Development Network Africa

Increasing Trade with Latin America: Preferences, Challenges and Remedies

Policy Paper

ACKNOWLEDGEMENTS

This paper was commissioned by the Department of Trade and Industry (DTI). We would like to express our appreciation to the DTI's Project Steering Committee for the advice and assistance they have provided over the course of this study. In particular, we would like to thank Shoni Museisi and Modiegi Modiga for their ongoing feedback and support.

This policy paper is a summary of a much larger and more comprehensive research report. Many of the results and recommendations presented in this paper are supported by data and analysis which is included only in the main report.

AUTHORS

Amanda Jitsing (DNA)

Neil Rankin (African Micro Economic Research Umbrella - WITS)

Volker Schoer (African Micro Economic Research Umbrella – WITS)

Matthew Stern (DNA)

Development Network Africa

4th Floor, South Office Tower, Hatfield Plaza, 1122 Burnett Street, Hatfield, Pretoria, 0083, South Africa

PO Box 95838, Waterkloof, 0145, South Africa

Tel +27 (0)12 362 0025 | Fax +27 (0)12 362 0210 | Email contact@dnafrica.com | www.dnafrica.com

TABLE OF CONTENTS

Development
Network
Africa

EXECUTIVE SUMMARY

With the adoption of market reform and trade liberalisation in most Latin American countries, the region has become an important player in global trade. The economic powerhouses – Brazil, Argentina, Chile and Mexico - in particular - present new opportunities for trade between South Africa and the Latin American region. Yet South Africa's exports to this region have been disappointing. This requires analysis and explanation. This report was commissioned by the Department of Trade and Industry (DTI) to evaluate the performance and possibilities of South Africa's exports to Latin America and to inform the development of an appropriate export promotion strategy.

This study adopted four different approaches to assess the export performance of South African products to Latin American countries:

- Firstly, detailed trade analysis of South Africa's exports to Latin America was used to identify key products and trends.
- Secondly, South Africa's export performance was benchmarked against a number of comparator countries. The export promotion strategies of successful exporting countries were also evaluated.
- Thirdly, this report summarises the most common market barriers faced by exporters to Latin America countries and investigates specific non tariffs barriers that hinder South African exports.
- Finally, a firm level survey of 149 firms was undertaken in order to identify the opportunities and constraints faced by South African exporters in Latin American markets.

The initial trade analysis indicates that exports to Latin American countries stagnated at between 1 to 2 per cent of South Africa's total export volumes and represent a relatively small proportion the country's overall trade. Four countries - Brazil, Argentina, Chile and Mexico - account for 77 per cent of South Africa's exports to this region, and exports are dominated by resources such as minerals and base metals. Latin American countries are also major commodity exporters and generally compete with South Africa in world markets. This may partly explain the low market penetration of South African products.

To better understand the relative performance of South African exports, six comparator countries were selected on the basis that they experience similar levels of economic development, resource endowments, production structures and / or market barriers. Some country-specific results from the comparative analysis include:

- Australia's exports to Latin America are dominated by mineral products. But Australia also exports more machinery, live animals and animal products to Latin America than South Africa.
- Hungary's exports to Latin America are dominated by machinery and transport equipment. It also exports relatively more plastic products and specialised equipment than South Africa.

- Malaysia exports mainly machinery to Latin America, followed by plastic products and specialised equipment.
- The Russian Federation performs better in exports of chemicals and minerals to Latin America.
- Thailand tops South Africa's performance in machinery, transport equipment and plastic products as well as in textiles and clothing.
- Turkey exports relatively more transport equipment and textiles and clothing.

Looking at the combined exports of these six countries, relative to South Africa's exports, two general results emerge. Firstly, a large proportion of the products which comparator countries export to Latin America but are not exported by South Africa, fall into the machinery category. Secondly, for the majority of the product lines reviewed, South Africa's share of exports to Latin America is less than one per cent of the total export value of all the comparator countries combined. This would suggest that there are significant opportunities for South Africa to extend its market share in certain high value-added products, specifically those related to the mining industry and those where the SACU-Mercosur FTA provides preferential access.

In completing the benchmarking analysis, the export promotion strategies of the six comparator countries were reviewed. No evidence could be found to suggest that the comparator countries specifically target Latin America as an export destination. While most countries use similar export promotion instruments to support their firms, the effectiveness of these instruments depends on the way they are constructed and packaged as part of a comprehensive and global export promotion strategy; and the way that they are targeted at export-ready firms.

Together, the trade analysis and benchmarking helps us to identify areas of underperformance and assess the export potential of South African products. But this analysis is unable to explain why trade patterns are erratic and product penetration so low. The firm level survey enables us to interrogate some of these issues in more detail and to understand which firms export and why, as well as the constraints faced by South African exporters in engaging in export activity.

Results from previous research show that exporting firms are significantly larger, produce more output and value-added per employee and are on average older than non-exporting firms. The reason behind this is intuitive but also supported by empirical evidence. To enter a foreign market, firms have to expend considerable resources on activities such as marketing their product, expanding productive capacity and making contact with foreign buyers. These market barriers are expected to be particularly high in non-traditional markets and therefore small firms with no previous exporting experience may find it difficult to enter Latin America.

The results of the survey undertaken for this project confirm these assumptions. Of the 149 firms interviewed, only 15 per cent exported to Latin America. Brazil, Mexico and Argentina are the dominant markets, with almost half of the Latin American exporters mentioning Brazil as their most important market.

There are a number of characteristics that set firms exporting to Latin America apart from other South African exporters. Exporters to Latin America are generally larger, more capital intensive and more productive than the broader sample of exporters. There were dedicated exporters amongst the firms surveyed, and firms that participate in the Latin American market are more likely to have relatively low levels of exports.

The three most frequently mentioned constraints faced by South African exporters to Latin America are the volatility of the exchange rate; costs of transport; the costs of marketing the product and customs. Firms that did not export to Latin America *perceived* making contact with potential buyers and language barriers as the two main impediments to trading with Latin American countries.

Main findings and recommendations

The full report, upon which this summary paper is based, provides the DTI with a wealth of information on trade trends and firm behaviour. Such information should assist the DTI in the development of an appropriate export strategy for the Latin American market. In particular, the results suggest that the DTI should:

- **Use the findings of this study to prioritise certain commodity groups for export to Latin America:** This study identifies product groups where exports can be increased from current levels as well as new products, which South Africa can export to Latin America. These product lists provide DTI with a starting point to engage with sectors and industry in order to create awareness of the potential for exporting to Latin America.

- **Select and support firms for participation in Latin American trade promotion activities on the basis of their 'export-readiness'***:* The DTI should prioritise and support those firms that are mostly likely to succeed in Latin American markets. These are likely to be firms which are larger than the average exporter; export high value products, and/or have previously exported to either Latin America or other developing markets in Eastern Europe and the Far East.

- **Improve access to and the quality of information provided to exporters:** The DTI can help mitigate against the risk associated with information and language asymmetries though information services and trade publications. Information provided to exporters should be relevant, accurate and up to date.

- **Reinforce capacity within the DTI to carry out export facilitation activities and provide advisory services:** The DTI representatives play a key role in facilitating trade. For firms exporting to Latin American markets, DTI's local representatives in foreign markets are a particularly valuable resource in their capacity as both intermediaries and informants on local conditions. These representatives should be selected on the basis of their understanding of trade issues and equipped with the required trade facilitation and language skills.

- **Monitor and evaluate the results of export promotion activities**: All trade promotion activities should be monitored regularly. For those targeted at Latin America markets, this

1 INTRODUCTION

Since the early 2000's, most major Latin American countries have embarked on substantial reforms – targeted at improving macroeconomic stability and economic efficiency. The benefits of these reforms were seen through increases in GDP growth rates particularly in the economic powerhouses of Brazil, Chile, Mexico and Argentina, which achieved average growth rates of 6.5 per cent[1] between 2003 and 2006. This recovery, which was driven by buoyant consumer demand and higher revenues from stronger commodity prices, also raised the profile of Latin America as a serious export destination. Between 2001 and 2006, exports to Latin America from the rest of the world surged by 34 per cent[2].

From a trade reform perspective, evidence of trade liberalization is mixed. While Chile has greatly reduced and simplified its external tariff structure, Argentina has seen several trade policy reversals, driven by the macroeconomic crises faced by the country (De Melo and Dhar, 1992). Significant change has however taken place within the region, with Brazil, Argentina, Paraguay and Uruguay forming the Mercosur trade block. Moreover, Chile as part of its trade promotion strategy, has signed free trade agreements with other Latin American countries such as Columbia, Peru, Panama, Mexico, Costa Rica, El Salvador, Honduras as well as Mercosur countries. As a result, intra-Mercosur exports as a share of total exports rose from 9 per cent in 1990 to 20 per cent in 1999 (Inter-American Development Bank, 2000).

Despite the strong growth in world exports to Latin America, the establishment of Mercosur as a serious trading block, and the signing of a SACU-Mercosur Free Trade Agreement, South African exporters have made little in-roads into this market. Exports from South Africa to Latin America have stagnated at between 1-2 per cent of total exports between 2001 and 2006. Over this same period, exports from a number of comparator countries have risen significantly. This seems to demand some explanation.

The objectives of this policy paper are therefore to:

- Analyse trade patterns between South Africa and the Latin American region to better understand the existing structure of trade (Section 2).
- Compare South Africa's export performance to Latin America to a group of comparator groups and to identify markets and commodity groups that may warrant export promotion (Section 3).
- Explore how other countries promote their exports in general, and to Latin American in particular. (Section 4).
- Assess the main constraints and barriers identified by South African firms in exporting to the Latin American market (Section 5).

---

[1] ECLAC, *GDP in constant prices* http://www.eclac.org/estadisticas/bases/default.asp?idioma=IN
[2] ECLAC, *Imports and exports at constant prices* http://www.eclac.org/estadisticas/bases/default.asp?idioma=IN

- Identify some of the main non-tariff barriers that exist in key Latin American markets and sectors (Section 6).

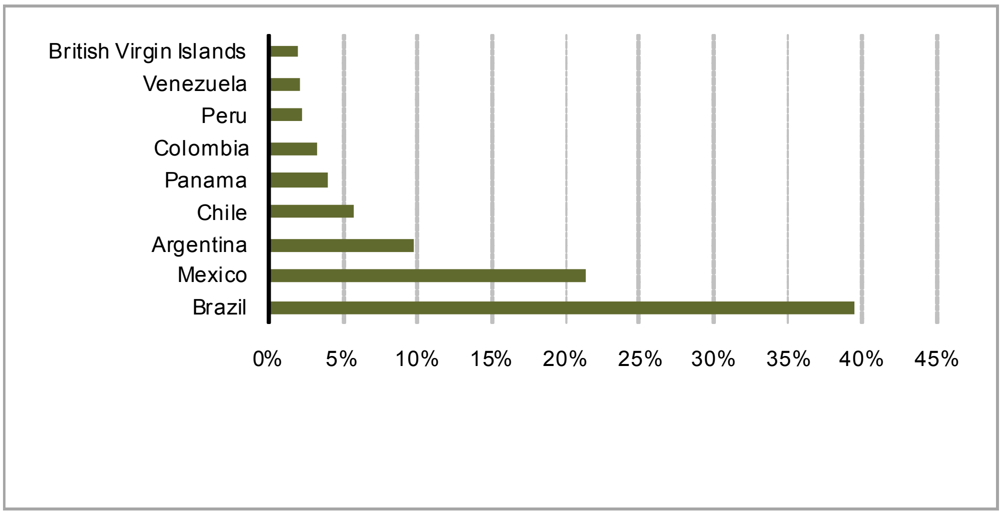
Finally, in Section 7, the report provides some recommendations to the DTI and to South African exporters on how to address barriers and raise exports in this fast-growing market.

2 TRADE PATTENS BETWEEN SOUTH AFRICAN AND LATIN AMERICA

South Africa remains a minor trading partner of the Latin American region - accounting for just 0.2% of the region's world imports. Similarly, South Africa's exports to Latin American countries represent a relatively small proportion of South Africa's total export volumes. In 2006, South African exports to forty-six Latin American and Caribbean countries accounted for only 1.7 per cent of total South African exports.

Moreover, South Africa's exports to Latin America are highly concentrated within a few destination markets and products. The economic powerhouses of Latin America – Brazil, Mexico, Argentina and Chile - accounted for 77 per cent of all South Africa's exports to the region. When Panama, Colombia, Peru, Venezuela and the British Virgin Islands are added to this analysis, they account for 90 per cent of South Africa's total exports to Latin America and the Caribbean.

Figure 1: South African Top Latin American and Caribbean Export Markets (2006)



Source: TIPS SADCTRADE data, author's calculations

Unsurprisingly, South Africa's trade pattern with Latin America reflects South Africa's overall structure of trade with the rest of the world. Approximately 60 per cent of South Africa's world exports comprise of minerals, base metals and precious stones. Similarly South Africa's exports to Latin America are highly concentrated in the resource sector. Table 1 shows the change in the commodity mix of South African resource exports to Latin America. Whereas exports of base metals have declined in relative terms since 2000, exports of mineral products have increased significantly.

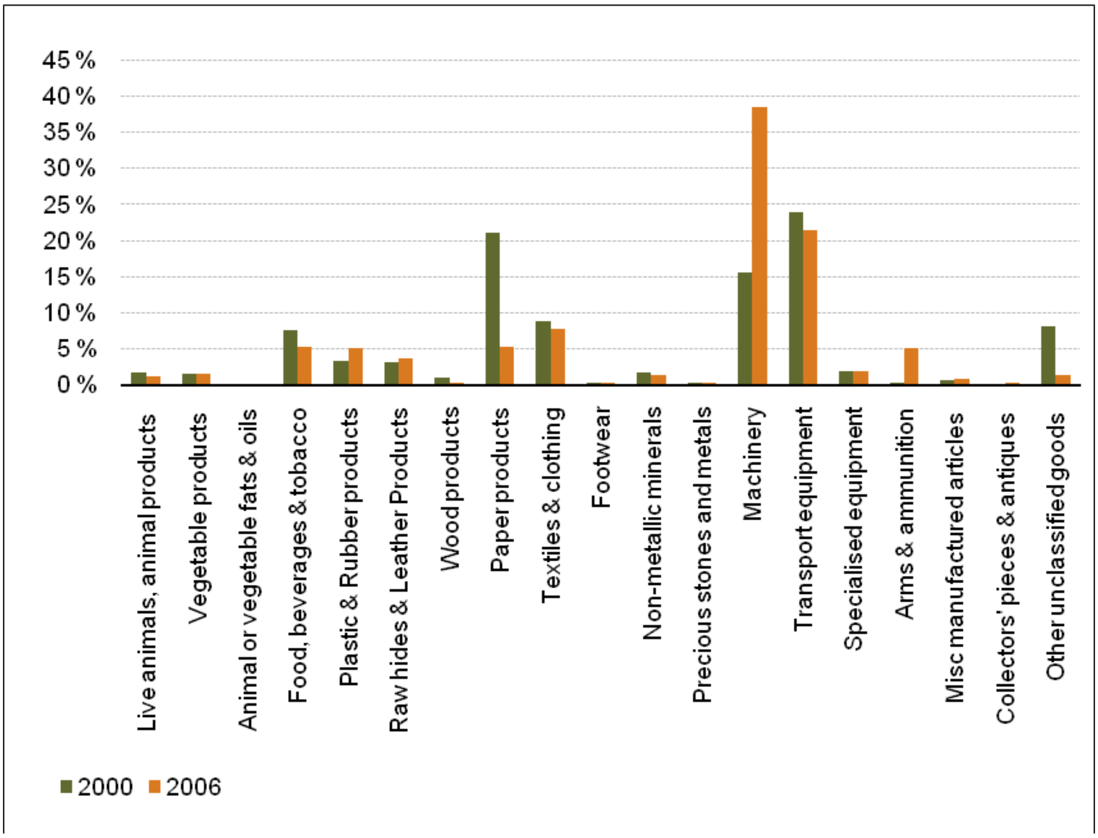
Table 1: Percentage share of South African exports to all Latin American and Caribbean countries

Commodity groups exported		SA exports to Latin America			SA exports to World
		2000 %	2006 %	2008 %	2006 %
C01	Live animals, animal products	1	0	0	1
C02	Vegetable products	1	0	1	3
C03	Animal or vegetable fats & oils	0	0	0	0
C04	Food, beverages & tobacco	3	1	1	3
C05	Mineral products	10	20	33	14
C06	Chemical products	16	15	11	6
C07	Plastic & Rubber products	1	1	2	2
C08	Raw hides & Leather Products	1	1	2	0
C09	Wood products	0	0	0	1
C10	Paper products	7	1	1	2
C11	Textiles & clothing	3	2	1	1
C12	Footwear	0	0	0	0
C13	Non-metallic minerals	1	0	1	1
C14	Precious stones and metals	0	0	5	28
C15	Base metals	38	39	24	17
C16	Machinery	6	10	11	10
C17	Transport equipment	8	6	4	10
C18	Specialised equipment	1	0	0	1
C19	Arms & ammunition	0	1	2	0
C20	Misc manufactured articles	0	0	0	1
C21	Collectors' pieces & antiques	0	0	1	0
C22	Other unclassified goods	3	0	0	0

Source: TradeMap & TIPS SADCTRADE data, author's calculations

The dominance of resource exports in South Africa's trade basket may mask trends in other sectors. In Figure 1, we re-analyse the performance of South Africa's exports to Latin America after excluding all resource exports (mineral products, chemical products and base metals). The analysis shows that as a share of total exports to Latin America, paper products experienced the greatest decline while machinery, arms and ammunition increased the most between 2000 and 2008. High value items such as machinery and transport equipment account for 60 per cent of this constrained export basket.

Figure 2: Share of South African exports to all Latin American and Caribbean countries (after excluding mineral products, chemical products and base metals)



Source: TIPS SADCTRADE data, author's calculations

2.1 Exports to the Latin American region by product

The sector analysis provides a good overview of South Africa's overall trade structure – but it cannot reveal niche products (or companies) which have succeeded in accessing the Latin American market. To do so, the analysis needs to look beyond this high-level data and consider the pattern of trade as described by the disaggregated HS-8 (product) level data. In general, this more detailed analysis confirms the previous picture:

1. South Africa's exports to Latin America are highly concentrated. Of more than 7 000 product lines at the HS-8 digit level, South Africa only exports 1 938 product lines to the Latin American region. Moreover, the top 50 product lines account for just under 70% of South Africa's total exports to Latin America. See Table 15 in Annexure A.

2. Exports are dominated by mineral, chemical and base metal products. Coal and other fuels, various forms of base metals and numerous chemical products make up most of the top 50 export product lines.

3. In addition, the data indicates that very few product lines are exported consistently over an extended period of time. The majority of products are exported only once (in a single year) or exports are very sporadic.

2.2 Product exports by Latin American country

Product demand from the Latin American region is not homogenous. Indeed, different countries within the region may import a diverse range of products depending on their own comparative advantages, level of economic development and growth rates. For the purposes of developing an export strategy, it is therefore necessary to consider each country separately.

In Table 2, we compare South Africa's exports of each main commodity group as a percentage share of total exports, for each of nine of the top Latin American export markets. We also look at changes in export patterns, by country, between 2000 and 2006. From the data, it is evident that Argentina, Brazil, Chile and Mexico have a particularly large influence over South Africa's overall export pattern to Latin America. But there have been some marked changes in the relative mix of commodities exported between 2000 and 2006:

- The relative share of exports of paper products and transport equipment to Argentina declined during this period but exports of mineral products and base metals increased as a proportion of total South African exports to the country.
- Exports of mineral products and machinery to Chile increased as a share of total South African exports to the country. However, exports of chemicals and base metals declined.
- Mexico recorded a small decrease in its imports of base metals, but these still account for 64 per cent of its total imports from South Africa.
- The export mix of resource commodities changed for Panama with a shift from base metals to mineral products.
- South Africa has consistently exported transport equipment (yachts) to the British Virgin Islands.
- Exports of arms and ammunition increased to 42 per cent of total South African exports to Columbia.

Table 2: South African exports to leading Latin American countries (Source: TradeMap data, author's calculations)

		2000 (%) Percentage of total South African exports to each LA country										2006 (%) Percentage of total South African exports to each LA country									
Section	Category	Arg	BVIs	Bra	Chile	Col	Mex	Pan	Peru	Ven	TOTAL	Arg	BVIs	Bra	Chile	Col	Mex	Pan	Peru	Ven	TOTAL
C01	Live animals, animal products	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
C02	Vegetable products	2	0	0	0	2	0	0	0	0	1	1	0	0	1	2	0	0	0	0	0
C03	Animal or vegetable fats/oils	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C04	Food, beverages & tobacco	3	0	3	3	0	0	40	0	0	2	1	2	1	2	1	0	1	1	2	1
C05	Mineral products	12	0	20	5	2	1	0	2	17	11	35	0	20	21	2	6	89	6	4	20
C06	Chemical products	12	0	26	17	36	4	3	24	13	16	10	0	21	11	17	12	2	12	9	15
C07	Plastic products	3	0	1	1	1	0	0	3	0	1	7	0	1	2	1	0	0	1	3	1
C08	Raw hides	0	3	1	0	0	3	1	0	0	1	0	0	0	0	0	4	0	0	0	1
C09	Wood products	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
C10	Paper products	22	0	4	7	9	2	0	16	19	8	6	0	1	0	1	1	0	1	0	1
C11	Textiles & clothing	3	0	4	6	6	0	2	5	5	3	3	0	3	2	11	1	0	0	1	2
C12	Footwear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

		2000 (%) Percentage of total South African exports to each LA country										2006 (%) Percentage of total South African exports to each LA country									
Section	Category	Arg	BVIs	Bra	Chile	Col	Mex	Pan	Peru	Ven	TOTAL	Arg	BVIs	Bra	Chile	Col	Mex	Pan	Peru	Ven	TOTAL
C13	Non-metallic minerals	1	0	1	1	0	0	0	0	5	1	1	0	0	1	0	0	0	0	4	0
C14	Precious stones and metals	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
C15	Base metals	16	0	33	42	9	78	47	32	16	40	28	0	38	30	6	64	4	27	13	38
C16	Machinery	3	0	4	14	3	3	1	15	17	5	4	0	10	27	11	6	1	27	64	11
C17	Transport equipment	23	96	2	1	0	2	0	0	2	8	3	98	3	1	1	5	1	23	1	6
C18	Specialised equipment	1	0	1	0	1	0	2	1	0	1	1	0	0	1	0	0	0	1	0	0
C19	Arms & Ammunition	0	0	0	0	2	0	0	0	0	0	0	0	0	0	41	0	0	0	0	2
C20	Misc manufactured articles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
C21	Collectors' pieces &	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C22	Other unclassified goods	0	0	0	1	29	6	0	0	5	3	0	0	0	1	6	0	0	0	0	0

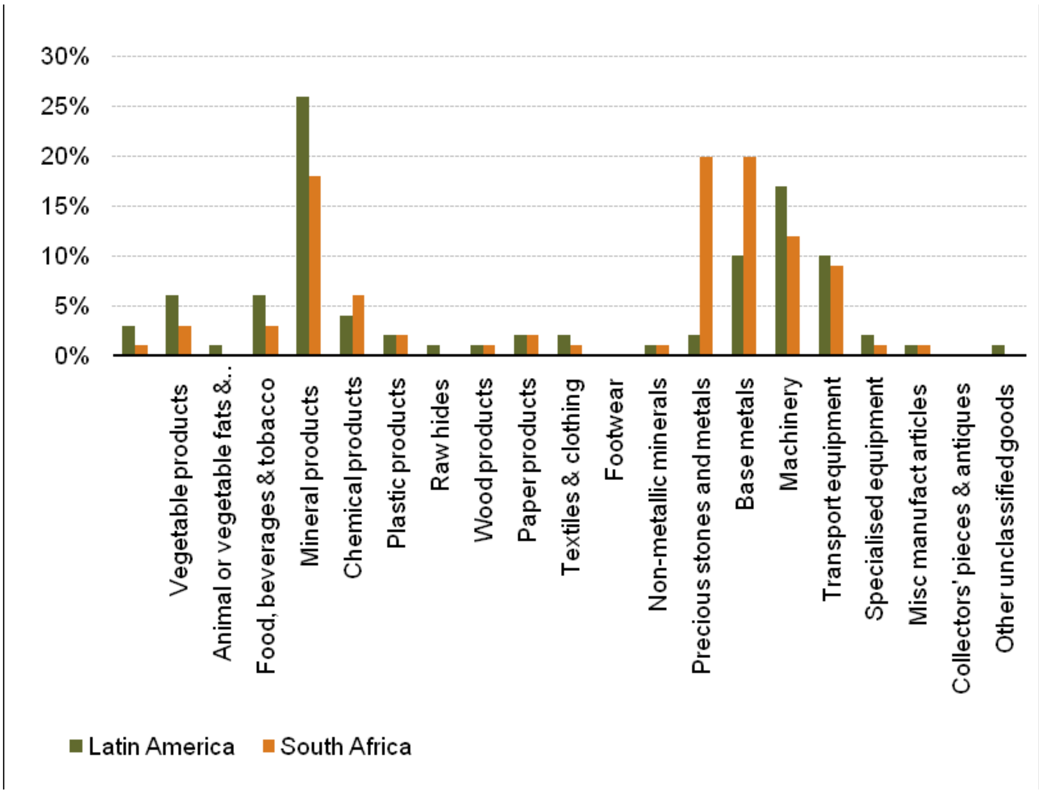
2.3 Trade patterns with the rest of the world

2.3.1 Exports to the rest of the world

The low levels of export penetration by South Africa in the Latin American market may reflect the fact that the two regions display similar comparative advantages. In order to assess the similarities in production structures and resource endowments, the report therefore compares Latin America's and South Africa's exports to the rest of the world.

Unsurprisingly, countries like Brazil, Argentina, Chile and Mexico, which are most similar to South Africa in size and level of development, supply the rest of the Latin American region with the same kind of products which South Africa normally exports. Figure 3 confirms this finding. It shows that South Africa and Latin American countries do indeed compete for markets in similar product categories.

Figure 3: Exports by Latin American and South Africa to the rest of the world



Source: TradeMap data, author's calculations

3 BENCHMARKING EXPORT PERFORMANCE

Given that many other countries are likely to face the same challenges as South Africa in entering the Latin American market, it useful to compare and benchmark South Africa's export performance with that of others. This analysis should also help to identify specific products which are currently exported by the comparator countries, but are not exported to Latin America by South Africa.

Selecting the right set of comparator countries is critical in ensuring that the results of the comparison are relevant. For this benchmarking exercise, comparator countries were selected on the basis of the following criteria:

- Economic development (reflected by a measure of GDP).
- Resource endowment (reflected by a measure of factor intensities).
- Production structures and trade patterns (reflected by the structure of its exports).
- Similar constraints and challenges (e.g. transport distances and languages).

Based on these criteria, the following countries were selected: Australia, Hungary, Malaysia, Russsia, Thailand and Turkey. More information on the method and data for selecting these case studies is available in the main report.

3.1 Trade flows between Latin America and comparator countries

Like South Africa, exports to Latin America represent a small proportion of total trade for most of the comparator countries, at around 2 per cent on average; and in three of the six countries, exports are dominated by the resource sector. However, despite these overlaps, some notable differences do emerge (see Table 4):

- Australia's exports to Latin America are dominated by mineral products. But Australia exports more machinery to Latin America than South Africa as well as live animals and animal products.
- Hungary's exports to Latin America are dominated by machinery and transport equipment. It also exports relatively more plastic products and specialised equipment than South Africa.
- Malaysia exports mainly machinery to Latin America, followed by plastic products and specialised equipment.
- The Russian Federation performs better in exports of chemicals and minerals to Latin America.
- Thailand's exports are dominated by machinery and transport equipment, followed by plastic products as well as textiles and clothing.
- Turkey exports relatively more transport equipment and textiles and clothing than South Africa.

Table 4: South African and comparator countries' exports to Latin America

Section	Descriptions	2007 Percentage Value (%)						
		RSA	Aus	Hun	Mal	Rus	Thai	Turk
C01	Live animals, animal products	0	6	0	0	0	0	0
C02	Vegetable products	0	1	0	0	0	0	3
C03	Animal or vegetable fats/oils	0	0	0	2	0	0	0
C04	Food, beverages & tobacco	1	1	0	0	0	3	2
C05	Mineral products	20	51	0	0	33	2	51
C06	Chemical products	15	9	9	1	42	1	4
C07	Plastic products	1	1	3	5	1	10	2
C08	Raw hides	1	1	0	0	0	0	0
C09	Wood products	0	0	0	1	0	0	0
C10	Paper products	1	1	0	0	0	0	0
C11	Textiles & clothing	2	1	1	2	0	4	9
C12	Footwear	0	0	0	0	0	1	0
C13	Non-metallic minerals	0	0	0	0	0	0	1
C14	Precious stones and metals	0	0	0	0	0	0	0
C15	Base metals	39	7	2	1	12	2	6
C16	Machinery	10	16	70	81	3	50	7
C17	Transport equipment	6	2	9	0	2	21	11
C18	Specialized equipment	0	2	4	3	0	2	0
C20	Misc manufact articles	1	1	1	1	0	1	1
C21	Collectors' pieces & antiques	0	0	0	0	0	0	0
C22	Other unclassified goods	0	1	0	1	5	1	1

Source: TradeMap data, author's calculations

3.2 Product level comparisons

Extending the above analysis to the product line level (HS-6) yields much more useful information for the development of an export promotion strategy. First, it helps us identify those products which South Africa already exports to Latin America but underperforms when compared to the exports of the comparator countries. Secondly, we examine those products which South Africa exports to the rest of the world, but not to Latin America, and in which the comparator countries have had some export success in Latin America. Together, these two sets of analyses enable us to identify potential product categories that the DTI could help promote.

3.2.1 Product lines exported by comparator countries but not exported by South Africa

Table 5 identifies those product lines produced and exported by South Africa (South Africa's export value of this product to the world is at least $1,000,000 per annum); in which at least 3 comparator countries have had significant export success in Latin America (Latin American countries import at least $10,000,000 worth of this product line per annum from all comparator countries excluding South Africa); but South Africa does not export to Latin America.

This analysis reveals a number of interesting products and issues:

- Most of South Africa's 'non-traded' exports fall in the machinery category.
- Most, if not all comparator countries, have found ways to export these products to Latin America, irrespective of language and transport costs.
- The Preferential Trade Agreement between Mercosur and SACU does not provide preferential access to South African exporters in any of the identified product lines.

Table 5: Product lines exported to Latin America by comparator countries but not by South Africa

HS 6	Product line	No. of comparator countries exporting product to Latin America
	C07: Plastic & rubber products	
'400932	Tubes, pipes and hoses of vulcanised rubber (excl. hard rubber), rein	6
	C10: Paper products	
'481840	Sanitary paper articles, incl towels & napkins	6
	C11: Textiles and Clothing	
'560110	Sanitary textile articles i.e. sanitary towels, tampons	6
'621040	Mens/boys garments nes,made up of impreg, ctd, cov,	6
	C13: Non-metalic Minerals	
'690320	Refractory ceramic goods nes,>50% of Al2O3/mx/compds alumina/silica SiO2	5
	C15: Base Metals	
'720840	Hot roll iron/steel, not coil >600mm relief pattern	6
'760720	Foil, aluminum, backed ,not exceeding 0.2mm thick excluding any backing	6
	C16: Machinery	
'840690	Parts of steam and vapour turbines	6
'841199	Parts of gas turbines nes	6
'841451	Fans: table, roof etc w a self-cont electric motors of an output not exceeding 125W	4
'841459	Fans nes	5
'841490	Parts of vacuum pumps, compressors, fans, blowers, hoods	6
'841582	Air conditioners nes, inc a refrigerating unit	4
'841810	Combined refrigerator-freezers, fitted with separate external doors	4
'844180	Machinery for making up paper pulp, paper or paperboard nes	6
'845490	Pts of converters/ladles/ingot mould & casting machinery	6
'846729	Electro-mechanical tools for working in the hand, with self-contained	6
'850220	Generating sets with spark-ignition internal combustion piston engines	6
'851180	Glow plugs and other ignition or starting equipment nes	6
'853530	Isolating switches & make-and-break switches, voltage exceed 1,000 volts	6

HS 6	Product line	No. of comparator countries exporting product to Latin America
'853540	Lighting arresters, voltage limiters & surge supp voltage > 1,000 volts	4
'853810	Boards, panels, etc for goods of headg no. 85.37	6
'854470	Optical fibre cables, made up of individually sheathed fibres	6
C17: Transport Equipment		
'860799	Railway rolling stock parts nes	6
'870421	Diesel powered trucks with a GVW not exceeding five tonnes	3
'890790	Buoys, beacons, coffer-dams, pontoons and other floating structures	6
C18: Specialised Equipment		
'901480	Navigational instruments and appliances nes	6
'902730	Spectrometers, spectrophotometers & spectrographs usg optical radiations	3
'903089	Instruments & apparatus for measuring or checking electrical quantities nes	5
'903090	Parts & access for inst & app for meas or checkg electrical quantities	5

Source: TradeMap data, author's calculations

3.2.2 South African products with limited penetration into the Latin American market

Table 6 identifies those product lines which South Africa does export to Latin America; but it's share is less than 20% of the total export value of all of the comparator countries. South Africa should look to extend its share of exports to Latin American markets in these products. Again, a few general points emerge from the analysis:

- Once again, the machinery sector appears to offer South Africa the greatest export potential, in terms of the number of products.
- From a value perspective, hot roll iron/steel (HS6 line 720839), machines for sorting, screening, separating and washing of stones (HS6 line 847410) and machines for reception, conversion and transmission (HS6 line 851762) offer the most substantial export opportunity. These three product lines account for 20 per cent, 14 per cent and 10 per cent of the comparator countries' export value to Latin America respectively.
- For most of these product lines, South Africa's share of exports to Latin America is less than 1 per cent of the total export value of all of the comparator countries combined. Prospects for export growth appear substantial.
- The Preferential Trade Agreement with Mercosur provides improved access for some of the product lines which South Africa currently exports to Latin America. These include:
  - trousers and shorts for men/boys (HS6 line 620342),
  - heat exchange units (HS6 line 841950),
  - printers and copiers (HS6 line 844332),

- cell phones and other mobile phones (HS6 line 851712),
- machines for reception, conversion and transmission (HS6 line 851762),
- electrical applications for switching and protection of electrical circuits (HS6 line 853690),
- electrical boards and panels (HS6 line 853710).

Table 6: Product lines with limited export penetration into the Latin American market

HS 6	Product line	No. of comparator countries exporting product to Latin America	SA share of export value as a % of all comparator countries	Preferential Access
	C06: Chemical products			
'300230	Vaccines, veterinary use	6	0%	NO
'340600	Candles, tapers and the like	5	0%	NO
'382200	Composite diagnostic or laboratory reagents, nes	3	4%	NO
	C07: Plastic & rubber products			
'400942	Tubes, pipes and hoses, of vulcanised rubber (excl. hard rubber), rein	6	0%	NO
'401120	Pneumatic tires new of rubber for buses or lorries	4	1%	NO
	C11: Textiles & clothing			
'620342	Mens/boys trousers and shorts, of cotton, not knitted	4	0%	YES
	C15: Base metals			
'720839	Hot roll iron/steel nes, coil >600mm x <3mm	3	20%	NO
'732090	Springs, iron or steel, nes	3	0%	NO
'830230	Mountings, fittings &similar articles of base metal f motor vehicles, nes	6	0%	NO
	C16: Machinery			
'841231	Pneumatic power engines & motors linear acting (cylinders)	5	0%	NO
'841510	Air conditioning machines window or wall types, self-contained	4	0%	NO
'841869	Refrigerating or freezing equipment nes	4	0%	NO
'841950	Heat exchange units, non-domestic, non-electric	4	0%	YES
'843141	Buckets, shovels, grabs and grips of excavating machinery	3	0%	NO
'844332	Machines which only perform one of the functions of printing, copying	6	0%	YES
'847410	Sorting/screening/separating or washing mach for stone/ores or other minerals etc	4	14%	NO
'848041	Moulds, injection or compression types, for metal or metal carbides	6	0%	NO
'848220	Bearings, tapered roller, including cone and tapered roller assemblies	6	3%	NO
'848490	Gasket sets consisting of gaskets of different materials	5	0%	NO
'851712	Telephones for cellular networks mobile telephones or	3	7%	YES

HS 6	Product line	No. of comparator countries exporting product to Latin America	SA share of export value as a % of all comparator countries	Preferential Access
	for other wirele			
'851762	Machines for the reception, conversion and transmission or regeneration	4	10%	YES
'851840	Audio-frequency electric amplifiers	4	0%	NO
'853690	Electrical app for switchg/protec elec circuits,not exced 1,000 V,nes	6	4%	YES
'853710	Boards,panels,includg numerical control panels,for a voltage <=1000 V	4	3%	YES
'854790	Insulating fittings for electrical mach appliances or equipment, nes	5	0%	NO
C17: Transport equipment				
'870893	Clutches and parts for motor vehicles	5	4%	NO
'880400	Parachutes and parts and accessories thereof	5	8%	NO
C18: Specialised equipment				
'901839	Needles, catheters, cannulae and the like, nes	3	0%	NO
'903289	Automatic regulating or controlling instruments and apparatus, nes	4	3%	NO
'903290	Parts&access for automatic regulatg or controllg instruments&app,nes	6	0%	NO
C20: Misc manufact articles				
'940161	Seats with wooden frames,upholstered nes	6	0%	NO
'940320	Furniture, metal, nes	5	1%	NO
'940360	Furniture, wooden, nes	5	2%	NO
'950430	Games, coin or disc-operated, other than bowling alley equipment	4	2%	NO

Source: TradeMap data, author's calculations

4 BENCHMARKING EXPORT PROMOTION STRATEGIES

Competing in international markets requires exporters to have sufficient resources to gather the knowledge, skills and expertise to market and distribute their product in foreign markets. Moreover, the transactional costs associated with expanding the distribution and marketing value chain to foreign markets can deter potential companies from exporting. Together, these barriers can make exporting a high risk activity for businesses, and prohiitive for small to medium size companies.

To overcome these problems, governments around the world assist domestic companies through a myriad of export promotion initiatives. Indeed, until export subsidies were prohibited by the WTO, governments also provided generous financial assistance to support the production process of their export orientated industries.

Export promotion strategies generally comprise of a number of elements. These include:

- Educational components – targeted at training exporters or potential exporters around trading in global markets.
- Information and research services – aimed at providing exporters with information, research and sometimes 'leads' on export markers.
- Trade missions and related instruments - focused on providing an 'entry' point as well as exposure for exporters in international markets.
- Financial assistance schemes – targeted at assisting exporters with marketing their products in foreign countries.

This section reviews the export promotion strategies adopted by the comparator countries and examines how they are structured. In particular, the review seeks to understand whether the comparator countries have succesfully implemented export promotion activities that are specifically targeted at Latin American markets. Whereas information from some countries, like Australia and Malaysia, is widely available, others are less transparent.

4.1 Australia

The Australian trade promotion strategy is based on two key principles:

- Disseminating accurate information in an easily accesible manner to exporters.
- Using appropriate export promotion tools to support business in exporting products and services.

Austrade is Australia's primary trade promotion agency and is funded by the federal government. It offers a comprehensive basket of services and products for exporters.

Though its TradeStart Programme, Austrade offers assistance to small[3] and medium size businesses to enter export markets and or to convert from irregular exporters into regular and sustainable exporting firms. The TradeStart Programme places considerable emphasis on educating firms on matters relevant to import and export.

Austrade also uses its website extensively as a tool for disseminating information. From the website, potential and current exporters are able to easily access (free of charge):

- Information on getting ready to export.

[3] Note that Australian legislation defines a Small Business by the number of persons it employees on a full time basis and NOT by the turnover of the enterprise. Under this definition, a small business refers to any firm with less than 20 full time employees

- Information on networking events and matching opportunities.
- Research on export markets.
- Industry analysis and market intelligence.
- Trade related publications.
- Registration on the Australian suppliers directory.

At a nominal fee of AUS$190, exporters are also able to access tailored advice from trained export advisors on more specific issues involved in exporting. During these consultations, exporters are linked with Austrade counterparts in their export destinations, who play a critical role in facilitating transactions.

Austrade also administers the Export Market Development Grant (EMDG) which has operated for over 30 years and provides businesses with up to 50 per cent reimbursement of certain export promotion expenses above a $10,000 threshold (Austrade, 2009).

The Export Market Development Grant

The Export Market Development Grant is Australia's flagship export promotion grant and is funded by the federal government. The total value of the grant is determined on an annual basis and appropriated through the national budgeting process.

The grant itself offers financial assistance to current and potential exporters who want to access and/or enter export markets. Financial assistance is provided to exporters and eligible organisations on a reimbursable basis. The EMDG grant refunds up to 50 per cent of all eligible expenses incurred in export promotion activities above a AUS$ 10,000 threshold (i.e firms spending less than AUS$ 10,000 on export promotion activities do not qualify for the grant). For first time grant applicants, EMDG rules allow firms to combine the first two years of expenditure incurred in promoting their exports. This threshold ensures that firms that are not able or not prepared to invest in exporting, do not qualify for assistance.

In order to apply for the EMDG, companies must comply with the following additional eligibility criteria:

- Have a turnover of less than AUS$ 50 million[4];
- Be registered in terms of Australian company law; and
- Have promoted either the export of an Australian product, inbound tourism, intellectual property and/or conferences held in Australia.

Industry associations or export councils activity involved in export promotion activities may also claim from the EMDG grant provided that they fulfil certain predetermined conditions.

[4] Note that this grant does not solely apply to SME firms, which according to Australian policy, are defined as those firms with less than 20 full time employees.

> The main advantage of the EMDG lies in its simplicity and the certainty it provides exporters. Applications for the grant are opened on an annual basis and close once all applications are assessed or the fund is depleted. The EMDG clearly sets out the criteria and a maximum limit for reimbursement for each type of promotional activitiy. All claims are assessed and where required audited to verify their veracity.

Government research on unlocking opportunities for Australian trade to Latin America has highlighted a number of challenges/barriers:

- Risks associated with political instability in Latin America.
- Foreign exchange risks.
- High level of bureaucracy.
- Unpredictable legal systems.
- Underdeveloped banking and financial markets.
- Geographical distance (Australian DFAT, 2001).

Much of Austrade efforts in Latin America have concentrated on export development –providing exporters with accurate and up to date market research on Latin American countries. Specific opportunities identified in this market include: mining supplies, agribusiness such as wine and food processing, and infrastructure related commodies such as telecommunications products. Moreover, trade in services such as education, financial services, telecommunications and entertainment offer Australia an additional entry point into the Latin American market (Australian DFAT, 2001).

In addition to direct exports, part of Australia's strategy is to invest in productive capacity in Latin America, particularly in sectors where it has an existing comparative advantage. Here Austrade also provides leads. Promoting investment in the mining industry, in particular, allows Australian companies to access the rest of Latin America and the North American markets through existing preferential trade agreements.

4.2 Malaysia

Malaysia's External Trade Development Corporation (MATRADE) is the official export promotion agency of the Malaysian government. As an export orientated economy, Malaysia offers an extensive menu of trade promotion services, including:

- Trade information services – such as trade publications, online directories and newsletters.
- Trade promotion events – for example, trade missions, fairs and exhibitions.
- Trade matching services - such as tender notifications, leads and buying missions.
- Export development initiatives – such as training potential exporters and briefing services.

- Financial assistance schemes – targeted at different types of products. (MATRADE, 2009)

The construct of MATRADE's financial assistance provides some insight into the country's approach to export promotion. There are broadly four types of financial assistance schemes administered by MATRADE: the Market Development Grant, Brand Promotion Scheme, Services Export Fund and tax incentives schemes. Excluding the tax incentive schemes, which are available to all exporters, the other three schemes target specific kinds of activities:

- The *Market Development Grant* (MDG) is loosely based on the Australian Export Market Development Grant and is the main form of financial assistance for exporters in Malaysia. The MDG provides a matching grant to SMEs, which can be used to defray the transactional costs associated with exporting. The MDG scheme can be used to reimburse up to 50 per cent of the expenses incurred by the SME. Eligible companies are defined as those businesses incorporated under Malaysian company law and in which 60 per cent of equity is owned by Malaysians. SMEs are further defined as those companies whose annual turnover do not exceed RM 25 million or not does not employ more than 150 full time staff. Specific criteria and limits are set for different kinds of activities.

- The *Brand Promotion Scheme* (BDS) is a highly specialized form of assistance. It can be used to defray expenses associated with promoting Malaysian brands in export markets. Non-SME companies can be reimbursed up to 50 per cent of their marketing expenses whilst SME companies are eligible to receive a full refund under this scheme.

- The *Services Export Fund* (STF) provides grants to Malaysian service providers to defray the costs of preparing and submitting tenders in foreign countries. Under this scheme, companies can claim up to 50 per cent reimbursement for eligible expenses. A list of eligible expenses is published by MATRADE and updated on a regular basis.

In addition to these general support schemes, Malaysia implements the *Bumiputra Exporters Development Programme* (BEDP) to build export capacity in enterprises owned by Bumiputra ethnic groups. In order to participate in this export development programme, qualifying enterprises must produce a product with clear export potential as well as demonstrate capacity to build supply capabilities for export markets.

4.3 Turkey

Turkey adopts a centralised approach to trade promotion - the Undersecretariat For Foreign Trade is located in the Prime Ministry Office – and is responsible for most trade promotion activites from the signing of bilateral agreement to developing Free Trade Zones. As a way of targeting export promotion, the undersecretariat created the Export Promotion Center (İGEME) in 1960. The IGEME acts as an intermediary between exporters and their markets by providing:

- Market research – for example on the IGEME website, exporters can access detailed market research on the export profile of each product category traded.

- Training – the IGEME offers training to potential and existing exporters on export procedures.

- Trade information services – collects trade information and makes it available through an extensive network of regional offices, publications, libraries and databases.
- Publicity and Promotion - organises trade fairs, exhibitions and publishes promotional material.
- International engagement – safeguards and promotes Turkey interest's as a active participant in international forums while engaging with other trade promotion organisations to improve bilateral trade. (Prime Ministry for Foreign Trade, 2009).

The government offers financial support to exporters through two mechanisms: Turkey's extensive network of 20 Free Zones and as well as Türk Eximbank – the official export credit agency.

4.4 Thailand

The Export Promotion Strategy Plan developed by ThaiTrade outlines the country's approach to export promotion. The document contains no reference to Latin America as a possible export destination. This is not surprising given that Latin America countries do not feature in the top ten export destinations for most of the country's products. Instead, there is a clear focus on continuing to increase exports to the ASEAN market, China, India, Middle East, East Europe and Africa (Department of Export Promotion - Thailand, 2008).

From an export promotion perspective, Thailand provides information, education and intermediary services to its exporters. No evidence of financial assistance schemes to exporters could be found.

4.5 Hungary

Much Hungary's export growth has occurred from within the 206 industrial parks and free trade zones scattered across Hungary. These parks offer attractive terms to foreign investors to set up manufacturing plants in Hungary. On average, 64 per cent of the total value produced in these parks is exported (Hungarian Investment and Trade Development Agency, 2009).

The Hungarian Investment and Trade Development Agency is dedicated to promoting exports. Export promotion activities are targeted at SME's by providing them with secure state based export credit insurance (European Commission, 2008). Very little additional information is provided on the export promotion strategy of the country or the activites of the trade development agency.

4.6 Russian Federation

Exports of minerals (in the form of oil and gas) as well as base metals account for 75 per cent of Russia's total exports. The market structure of these industries is dominated by large state owned enterprises. According to the Enterprise Survey conducted by the World Bank, only 6.9 per cent of all firms in Russia are registered as exporters in the manufacturing sector (Enterprise Survey, 2008). It is therefore not surprising that no material on Russia's export promotion strategies and initiatives could be found.

5 FIRM LEVEL SURVEY

Whilst the product level analysis has shown the types of products that have potential for success in the Latin American market – it is equally important to understand the firm level decision in deciding to export and more specifically in choosing to export to Latin America.

Existing firm level data collected in South Africa does not interrogate the key export decision in much detail. In addition to this, given the relatively low occurrence of exporting to Latin America, there is little information on the constraints to exporting to this market. In order to overcome this, a focused survey instrument was designed and implemented by AMERU.

The survey targeted companies that are more likely to be exporters than the general population of firms. This is for two primary reasons. First, it was important to survey successful exporters in addition to non-exporters since the aim of this study was to determine what characterises successful export participation. Second, it was important to distinguish between firms that export to Latin America and other firms. If a random sample of firms was drawn from the general population, the study would have a very small proportion of exporters in the sample and an even smaller proportion of Latin American exporters.

Approximately 68 per cent of firms interviewed in the sample are involved in export activity. Export participation rates are between 64 to 76 per cent in the four provinces – Gauteng, KwaZulu-Natal, Western Cape and Eastern Cape – where the sample contains the largest number of observations.

Participation rates in the Latin American market are low among the sample. 15 per cent of firms export to Latin America. Brazil, Mexico and Argentina are the dominant markets, with almost half of the Latin American exporters mentioning Brazil as their most important market.

5.1 Characteristics of exporters and non-exporters

The first step of the analysis is to examine the difference between non-exporters, exporters and Latin American exporters in terms of labour productivity, size (in terms of employment) and capital intensity. The literature suggests that exporters should be more productive, larger and more capital intensive than non-exporters. This finding also applies for this sample. If one compares means, exporters are more than five times more productive in terms of labour productivity than non-exporters, they use almost double the amount of capital per worker and are almost five times larger.

In turn, Latin American exporters are generally larger, more capital intensive[5] and more productive than the broader export pool - the ‘typical’ Latin American exporter has labour productivity levels that are almost double the broader export pool. The ‘typical’ Latin American exporter also uses 50 per cent more capital per unit labour and is double the size of other exporters.

[5] Average capital intensity is higher for exporters than Latin American exporters but this is driven by a few very capital intensive firms in the sample. If one looks at the 25th , 50th and 75th percentiles of the distribution, at all these points Latin American exporters are more capital intensive.

Table 7: Differences between non-exporters, exporters and Latin American exporters

Labour productivity – Output per unit labour	**Non exporters**	**Exporters**	**Latin American Exporters**
Mean	322,978	1,810,085	2,098,784
25th percentile	100,000	281,250	450,000
50th percentile (median)	285,714	555,556	970,000
75th percentile	525,000	1,218,182	4,500,000
Standard deviation	254,069	5,299,652	2,551,545
Number of observations	25	59	11
Capital intensity – Capital per unit labour	**Non exporters**	**Exporters**	**Latin American Exporters**
Mean	111,111	206,417	194,636
25th percentile	10,526	10,000	43,519
50th percentile (median)	61,369	60,000	92,593
75th percentile	185,714	380,952	413,691
Standard deviation	121,307	317,779	196,280
Number of observations	18	37	8
Number of employees	**Non exporters**	**Exporters**	**Latin American Exporters**
Mean	37	170	230
25th percentile	4	8	17
50th percentile (median)	15	20	40
75th percentile	38	60	120
Standard deviation	61	687	638
Number of observations	45	102	23
Foreign ownership	Non exporters	Exporters	Latin American Exporters
Proportion of firms in category with some foreign ownership	6.38%	14.71%	34.78%
Number of observations	47	102	23
Value Added	Non exporters	Exporters	Latin American Exporters
Mean share of value added to turnover	69%	58%	41%
Number of observations	16	20	2

Source: Survey data and author's calculations

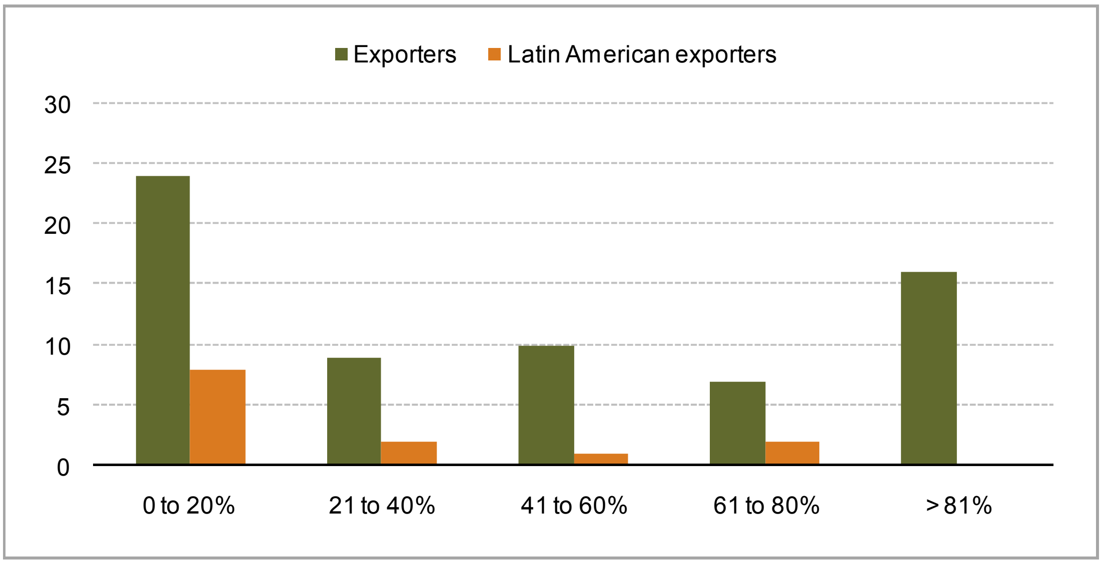
In terms of foreign ownership, exporters are more likely to have some foreign ownership than non-exporting firms. Latin American exporters are, in turn, more likely to have foreign ownership than the general exporting pool.[6] Firms with some foreign ownership are more likely to have contacts in the export market or be able to benefit from the export experience of their foreign owners or partners.

In terms of value added, Latin American exporters add less value in terms of total output than either other exporters or non-exporters. However, the small number of firms that reported enough information (turnover and intermediate costs) to enable value added to be calculated make these estimates unreliable.

These results suggest that Latin American exporters are distributed among the larger, more productive and more capital intensive exporters. They are very unlike the 'typical' non-exporting firm. It would thus suggest that policies to target firms to enter the Latin American export market should not target the broader pool of non-exporters but rather target firms with characteristics that are similar to those firms that are already successful Latin American exporters. These types of firms could be drawn from the pool of existing exporters.

As previous studies have found, firms generally export a small proportion of their output. The distribution of the amount exported for firms in the broad export pool is bimodal – they export either a relatively small amount of output (less than 20 per cent) or are relatively specialised (exporting more than 80 per cent of output). Firms that participate in the Latin American market are more likely to have relatively low levels of exports and there are no specialised Latin American exporters in this sample.[7]

Figure 4: Percentage of output exported



Source: Survey data and author's calculations

6 This measure of foreign ownership is if the firm has any foreign ownership. The majority of foreign owned firms in the sample are wholly foreign owned although a quarter of the foreign owned sample has less than 50% foreign ownership.

7 This measures the total proportion of output exported and not just the proportion exported to Latin America. If this were used, it would further reduce the amount exported.

Firms were asked about the export destinations of their three most important products. Firms exporting to Latin America are more likely to also be exporting to the Far East and to Eastern Europe than exporters in the sample. They are less likely to be exporting to Western Europe, Southern Africa and North America. This indicates that trade with Western Europe, North America and Southern Africa follows a pattern suggested by comparative advantage but that trade with Latin America, Eastern Europe and the Far East (all regions with generally similar per capita incomes to South Africa) is indicative of a certain amount of intra-industry trade.

Table 8: Export destinations

	All exporters		Latin American exporters	
Top 3 export destinations	**Frequency**	**Percent**	**Frequency**	**Percent**
Western Europe	64	34	12	26
Southern Africa	32	17	6	13
North America	27	14	4	9
Oceania	16	9	4	9
Far East	14	7	6	13
Middle East	13	7	1	2
Latin America	10	5	10	21
Eastern Europe	7	4	4	9
Other Africa	5	3	0	0
TOTAL	**188**	**100**	**47**	**100**

Source: Survey data and author's own calculations

Firms were also asked to classify the types of products that they produce. Firms exporting to Latin America are relatively more likely to produce high-technology, mass market and capital intensive products than general exporters. This is also the case relative to non-exporters. This finding corroborates with the results reported earlier that found that Latin American exporters had higher capital-labour ratios than non-exporters and other exporters.

Table 9: Product types

Product types (%)	Non exporters	Exporters	LA Exporters
High-technology products	25	41	52
Medium-technology products	28	28	17
Low-technology products	28	25	30
Intermediate products	15	13	17
Final products	62	61	65
Niche market products	36	47	30
Mass market products	30	24	48

Labour intensive products	57	49	52
Capital intensive products	28	35	52

Source: Survey data and author's own calculations

Latin American exporters are also more likely to view themselves as targeting the international market than exporting firms. 65 per cent of Latin American exporters view the international market as their main market.

Table 10: Exports by main markets

Main market (%)	Non exporters	Exporters	LA Exporters
Local (Province)	29	14	17
National (South Africa)	49	23	13
Regional (Southern Africa)	2	4	4
International	20	59	65
Frequency	**45**	**101**	**23**

Source: Survey data and author's own calculations

Two-thirds of exporting firms are also importers compared with only one-quarter of non-importing firms. Latin American firms are more likely to be importers than exporters in general. Almost three-quarters of firms that export to Latin America also import. However, the mean share of imports for firms that do import is lower than for other exporters or non-exporting firms. It is only for intermediate inputs that Latin American exporters have a higher share of imports than exporters in general. These results indicate a possible role for broader industrial and trade policy in promoting Latin American exports. Policies that reduce the costs of imports, transport costs associated with importing or the bureaucratic costs associated with clearing customs will all reduce the costs that firms face and may enable them to better compete in the Latin American market.

Table 11: Import participation

Response	Non exporters	Exporters	LA Exporters
Importers (Yes %)	26	66	74
Imports	Non exporters	Exporters	Latin American Exporters
Mean import share of total inputs	32%	36%	24%
Number of observations	8	30	9
Mean import share of raw materials	21%	28%	6%
Number of observations	8	28	4
Mean import share of intermediate inputs	42%	27%	38%
Number of observations	7	26	7
Mean import share of capital goods	2%	32%	8%

Number of observations	4	17	2

Source: Survey data and author's own calculations

5.2 Constraints to exporting

In order to design strategies to promote Latin American it is useful to know the constraints that firms encounter in the export market and the perceived barriers to exporting among those firms that do not export. All firms were asked to indicate the constraints and challenges they face. For those firms not participating in the export market or those not exporting to Latin America, they were asked to identify the factors they perceived as constraints.

There are a number of potential barriers that firms face when they engage in exporting. The first type relate to the sunk costs associated with entry. These are costs that cannot be recovered and include: making contact with potential buyers; securing the correct type of documentation for exporting; acquiring trade credit; and changing the product for the export market. Table 12 (a-e) shows the responses by firms to questions about these different types of constraints.

Table 12 (a-e): Constraints and perceived constraints to exporting

(a) Sunk Costs	Exporters (n=102)	LA exporters (n=23)	Non Exporters (n=47)	Non Latin America exporters (n=126)
Making contact with potential buyers	30	26	11	25
Securing the right kind of documentation	22	26	4	10
Access to trade credit	8	4	13	6
Changing product for export market	5	4	0	3

The second type of constraints relate to fixed costs associated with participation in the export market. These are recurring costs that are incurred as long as the firm remains in the export market. These include: costs of transport; issues surrounding transport logistics; the monitoring of shipments; clearing customs; and marketing costs associated with exports.

(b) Fixed costs	Exporters (n=102)	LA exporters (n=23)	Non Exporters (n=47)	Non Latin America exporters (n=126)
Costs of transport	30	39	13	13
Transport logistics	14	13	2	4
Monitoring of shipments	4	9	0	1
Customs	19	30	2	6
Costs of marketing the product	21	30	6	10

The third type of barriers are grouped as trade barriers (both tariff and non-tariff barriers). These include: tariffs; volatility of the exchange rate; and local product standards.

(c) Trade barriers	Exporters (n=102)	LA exporters (n=23)	Non Exporters (n=47)	Non Latin America exporters (n=126)
Tariffs	10	17	2	4
Volatility of exchange rate	28	43	6	4
Local product standards	1	4	0	2

Conditions in foreign markets are the fourth type of barrier. There may be no foreign market for the good; this market may be too small; or it may be too competitive or unprofitable.

(d) Trade barriers	Exporters (n=102)	LA exporters (n=23)	Non Exporters (n=47)	Non Latin America exporters (n=126)
No foreign market for the good	0	0	2	3
Foreign market is too small	1	0	0	2
Foreign market is too competitive/unprofitable	12	13	11	8

The last set of barriers groups all other constraints not categorised elsewhere.

(e) Other	Exporters (n=102)	LA exporters (n=23)	Non Exporters (n=47)	Non Latin America exporters (n=126)
Licence agreement means that they are not allowed	2	4	2	1
Have a local subsidiary or partner in foreign market that produces for that market.	1	0	2	0
Language barriers	9	13	6	22
Risk of non-payment by clients	4	4	0	2
No confidence in legal arbitration in case of contractual disputes with foreign client	1	0	2	0
Complexity of tax regulations in export country	1	0	2	1
Tax levels in export country	1	0	0	1
Others (specify)	15	0	0	0

Source: Survey data and author's own calculations

Among the group of current exporters constraints related to the sunk and fixed costs of exporting were most often mentioned. In particular, making contact with potential buyers and the costs of transport were most problematic. The volatility of the exchange rate, securing the correct documentation and marketing costs were the next most frequently mentioned constraints.

The four most frequently mentioned constraints by Latin American exporters were the: volatility of the exchange rate; costs of transport; and then jointly the costs of marketing the product and customs. Latin American exporters were more likely than the broader pool of exporters to list the following as constraints: securing the correct type of documentation; the costs of transport; customs; costs of marketing the product; and volatility of the exchange rate.[8]

The second comparison worth making relates to the constraints that non-Latin American exporters perceive compared to the constraints perceived by firms that are non-exporters. Making contact with potential buyers and language barriers are the two most frequently mentioned perceived constraints by firms not exporting to Latin America. These reflect areas where the DTI can play a role to reduce these barriers through activities such as trade missions.

Firms were asked how they established contact with the client in the export market. The Latin American exporters are more likely to have benefited from a DTI arranged event, particularly a trade mission, relative to firms in the general export pool. Although these large differences may in part be explained by the sampling strategy employed in this survey, they do indicate that these DTI arranged events can be particularly beneficial for penetrating the Latin American market. Trade missions into South Africa are almost twice as likely to be mentioned as a way to establish contacts when compared to Trade missions to foreign countries.

Table 13: How were contacts established?

Contacts established? (%)	Exporters (n=102)	LA exporters (n=23)
Foreign client approached me	43	39
I approached foreign client	32	26
I participated in a DTI arranged Trade Mission (in a foreign country)	11	26
I participated in a DTI arranged Trade Mission (in South Africa)	15	48
Export Event (organised by non-DTI South African agency)	3	4
Export Event (organised by foreign agency)	7	22
I participated in a DTI arranged International Trade Initiative (in a foreign country)	2	9
I participated in a DTI arranged National Pavilion (in a foreign country)	4	9
I participated in a DTI arranged International Trade Initiative (in South Africa)	11	13
I participated in a DTI arranged National Pavilion (in South Africa)	7	13

[8] This list is confined which at least 20% of respondents view as onerous.

Export council	0	0
Other (specify)	25	0

6 NON-TARIFF MARKET ACCESS BARRIERS

In recent years, non-tariff barriers[9] (NTBs), have become a powerful instrument for trade and for protection in some countries. Discussions on NTBs have also become a major part of multilateral and bilateral trade negotiations and agreements. The survey results indicate that South African exporters to Latin America face significant barriers in terms of documentation; transport; customs; and marketing. For this reason, a separate study on the non-tariff barriers in Brazil, Argentina, Chile and Mexico was commissioned.

It is not possible to summarise the full list of non-tariff barriers uncovered in this separate and lengthy analysis. But the main policy conclusions are summarised below.

6.1 Sanitary and phytosanitary measures

It appears clearly from the study that despite a common framework given by the Mercosur Agreement, Argentina and Brazil have distinct policies regarding SPS measures and therefore, a country and product specific strategy should be pursued through face-to-face discussions with country representatives.

The experience of other countries has shown that the organization of bilateral SPS committees can provide for a constructive solution. For example, the creation of an ad-hoc committee to help solving SPS issues was critical for Chile to meet with US requirements for phytosanitary measures, and greatly assisted several Chilean fruit and meat products in entering into the US market. Thus, the formation of a dedicated committee which focuses on SPS concerns of both trading partners might be an appropriate tool for easing the access of South African products in priority Latin American markets.

6.2 Complex custom requirements

Notwithstanding the existence of regional agreements on customs, such as the Mercosur regime, the presence of local interlocutors in each member country can be a strategic asset. In particular, the assistance of a local custom agent, who knows domestic import processes, can greatly assist exporters in gathering trust-worthy information on specific issues and speeding-up customs procedures. It is also important in facilitating contacts with the local authorities.

For this reason, most successful exporting countries have established dedicated trade offices and have promoted the creation of trade chambers where prospective business partners can meet. A noteworthy example is the South African Business Centre, which is an active member of the Argentine-South African Chamber of Commerce. Given the size and complexity of the Latin American market, it is not sufficient to count on regional offices and embassies – priority countries need to be

[9] NTBs include administrative, regulatory, governmental, financial, exchange and other type of measures or barriers on imports of goods or services.

well-targeted and offices well-equipped. Again – the survey confirms the key role played by DTI offices and officials in penetrating the Latin American market.

7 CONCLUSION AND POLICY RECOMMENDATIONS

When designed well, export promotion strategies can help improve the export performance of a country. This report uses three analytical tools – trade analysis, benchmarking and a firm level survey to provide the DTI with an evidence-based approach towards formulating its export promotion strategy for the Latin American region.

In seeking to increase exports to the Latin American region, the DTI has a number of policy options available. It can focus its efforts on: seeking to increase the number of firms that become exporters; increasing the volumes exported by companies that already export to Latin America; increasing exports from companies that export to the rest of the world but not to Latin America; or adopting a combination of these policy options. However, whatever option the DTI chooses to adopt, the overarching consideration should be that their export promotion strategies are effective in achieving improved export performance whilst still delivering value for money. To achieve this, we recommend a number of improvements on the current approach to export promotion. Whilst some of these improvements address specific constraints faced by exporters to the Latin American region, most recommendations are more general in nature.

Recommendation No. 1: Use the findings of this study to prioritise certain commodity groups for export to Latin America

The trade analysis and export benchmarking provide considerable insight into the trade patterns between South Africa and Latin American countries. The table below summarises the results of the benchmarking exercise by ***commodity group***. It highlights a number of products within each of these commodity groups where South Africa has both limited penetration or does not export certain products at all. It is worth noting that in both of these analyses, a large number of product lines were identified within the machinery commodity group where South Africa could possibly increase its current exports or alternatively export new products to Latin America. These product lists provide DTI with a starting point to engage with sectors and industry in order to create awareness of the potential for exporting to Latin America.

Table 14: Priority export opportunities – by commodity

Products with limited export penetration in the Latin American Market	Products exported to Latin America by comparator countries but not exported by South Africa
Chemical products (C06)	Plastic and rubber products (C07)
Plastic and rubber products (C07)	Paper Products (C10)
Textiles and Clothing (C11)	Textiles and Clothing (C11)
Base metals (C15)	Base metals (C15)

Machinery (C16)	Machinery (C16)
Transport equipment (C17)	Transport equipment (C17)
Specialised equipment (C18)	Specialised equipment (C18)
	Miscellaneous manufactured articles (C20)

Recommendation No. 2: Select firms for participation in Latin American trade promotion activities on the basis of their 'export-readiness

The findings from the survey show that the Latin American market is difficult to enter. Firms that are successful Latin American exporters are larger, more productive, more capital intensive and more likely to produce value-added goods than the broader pool of exporters. These firms are different from the typical non-exporting firms. Export promotion strategies that are more likely to succeed would target firms that are already similar in characteristic to those that participate in the Latin American market. This study consequently suggests that the DTI should consider adopting 'export readiness' criteria which should be formulated to take into account:

- The firm size (reflected through the number of employees).
- The types of products exported (reflected through their exports of high value products).
- Whether the firm has exported to Latin America (even on a once-off basis).
- Whether the firm exports to 'similar' markets such as Eastern Europe and the Far East.

Recommendation No 3: Improve access to and the quality of information provided to exporters

Successful export promotion strategies are built on reliable, accurate and up to date information. In deciding on whether or not to export, firms are likely to search for information on potential markets and international demand for their product. The firm level surveys shows that amongst non-exporting firms - language barriers and making contact with buyers were perceived as the greatest constraints to entry into Latin American markets. Such constraints often lead to erratic export trends – and the data confirms that South African firms do struggle to sustain exports to Latin America.

The experience of other export promotion agencies suggests that the DTI can assist exporters to Latin America by:

- Developing an electronic (web-based) system that houses information on Latin America country profiles, customs and tax information, contact details of DTI representatives in Latin American countries and market intelligence.
- Publishing regular bulletins highlighting all trade related issues and events that occur in Latin America.

- Reporting and monitoring trade statistics between South Africa and Latin American countries.
- Compiling a directory of all South African exporters, their contact details and the types of products they export.

Moreover, by improving the quality and access to information on Latin American countries, the DTI can signal to exporters their intent to support export activities targeted at these countries.

Recommendation No4: Reinforce capacity within the DTI to carry out export facilitation activities and provide advisory services

Engaging in successful export activities may often be hindered at the outset if firms cannot access the services and products offered by the DTI. Countries like Australia, Malaysia and Thailand have dedicated trade help desks, which are the first port of call for exporters seeking information. The role of their call centre agents is to provide the information required by exporters, place them in contact with representatives in foreign markets or direct them to right person to address specific queries. Australia also employs export advisors, which have specialist knowledge of all aspects of exporting. They provide information on trade leads, country specific problems, logistical issues, customs procedures and facilitate communication between the exporter and the Austrade local representatives in foreign markets.

The DTI's local representatives in foreign countries also play an important role in trade facilitation. For firms exporting to Latin American markets, they can be a particularly valuable resource in their capacity as intermediaries but also as key informants on local conditions. It is therefore suggested that local representatives are selected on the basis of their understanding of trade issues and equipped with the required trade facilitation skills.

It is worth noting that respondents considered the inward Trade Missions (held in South Africa) as a more successful mechanism for linking potential Latin American clients and local firms than outward missions. It is therefore recommended that the DTI uses this mechanism more regularly.

Recommendation No 5: Monitor and evaluate the results of export promotion activities

All trade promotion activities should be monitored regularly. For those targeted at Latin American markets, this survey provides baseline information on challenges and constraints faced by exporters as well as insights into the type of support they require. More generally, it is recommended that the effectiveness of trade promotion activities are monitored through (a) an annual customer survey to gauge the response of exporters to DTI services (b) a five year economic impact assessment of DTI's EMIA programme to assess its effectiveness in terms of improving export performance.

8 REFERENCES

Anjinho, N. and Rankin, N. (2008) *Exporting and size: Comparisons between developing countries* University of the Witwatersrand, mimeo.

Arora, V. and Bhundia, A. (2003) *Potential Output and Total Factor Productivity Growth in Post-Apartheid South Africa*, IMF Working Paper WP/03/178, International Monetary Fund, Washington, D.C.

Austrade. (2009a). *Getting Financial Assistance*. Retrieved from Austrade: http://www.austrade.gov.au/Getting-financial-assistance/default.aspx

Austrade (2009b) *What can you claim.* Retrieved from Austrade: http://www.austrade.gov.au/What-can-you-claim/default.aspx

Austrade. (2008, September 1). *Publications: Review of the Export Market Development Grant Scheme.* Retrieved June 14, 2009, from Austrade: http://www.austrade.gov.au/Publication/default.aspx

Australian DFAT. (2001, June 24). *Investing in Latin American Growth: Unlocking Opportunities in Brazil, Mexico, Argentina and Chile.* Retrieved June 2008, 18, from DFAT: http://www.dfat.gov.au/publications/la/unlocking_opportunities_in_la.pdf

Baldwin, R. (1988) *Hysteresis in Import Prices: The Beachhead Effect*, *American Economic Review*, 78(4): 773-785.

Baldwin, R. and Krugman, P. (1989) *Persistent Trade Effects of Large Exchange Rate Shocks*, *Quarterly Journal of Economics*, 104(4): 635-654.

Belli, P., Finger, M. and Ballivian, A. (1993) *South Africa: A review of trade policies*, World Bank Informal Discussion Papers on Aspects of the South African Economy no. 4, The Southern Africa department, The World Bank.

Bernard, A, Jensen, JB, Redding, S. and Schott, P. (2007) *Firms in International Trade,* National Bureau of Economic Research Working Paper 13054.

Bernard, A.B. and Jansen, J.B. (1999) *Exporting and Productivity*, National Bureau of Economic Research Working Paper: 7135.

Bernard, A.B and Jensen, J.B. (2001) *Why Some Firms Export*, National Bureau of Economic Research Working Paper: 8349.

Bernard, A. and Wagner, J. (1997) *Exports and Success in German Manufacturing*, Weltwirtschaftliches Archiv, 133(1): 134-157.

Bigsten, A., Collier, P. Dercon, S., Fafchamps, M., Gauthier, B., Gunning, J.W., Haraburema, J., Oduro, A., Oostendorp, R., Pattillo, C., Söderbom, M., Teal, F. and Zeufack, A. (2004) *Do African Manufacturing Firm Learn from Exporting?*, Journal of Development Studies 40(3): 115-141

Bigsten, Arne and Söderbom, Måns (2006) *What have we learned from a decade of manufacturing enterprise surveys in Africa?* World Bank Research Observer, August: 1-25.

Clerides, S., Lach S. and Tybout, J. (1998) 'Is Learning by Exporting Important? Micro-Dynamic Evidence from Colombia, Mexico and Morocco,' *Quarterly Journal of Economics*, 113(3): 903-948.

Das, S., Roberts M. and Tybout, J. (2001) *'Market Entry Costs, Producer,* Heterogeneity, and Export Dynamics, Pennsylvania State University, mimeo, http://econ.la.psu.edu/~jtybout/drtfinal1.pdf.

De Loecker, J. (2004) *Do Exports Generate Higher Productivity? Evidence from Slovenia,* LICOS Discussion Papers Katholike Universiteit Leuven, Discussion paper 151/2004.

Department of Export Promotion - Thailand. (2008, December). *About Us*. Retrieved from Thaitrade: http://www.thaitrade.com/

De Melo, J and S. Dhar (1992) Lessons of Trade Liberalisation in Latin America for transistional economies. http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/1992/11/01/000009265_3961003170315/Rendered/PDF/multi0page.pdf

Dixit, A. (1989) *Exit and Entry Decisions under Uncertainty*, Journal of Political Economy, 97(3): 620-638.

ECLAC. (2008, June 9-12). *Structure Change and Productivity Growth: 20 Years Later.* Retrieved June 11 , 2009, from ECLAC: http://www.eclac.org/publicaciones/xml/2/33282/2008-118-SES.32-INGLES-WEB-OK.pdf

Edwards, L. and Golub, L. (2004) *South Africa's International Cost Competitiveness and Productivity in Manufacturing*, World Development, 32(8), pp. 1323-1339.

Edwards, L., Rankin, N. and Schöer, V. (2008) *South African exporting firms: What do we know and what should we know? Journal of Development Perspectives*, 4(1), pp. 67-92.

Enterprise Survey. (2008). *Russian Federation.* Retrieved from Enterprise Surveys.

European Commission. (2008, December). *Addendum to the 2008 Convergence Programme.* Retrieved July 12, 2009, from Europa: http://ec.europa.eu/economy_finance/publications/publication13831_en.pdf

Fafchamps, M., El Hamine S. and Zeufack, A. (2002) *Learning to Export: Evidence from Moroccan Manufacturing*, Centre for the Study of African Economies Working Paper, WPS/2002-02.

Fedderke, J. (2006) *Technology, Human Capital and Growth: evidence from a middle income country case study applying dynamic heterogeneous panel analysis*, in South African Reserve Bank, Banco de Mexico and The People's Bank of China (eds.) *Economic Growth*, Proceedings of a G20 seminar held in Pretoria, South Africa, on 4-5 August 2005.

Hungarian Government. (2003). *External Relations.* Retrieved from Hungary.hu: http://www.magyarorszag.hu/english/abouthungary/data/foreign/external.html

Hungarian Investment and Trade Development Agency. (2009). *Foreign Trade.* Retrieved July 11, 2009, from ITDH: http://www.itdh.com/engine.aspx?page=foreign_trade

International Monetary Fund (2005) *Stabilisation and reform in Latin America: A macroeconomic perspective on the experience since 1990's.*
http://www.imf.org/external/pubs/ft/op/238/pdf/op238_2.pdf

Jenkins, R. (2008) *Trade, Technology and Employment in South Africa*, *Journal of Development Studies*, 44(1): 60-79.

Jonsson, G. and Subramanian, A. (2000) *Dynamic gains from trade: Evidence from South Africa*, International Monetary Fund Working Paper no. 00/45.

Kraay, A. (1999) '*Exportations et performances economiques: Etude d'un panel d'entreprises chinoises,*' Revue d'Economie du Developpement, 0(1-2): 183-207.

Office of Export Planning (MATRADE). (2009). *Export Promotion Strategy 2009.* Retrieved from About MATRADE: http://www.matrade.gov.my/cms/content.jsp?id=com.tms.cms.section.Section_IntroFTA

Prime Ministry for Foreign Trade. (2009). *Export Promotion Activities.* Retrieved July 06, 2009, from IGEME: http://www.igeme.org.tr/english/turkey/pdfView.cfm?sec=tr&secID=1&subID=8

Prime Ministry for Foreign Trade. (2008). *Foreign Trade.* Retrieved Juy 6, 2009, from IGEME: http://www.igeme.org.tr/english/turkey/pdfView.cfm?sec=tr&secID=1&subID=3

Rankin, N. (2002) '*The Export Behaviour of South African Firms*', Trade and Industrial Policies Strategy (TIPS) Working Paper.

Rankin, N. (2005) '*The Determinants of Manufacturing Exports from Sub-Saharan Africa*', unpublished D.Phil Thesis, University of Oxford.

Rankin, N. and Schöer, V. (2009) "*Regional exports, excess capacity and the 'vent-for-surplus' among SADC firms*" University of the Witwatersrand, mimeo.

Rankin, N., Söderbom M. and Teal, F. (2006) "*Exporting from manufacturing firms in Sub-Saharan Africa.*" Journal of African Economies, 15(4), 671-687

Söderbom, M. and Teal, F. (2000) *Skills, Investment and Exports from Manufacturing Firms in Africa*, Journal of Development Studies, 37(2): 13-43.

Söderbom, M. and Teal, F. (2003) *Are Manufacturing Exports the Key to Economic Success in Africa?* 2003, Journal of African Economies, 12(1): 1-29

Tussie, D., & Lengyel, M. (1998). *WTO commitments on export promotion.* Retrieved June 24, 2009, from IADB: http://www.iadb.org/intal/aplicaciones/uploads/publicaciones/i_INTAL_IYT_4-5_1998_Tussie-Lengyel.Pdf

UNESCAP. (2007). *Publications.* Retrieved June 14, 2009, from UNESCAP: http://www.unescap.org/tid/publication/tipub2107_chap3.pdf

Van Biesebroeck, J. (2005) *Exporting Raises Productivity in sub-Saharan African Manufacturing Firms*, Journal of International Economics, 67(2): 373-391.

World Bank. (2008). *World Development Indicators.* Retrieved from World Bank: http://ddp-ext.worldbank.org/ext/ddpreports/ViewSharedReport?&CF=&REPORT_ID=9147&REQUEST_TYPE=VIEWADVANCED

World Bank, (2005) *South Africa: An Assessment of the Investment Climate*, Washington DC: World Bank.

World Bank (2009) *World Development Report: Reshaping World Geography.*

ANNEXURE A

Table 15: South Africa's top 50 export product lines to Latin American and Caribbean countries

Product line at HS 8 level	2006 share %	2006 accumulated % share
h27011200:bituminous coal	7	7
h72191300:steel of a thickness of 3 mm	5	13
h27101135:residual fuel oils	5	18
h84073400:of a cylinder capacity exceeding 1 000 cm3	3	21
h72021900:other steel	3	23
h72029200:ferro-vanadium	2	25
h72191200:of a thickness of 4,75 mm	2	28
h29012900:other	2	30
h75061000:of nickel, not alloyed	2	32
h89039100:sailboats, with or without auxiliary motors	2	34
h28258000:antimony oxides	2	35
h26140000:titanium ores and concentrates	2	37
h29349900:other	2	39
h76061207:coated or covered	2	40
h26100000:chromium ores and concentrates	1	42
h72021100:containing by mass more than 2 per cent of carbon	1	43
h93011900:other	1	44
h27011100:anthracite	1	45
h76012000:aluminium alloys	1	46
h72091800:of a thickness of less than 0,5 mm	1	47
h72023000:ferro-silico-manganese	1	48
h72024900:other	1	49
h87087090:other	1	50
h72083900:of a thickness of less than 3 mm	1	51
h72084000:not in coils, not further worked than hot-rolled,	1	52
h26151000:zirconium ores and concentrates	1	53
h72192200:of a thickness of 4,75 mm	1	54
h72104900:other	1	55
h72287000:angles, shapes and sections	1	55
h38083090:other	1	56
h76061217:not coated or covered	1	57
h76082000:of aluminium alloys	1	58
h29051300:butan-1-ol (n-butyl alcohol)	1	58
h72193300:of a thickness exceeding 1 mm but less than 3 mm	1	59
h84099190:other	1	60
h72091600:of a thickness exceeding 1 mm but less than 3 mm	1	61
h72192100:of a thickness exceeding 10 mm	1	61

Product line at HS 8 level	2006 share %	2006 accumulated % share
h72091700:of a thickness of 0,5 mm	1	62
h29141100:acetone	1	63
h87042180:other, of a vehicle mass not exceeding 2 000 kg	1	63
h84831000:transmission shafts	1	64
h22087020:in containers holding 2 li or less	1	65
h29161200:sters van akrielsuur:	1	65
h88024000:aeroplanes and other aircraft	1	66
h72193200:of a thickness of 3 mm	1	66
h41139000:other	1	67
h72139100:of less than 14 mm in diameter	1	67
h38220000:diagnostic or laboratory reagents	0	68
h84749000:parts	0	68

Source: TIPS SADCTRADE data, author's calculations

Development
Network
Africa