

# South Africa's Export Diversification Options: The End Of The Road For Traditional Export Markets?

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## ABSTRACT

*In the face of waning export opportunities for South Africa in its traditional markets in the developed world, this paper examines South Africa's evolving export relationships with countries in the South. Drawing on the concepts of the intensive and extensive margin, a quantitative analysis reveals that the SADC region in particular has become a significant export destination for South Africa over the past two decades, with many new export products attracting a strong following. This points to the need for South Africa's trade policies and strategies to have a strong regional orientation and for export diversification to become a cornerstone of the country's economic growth and development plans into the future.*

## INTRODUCTION

It is a commonly held view that countries with a strong export orientation have much better economic growth and development prospects than those countries with import substitution tendencies (Foster, 2006). Indeed, the impressive growth rates (by current world standards) of some of the leading emerging economies (e.g. China) can be attributed in large measure to their placing a heavy emphasis on extending their export capacity and reach (see Amiti and Freund, 2008). While the effects of a strong export drive on a country's terms of trade have been the subject of much debate, more and more analysts are coming to the conclusion that export growth can produce more positive outcomes if there is an increase in the range or variety of products being exported—as opposed to simply greater volumes of the same products being sold in foreign markets (Hummels and Klenow, 2005).

These alternative export strategies form the basis of the concepts of the extensive margin and the intensive margin. The extensive margin, typically associated with export diversification, involves expanding the array of export products on offer and forming new export relationships (new products to new or existing markets) (Brenton and Newfarmer, 2009). The intensive margin, on the other hand, is concerned with increasing the quantities of existing export products going to traditional destinations (same products to same markets).

Export diversification has been the driver of successful

development efforts in the emerging economies (Nichita et al., 2013). This is something that South Africa cannot afford to ignore, particularly as the National Planning Commission (2012), the architect of the country's forward-thinking National Development Plan, boldly states that South Africa's growth prospects are heavily dependent on the country engaging in geographical export diversification and strengthening its strategic relationships with fellow trading partners in the sub-continent as well as with other countries in the 'South'.

An export relationship is, in simple terms, a trade flow which can be defined as the export of product  $j$  from country (firm)  $k$  to country (firm)  $i$  (see Besedes and Prusa, 2007). Export relationships therefore constitute the medium for export growth, which can be either along the intensive margin or along the extensive margin. Decomposing export relationships in the intensive margin reveals which relationships have strengthened, weakened or became extinct, while decomposing relationships in the extensive margin shows the extent of export diversification that has occurred, suggesting 'export discoveries' (Brenton and Newfarmer, 2009).

This paper explores how South Africa's export relationships with its trading partners in the South have changed since the country embraced a more liberal trade regime—with specific reference to the period 1994 to 2012. A decomposed approach is used so that these relationships can be understood at a micro level. While export relationships are traditionally studied at the country-product level, this paper adds another, novel dimension—that is, the chapter level <sup>2</sup>(or HS-2 level), to account for relative diversification. The reasoning behind this is that the export diversification path of firms is not random but rather follows a distinct pattern based on the relatedness of capabilities required to diversify (Cirera et al., 2012). This can be illustrated in a practical example. HS Chapter 6 contains the following products: live trees and other plants, bulbs, roots and the like, cut flowers and ornamental foliage. Growth along the extensive margin would occur if a producer started to export cut flowers to the UK. A discovery would take place if the producer started to export bulbs (a new product) to either the Netherlands (a new

country) or the UK (an existing country). It can be argued that growth along the extensive margin takes place within a chapter. It is for this reason that the author of this paper added the chapter dimension to the analysis of South Africa's export relationships.

## METHOD: DECOMPOSING SOUTH AFRICA'S EXPORT RELATIONSHIPS

South Africa's export relationships were decomposed over the period 1994 to 2012 for the intensive and extensive margins, with the relevant data having been sourced from the WITS Comtrade database. The intensive margin was decomposed in terms of increases, decreases and extinctions (deaths). First, the values of changes along the intensive margin were calculated as follows:

$value_{12} - value_{94} = \text{value of change, per product and chapter (all values being added up to give a total change value)}$ .

Then the number of relationships within a chapter was calculated according to the following specifications:

if  $Country_{1,12}Product_{1,12}Chapter_{1,12} > Country_{1,94}Product_{1,94}Chapter_{1,94}$  then, it is counted as an increase in existing flows to existing countries (i.e. the relationship intensified);

if  $Country_{1,12}Product_{1,12}Chapter_{1,12} < Country_{1,94}Product_{1,94}Chapter_{1,94}$  then it is counted as a decrease in existing flows to existing countries;

if  $Country_{1,94}Product_{1,94}Chapter_{1,94} > 0$  AND  $Country_{1,12}Product_{1,12}Chapter_{1,12} = 0$ , then it is counted as a death and the relationship has become extinct.

The first step in calculating the extensive margin was to distinguish between an EC (existing country) and an NC (new country). An existing country (EC) is one that imported from South Africa in 1994 AND in 2012 (within the chapter, irrespective of the product). A new country (NC) is a country that imported from South Africa in 2012 but not in 1994 (within the chapter, irrespective of the product). Thus, if a country imported from South Africa both in 1994 and in 2012, then 1 was assigned. If a country only imported from South Africa in 2012 and not in 1994, then 1 was similarly assigned. The next step was to determine the NP (new products) that were exported. If the value of exports of a particular product (within a chapter) was 0 in 1994 AND the value of exports of that product in 2012 was greater than 0, then 1 was assigned. Once the new products had been identified, they were matched with the assigned values of NC and EC (again, within a chapter). To determine NPNC (new products to new countries) and NPEC (new products to existing countries), EC and NC were matched with NP within a chapter. Thus, due to the match-

ing within a chapter, only the number of export relationships was available for the extensive margin.

## RESULTS AND OBSERVATIONS

In 1994, South Africa traded mainly with Switzerland, the EU, the USA and Japan. In 2012, however, more African countries were featured in the top 20 export destinations, pointing to a geographical diversification to closer markets and an increase in intra-African trade. Moreover, China and India were among the top 5 export destinations in 2012, although they did not even make it onto the top 20 list in 1994. Clearly, South-South trade has been gaining momentum.

Table 1 shows the shift to South-South trade in South Africa's export relationships. South Africa's traditional trading partners, such as the USA and Germany, were among the country's top 10 export destinations in 1994, but 18 years later, the top 10 list was dominated by African countries, mainly within SADC.

Table 1: Comparing the top 10 export relationships in 1994 and 2012

1994	
Country	Number of relationships
Zimbabwe	2,148
Zambia	1,424
Mozambique	1,340
Great Britain	1,135
Malawi	1,135
USA	865
Mauritius	838
Germany	799
Australia	614
Congo, Dem. Rep	544

2012	
Country	Number of relationships
Zimbabwe	2,148
Zambia	1,424
Mozambique	1,340
Congo, Dem. Rep	1,135
Angola	1,135
Malawi	865
Tanzania	838
Kenya	799
Ghana	614
Mauritius	544

Source: Author's own calculations (with only the export relationships whose value exceeded a minimum threshold of US\$10 000 being included here)

The growing importance of SADC to South Africa's export performance can also be seen in the changes along the intensive margin with South Africa's main trading partners. Table 2 shows that in the period 1994 to 2012, export relationships with SADC countries intensified to a greater extent than the relationships with the EU 6, the UK, the USA or Japan. Yet the value of intensification per SADC relationship was significantly lower. In addition, the growing importance of China as an export partner during the period becomes clear if one considers the increase in value per export relationship established (US\$151.8 million for China compared with US\$1.2 million for SADC and US\$7.1 million for the EU 6).

Table 3 illustrates that SADC has become a significant market for new products from South Africa, and offers rich potential for an export product diversification drive into the future. For example, new products to existing countries (NPEC) totalled 1,387 for Zambia, 1,339 for Mozambique and 1,257 for Angola. Corresponding figures for Germany and the Netherlands trailed behind at 537 and 425, respectively. This signals that the southern African market has become a reservoir of opportunity for South Africa in its quest to enhance its economic wellbeing through a more diversified export base.

The dynamic shifts in the export relationships over the period have been influenced by a variety of factors. For example, the South African government, in an effort to diversify the country's export base, entered into a trade agreement with the EU (the EU-SA Trade, Development and Co-operation Agreement) and also contributed to the negotiations leading up to the signing of the US-initiated African Growth and Opportunity Act (AGOA), which allows duty- and quota-free access for many African products into the US market. There have also been attempts to bolster the country's image as a leading emerging country through its participation in the BRICS grouping, and to strengthen regional ties by promoting increased integration in trade blocs, such as SADC, and helping with the implementation of the Tripartite Free Trade Area. Despite these efforts, however, global events have affected South Africa's export relationships negatively. In particular, the global financial crisis of a few years ago and the more recent euro-zone crisis have eroded South Africa's export potential and contributed to the economy's current weakened state (ITRISA, 2015).

**Table 2: South Africa's export relationships with SADC, China and traditional trading partners along the intensive margin (1994–2012)**

Country / Grouping	Increase		Decrease		Extinction	
	Count	Value (US\$)	Count	Value (US\$)	Count	Value (US\$)
SADC	4,803	6,114,372,751	1,335	-448,115,141	1,847	-235,117,269
EU 6 *	583	4,148,879,128	347	-506,446,419	1,058	-579,653,931
UK	317	866,619,457	244	-680,907,059	574	-236,929,192
Japan	78	1,756,531,302	64	-277,933,594	176	-344,290,649
USA	325	4,711,983,598	174	-356,352,135	366	-336,278,693
China	40	6,073,725,002	7	-7,428,666	38	-11,034,895

Source: Author's own calculations

(\*EU 6: Belgium, Luxembourg, Germany, France, the Netherlands, Italy)

To appreciate the changing nature of South Africa's exports and to give more substance to the country's export diversification options, it is useful to consider the export products in South Africa's export relationships. In this regard, the cluster classification of HS chapters—first proposed by Hanson (2010) and also implemented by Reis and Farole (2012)—is used. Table 4 shows the intensive margin dynamics of the number of export relationships per cluster while Table 5 shows the extensive margin dynamics of the number of export relationships per cluster.

The intensive margin results reveal that there has been a significant intensification of the number of export relationships involving manufactures—specifically, skill and capital-intensive machinery, electrical materials, electronics and transport equipment. This has occurred over the various export destinations; however the churning (i.e. decreases and extinctions in these existing relationships) is less pronounced for SADC than for the traditional trading partners. The extensive margin results also emphasise the growing diversification in terms of manufactures but, interestingly, reveal that new markets for more labour-intensive industries, such as textiles to the SADC region have been developed. Yet if one considers the top export products by value, the list is dominated by commodities.

**Table 3: South Africa's export relationships with SADC, China and traditional trading partners along the extensive margin (1994–2012)**

Country / Grouping	NPNC	NPEC
SADC	1,207	8,704
EU 6	603	1,645
UK	5	513
Japan	10	207
USA	14	670
China	121	348

Source: Author's own calculations

**Table 4: Number of export relationships per cluster along the intensive margin (1994-2012)**

Cluster	SADC			EU6			UK		
	Incr.	Decr.	Ext.	Incr.	Decr.	Ext.	Incr.	Decr.	Ext.
Agriculture, meat and dairy, seafood	219	67	91	93	40	114	29	15	30
Food, beverages, tobacco, wood, paper	574	169	212	59	28	102	30	19	55
Extractive industries	242	94	116	36	27	76	14	15	37
Chemicals, plastics, rubber	982	294	328	54	45	140	34	23	79
Textiles, apparel, leather, footwear	228	98	300	32	43	237	23	42	149
Iron, steel and other metals	731	208	333	92	39	153	46	33	85
Machinery, electronics, transportation equipment	1,538	317	344	165	95	164	102	69	91
Other industries	380	88	123	52	30	72	39	28	48

**Table 4: Number of export relationships per cluster along the intensive margin (1994-2012) CONTINUED**

Cluster	Japan			USA			China		
	Incr.	Decr.	Ext.	Incr.	Decr.	Ext.	Incr.	Decr.	Ext.
Agriculture, meat and dairy, seafood	13	13	15	18	12	19	2	0	1
Food, beverages, tobacco, wood, paper	15	9	26	15	13	32	3	1	5
Extractive industries	4	11	19	25	16	19	2	0	4
Chemicals, plastics, rubber	17	7	27	39	15	50	6	2	5
Textiles, apparel, leather, footwear	3	6	18	21	26	92	3	1	4
Iron, steel and other metals	16	10	37	50	34	55	15	2	11
Machinery, electronics, transportation equipment	8	6	19	109	37	65	8	1	7
Other industries	2	2	15	48	21	34	1	0	1

Source: Author's own calculations (incr. = increases, decr. = decreases, ext. = extinctions)

**Table 5: Number of export relationships per cluster along the extensive margin (1994-2012)**

Cluster	SADC		EU6		UK	
	NPEC	NPNC.	NPEC.	NPNC.	NPEC	NPNC
Agriculture, meat and dairy, seafood	610	122	121	31	31	1
Food, beverages, tobacco, wood, paper	844	158	122	72	42	0
Extractive industries	502	80	107	33	46	0
Chemicals, plastics, rubber	1,476	150	268	115	82	3
Textiles, apparel, leather, footwear	1,084	192	94	46	47	0
Iron, steel and other metals	1,143	183	215	89	76	1
Machinery, electronics, transportation equipment	2,231	184	525	146	138	0
Other industries	814	138	193	71	51	0

**Table 5: Number of export relationships per cluster along the extensive margin (1994-2012) CONTINUED**

Cluster	Japan		USA		China	
	NPEC	NPNC.	NPEC.	NPNC.	NPEC	NPNC
Agriculture, meat and dairy, seafood	24	0	43	1	8	20
Food, beverages, tobacco, wood, paper	14	1	59	3	26	11
Extractive industries	22	0	40	0	16	11
Chemicals, plastics, rubber	43	0	123	3	52	36
Textiles, apparel, leather, footwear	10	6	59	4	17	19
Iron, steel and other metals	18	0	79	1	64	6
Machinery, electronics, transportation equipment	58	1	190	0	148	4
Other industries	18	2	77	2	17	14

Source: Author's own calculations

## CONCLUSION

Since 1994, when South Africa came in from the political wilderness and adopted a more liberal approach to managing its economy, the country's export volumes have grown by a significant margin. However, in terms of economic growth and development, South Africa has lagged behind many of the other emerging economies which have put export diversification at the centre of their international expansion strategies. An analysis of South Africa's export relationships over the past two decades—drawing on the concepts of the extensive and intensive margin—reveals that the country's trade with other countries in the South, especially China and members of SADC, has gained momentum. In terms of the intensive margin, these export relationships have generally been more resilient, but also lower in value,

than South Africa's relationships with traditional trading partners, such as the EU and the USA. Results of the extensive margin analysis, in turn, show that new product export diversification opportunities are—similarly—mainly concentrated in the SADC countries, rather than in South Africa's traditional export markets.

From this, one can conclude that the SADC region should be prioritised by South Africa's trade policy makers, with enhanced trade agreements and a cooperative approach to trade facilitation being core elements in the regional trade strategy. Where southern Africa is concerned, deeper integration at the economic and regulatory level is very important, but significant investment in infrastructure and a reduction in red tape will give the region a much-needed development boost. This will help to position the region as a more formidable player in South-South trade dynamics.

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## FOOTNOTES

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2. The Harmonized System or HS is an internationally-standardized product classification system developed by the World Customs Organization (ITRISA, 2015).