1.41
87	Professional, scientific & controlling instruments	0.13	14.45	0.59	2.67	0.13	0.06	0.34	3.48	1.36
79	Other transport equipment	0.21	27.80	-1.78	3.33	0.19	0.17	-1.03	4.33	1.34
68	Non-ferrous metals	2.92	(2.33)	0.80	0.00	2.64	-0.01	0.46	0.00	1.30
00	Live animals chiefly for food	0.22	52.92	-4.19	3.97	0.20	0.23	-2.42	5.17	1.29
53	Dyeing, tanning and colouring materials	0.40	6.98	1.36	1.94	0.36	0.03	0.79	2.53	1.24
73	Metalworking machinery	0.12	24.40	-2.41	3.19	0.11	0.13	-1.39	4.16	1.16
03	Fish, crustaceans, mollusca, preparations thereof	1.11	5.96	-0.90	1.79	1.00	0.03	-0.52	2.32	1.13
29	Crude animal and vegetable materials, n.e.s.	0.86	7.15	-1.39	1.97	0.78	0.03	-0.80	2.56	1.05
05	Vegetables and fruit	1.93	2.13	-0.94	0.76	1.74	0.01	-0.54	0.98	0.99
34	Gas, natural and manufactured	0.20	45.21	-5.98	3.81	0.18	0.20	-4.03	4.96	0.81
23	Crude rubber (including synthetic and reclaimed)	0.19	16.31	-3.92	2.79	0.17	0.07	-2.26	3.64	0.78
65	Textile yarn, fabrics, made-up, related products	0.39	4.10	-0.17	1.41	0.35	0.02	-0.10	1.84	0.78
21	Hides, skins and furskins, raw	1.87	3.83	-6.37	1.76	1.69	0.03	-3.68	2.30	0.64
01	Meat and meat preparations	0.32	3.55	-0.89	1.77	0.29	0.02	-0.51	1.65	0.58
86	Photographic apparatus, optical goods, watches	0.13	3.58	-0.73	1.28	0.12	0.02	-0.42	1.66	0.53
26	Textile fibres (except wool tops) and their wastes	1.59	1.91	-4.04	0.65	1.44	0.01	-2.33	0.84	0.36
22	Oil seeds and oleaginous fruit	0.43	6.58	-5.78	1.88	0.38	0.03	-3.34	2.45	0.20
08	Feeding stuff for animals, not incl. animal cereals	0.29	2.47	-2.95	0.98	0.26	0.01	-1.70	1.28	0.14
47	Fixed vegetable oils and fats	0.27	0.39	2.33	-0.94	0.24	0.00	-0.44	-0.96	0.00
35	Electric current	-	(100.00)	-1.67	0.00	0.00	-0.44	-0.96	0.00	-0.24
07	Coffee, tea, cocoa, spices, manufactures thereof	0.60	1.10	-4.71	0.10	0.54	0.00	-3.87	0.13	-0.68
80	Miscellaneous manufactured articles, n.e.s.	0.22	14.90	-14.13	2.70	0.20	0.07	-8.16	3.52	-0.72

Source: IDC; Author's estimation

Abbreviations: RCA_95: RCA Indicator for SADC Trade (1995)
RCA_GROW: Average Annual Growth Rate of RCA Indicator (% 1986 - 1995)
Growth Share: Average Growth in Share of Sector in World Trade (% 1986 - 1995)
Gr_ln: Natural log of RCA_GROW
e-h: Weighting of a-d (0.45, 0.35 and 0.25 (g and h))
RCA_comp: Summation of e, f and h, weighted 0.45, 0.35 and 0.25

