GROWTH TRENDS IN THE SOUTH AFRICAN MANUFACTURED EXPORT INDUSTRY

BY

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DEDICATION

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DECLARATION

I declare that:

"Growth Trends in the South African Manufactured Export Industry"

is my own work, that all the sources used or quoted have been indicated and acknowledged by means of a complete reference, and that this thesis was not previously submitted by me for a degree at another university.

…… ……

P. R. MOLOTO **DATE**

SUMMARY

Title:	Growth Trends in the South African Manufactured Export Industry
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Through empirical research the researcher gained an in-depth knowledge regarding the growth trends in the South African manufactured export industry as well as the factors determining the patterns of growth and champion industries. Finally, recommendations that may be used by relevant authorities and scholars were made. To researchers, a study at disaggregated level into the growth trends of each manufactured export sub-sector should be central to future research.

Selected key words: export orientation and import penetration, factor endowment, industrialisation, manufactured export and trade liberalisation.

ABBREVIATIONS

ANC	African National Congress
BLSN	Botswana, Lesotho, Namibia and Swaziland
BTI	Board on Trade and Industry
BTT	Board on Tariffs and Trade
DTI	Department of Trade and Industry
ECOWAS	Economic Community of West African States
ESKOM	Electricity Supply Commission
EU	European Union
EU-RSA-FTA	European Union-Republic of South Africa-Free Trade Agreement
FTA	Free Trade Agreement
GATT	General Agreement on Trade and Tariffs
GDP	Gross Domestic Product
GEAR	Growth, Employment and Redistribution
GEIS	General Export Incentive Scheme
GJMC	Greater Johannesburg Metropolitan Council
H-O	Hecksher-Ohlin
IDC	Industrial Development Corporation
IDZs	Industrial Development Zones
IMF	International Monetary Fund
IMS	Integrated Manufacturing Strategy
ISCOR	Iron and Steel Corporation
ITC	International Trade Center
JSE	Johannesburg Stock Exchange
LAC	Long-run Average Cost Curve
NAFTA	North Atlantic Free Trade Agreement

NICs	Newly Industrialised Countries
NIEP	National Institute for Economic Policy
NPI	National Productivity Institute
NRF	National Research Fund
PWV	Pretoria-Witwatersrand-Vaal
RCA	Revealed Comparative Advantage
R & D	Research & Development
SACU	Southern African Custom Union
SADC	Southern African Development Community
SAPs	Structural Adjustment Programmes
SARB	South African Reserve Bank
SARS	South African Revenue Service
SDIs	Spatial Development Initiatives
SMEs	Small and Medium Enterprises
SIC	Standard Industry Classification
SSA	Statistics South Africa
TELKOM	Telecommunication Commission
TIPS	Trade and Industry Policy Secretariat
UK	United Kingdom
US	United States
USSR	Union of Socialist Soviet Republics
WTO	World Trade Organisation

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CHAPTER ONE

Introduction and research methodology

1.1 Introduction

The importance of the manufactured export industry in South Africa relates to its pivotal role of overcoming domestic structural constraints inhibiting the growth of the manufacturing sector since 1980, with specific reference to the 1990s. The manufactured export industry holds growth potential for the increasing contribution of the sector to economic growth and development in South Africa. The thesis scrutinises the nature and patterns of growth trends in the South African manufactured export industry influenced by the nature of industrial and trade policy implemented in South Africa.

1.2 Problem identification

More than a decade ago the South African economy was by all measures an inward-oriented economy characterised by resource-intensive exports, thus declining growth prospects over the years. But since readmission into world markets South Africa has become a more open economy with manufactured exports occupying a key role as the main source of economic performance and growth (Roberts, 1988:5; Kahn & Black, 1998:9).

The dissertation will concentrate largely on growth trends in manufactured exports and factors influencing these growth trends and its contribution to the economy. The nature of the manufacturing sector and the growth patterns in exports are not well researched. This study is therefore crucial in determining and analysing what factors are responsible for export growth trends. Ascertaining the factors and identifying "export industry champions" would provide business and policy-makers with valuable information regarding the comparative advantage of the South African manufacturing sector.

The fact that South Africa is a prominent member of Southern African Custom Union [1](SACU) provides for a rationale to study contributing factors to the growth of manufactured exports by using trade data emanating in the custom union. Custom Unions are recognised by the General Agreement on Trade and Tariffs (GATT) – now the World Trade Organisation (WTO), as long as a custom union does not raise trade barriers against non-members but facilitate trade between nations (Booysen, 1999:43). Over the past seven years, the Southern African Development Community (SADC) intra-trade has growth significantly with South Africa dominant – emphasising South Africa's position as a bigger economy in the region (Roberts, 2000:614). Of particular importance is the fact that SADC is a major destination of South Africa's manufactured exports (Laubscher, 1997:4; Tsikata, 2000:4; Valentine & Krasnik, 2000:266). Furthermore, the significance of the availability of such trade data and tariff rates being levied for SACU enables the researcher to utilise the relevant and appropriate figures for analysis of impact of trade changes in exportable products in the custom union.

Analysing opportunities and challenges brought about by globalisation as South Africa seeks a greater share of world markets are crucial when considering the re-integration of the South African economy. In recent years trade continually enhanced economic efficiency in the South African economy, thereby raising the country's global competitiveness variables (Valodia, 1997:4; Jonsson & Subramanian, 2000:3).

1.3 The aim of the study

It is the purpose of this dissertation to investigate the direction of growth trends in the South African manufactured export industry. Knowledge of the manufacturing sector is crucial in analysing the role of the sector in the export industry, as an earner of foreign currency, creator of employment and its effect on the growth and development of the South African economy in general. The promotion of manufactured export growth is central to the growth and development

[1] South Africa, Botswana, Lesotho, Namibia and Swaziland

of the South African economy. This is in the light of the South African economy's inability to grow faster than the rate of population, which is resulting in ever-increasing social, political and economic problems (Dias, 1998:1; Chandra, 2002:2).

The following secondary aims are set for the study:

- Investigating the development history of the South African manufacturing sector;
- Researching the co-existence of the South African manufacturing sector and its linkages with other economic sectors;
- Researching the composition of South Africa's manufacturing sector and its exportable products;
- Highlighting the possible prevalence of future obstacles which could hinder the competitiveness and growth of the manufactured export industry; and
- Where possible, making recommendations for a co-ordinated programme of action, which can boost the export performance and direct actions of policy-makers with a view to attaining growth and prosperity in the South African manufacturing sector.

1.4 Importance of the study

The need for the development of the manufactured export industry is imperative for a country's ability to raise employment and the standard of living. This was recognised since Adam Smith's analysis of the development process where the importance of export expansion as an engine of economic growth was emphasised (Krueger, 1988: 89). Due to the prominence of the manufacturing sector as a driver of economic growth in South Africa, it is important to research the changing nature and growth patterns in the manufactured export industry. The impact of these changes will be studied in relation to:

- The manufactured exports by product and geographical dispersion;
- Overall contribution to economic growth and development; and
- The extent and nature of factors influencing growth trends of manufactured exports.

These will help deduce whether the opportunity cost forgone in utilising economic resources justifies the industrial and export-led growth strategy adopted in the South Africa economy.

1.5 Research procedure and methodology

The knowledge of basic economic theory coupled with the ability to apply it is undoubtedly a main tool used to gain insight into the numerous factors affecting the manufacturing industry. Such knowledge is also crucial in forecasting what is likely to happen in the manufactured export industry in a given period of time. It is for this reason that a literature study will form the basis of the background chapters. Sources of information will include annual reports, journals, articles and textbooks. Gathering information is important in determining the *status quo* within the field researched (Botha & Engelbrecht, 1992: 50). Furthermore, primary sources to collect data for quantitative analysis include institutions such as Statistics South Africa (SSA), Department of Trade and Industry (DTI), South African Reserve Bank (SARB) and Industrial Development Corporation (IDC). According to Lindsay (1993:46), some data is more reliable than others. Due to the uncertainty about the reliability of some data the researcher will utilise references which are more reliable and will be acknowledged in full under the Bibliography.

A local search engine on the Internet, e.g. Sabinet, will be utilised due to its likelihood of reducing agency and transaction costs when gathering information. A search engine can be defined as a program that searches for documents using specified keywords and returns the list of the documents when found. Basically, it enables searches for documents on the World Wide Web. The results obtained through these methods of data collection will be analysed and conclusions and recommendations pertaining to export growth patterns of the South African manufacturing sector will then be made.

The limitations (thus scope of the research) will determine the extent of study coverage of the manufactured export industry. Since the manufacturing sector comprises of more than 21 industries, it would be difficult, if not impossible, to individually study growth patterns for each industry type. The difficulty will arise mainly due to some logistical and time constraints. Therefore, specific industries of the South African manufacturing sector will be researched for an intensive analysis without compromising the general analysis of the overall growth trends of the manufactured export industry in South Africa.

1.6 Value of the research

The aim of the research is to investigate export growth trends of South Africa's manufactured goods. It is therefore important that the research outcomes are made available to the public and relevant funding institutions, government stakeholders and other interested parties. Consequently, there is a need to distribute copies of the research results to, inter alia, the University of Pretoria, relevant directorates at the DTI and the IDC that are tasked with the duty of promoting the establishment and expansion of manufacturing industries, Council for Scientific and Industrial Research (CSIR) and the National Research Fund (NRF). The findings will be useful in helping, inter alia, policy-makers in understanding trade conditions in the manufactured export industry as well as other economic sectors with a view to pursue Research & Development (R&D) for better industrial policy design and adjustment in accordance with the prevailing conditions in the global manufactured exports industry.

1.7 Division of chapters

The dissertation is organised as follows:

Chapter 1 is an introduction to the dissertation. It outlines the problem statement, aim, research procedure and methodology and the organisation of the dissertation.

Chapter 2 deals with the historical development of the manufacturing industry in South Africa over the years. This is important as it enables the researcher to establish the linkages between the manufacturing industry and other industries such as mining and agriculture and influence on current growth trends.

Chapter 3 explores the theory of structural change emphasising the significance of manufactures as the stages of the structure of the economy evolve over the years on the one hand and trade theories unravelling the theoretical rationale behind trade patterns on the other. There exists both theoretical and empirical evidence that export-oriented industrialisation has led to superior development performance in a number of countries, of which the East Asian Newly Industrialised Countries are prime examples. They overcame the diseconomies of scale of being small and realised dynamic efficiency in their mobilisation, allocation and utilisation of limited resources.

Chapter 4 outlines the impact of South Africa's recent trade reforms in the manufactured export industry, with specific reference to the 1990s. The diversion of demand for imported manufactured goods to domestic producers by means of high levels of protection, that is to say, import substitution, which was followed by many developed countries in early post-World War II industrialisation efforts, has proven inefficient and ineffective in stimulating efficient and competitive pressures on domestic firms. Consequently, countries shifted to reliance on an export-led growth strategy, which experienced immediate and dramatic results in most developing countries.

Chapter 5 investigates growth trends in South Africa's manufactured export industry since the 1980s. The analysis of the growth trends is essential in identifying "export industry champions" as well as the growing and growth potential markets and factors influencing the growth patterns.

Chapter 6 provides a summary of all previous chapters in this thesis with a number of concluding remarks and recommendations for relevant policy-makers and suggestions for future studies of growth trends in the South African manufactured export industry.

1.8 Summary and conclusions

The need for the development of the manufactured export industry is imperative for a country's ability to raise employment and the standard of living. Growth trends in the South African manufactured export industry are not well researched. The aim of the research is to investigate the growth trends in South Africa's manufactured export industry since 1980, with specific reference to the 1990s.

CHAPTER TWO

The historical development of manufacturing in South Africa

2.1 Introduction

Many other middle-income and semi-peripheral countries share the broad issues central to the analysis of development of the manufacturing sector in South Africa. These issues concern the question of inward and outward development paths, and more generally, the role of the state in the industrialisation process. The purpose of this chapter is to explain the historical development of manufacturing in South Africa. The chapter starts with a descriptive evolution of the manufacturing sector and explains the structural nature of the manufacturing sector in South Africa and then highlights some growth trends over the years.

2.2 The emergence and characteristics of the manufacturing sector in South Africa

The industrial revolution in South Africa began with the discovery of minerals in the mid-1800s.
As the growth rates of the economy increased, the sectoral contribution to economic growth changed significantly with the eventual dominance of the manufacturing sector. The potential to shift production processes from a predominantly primary to a modern diversified economy was the core of South Africa's industrial development (Leftwich, 1974; Botha *et al*, 1988; Schrire, 1991 & Chandra, 1992).

Dowling & Salvatore (1977:69) argue that the main reasons behind industrialisation in developing economies are that their manufactured imports clearly indicated the existence of a domestic market, protection against foreign competition and to relieve balance of payments pressure.

Swanepoel *et al*. (1995:19) define economic growth as a process whereby the production capacity of an economy increases over time so that there is an increase in the national income. Empirical evidence shows that the level of economic development in industrialised nations is attributable to an industrial growth path that was followed during their era as low-income countries.

For South Africa, it was the discovery of precious minerals such as gold on the Witwatersrand in 1886 and diamonds in Kimberly in 1870 that gave a significant starting foundation for manufacturing growth (Houghton, 1972:63). The early development of the manufacturing sector in South Africa, as a result, has been attributed to mining fortunes. As Nattrass (1982:163) puts it: "even today the links between the two sectors are strong". The discovery and exploitation of these minerals greatly transformed the South African economy by increasing the national income and accelerating the tempo of economic growth (Davenport, 1991:494). The location and nature as well as the extent of accessibility of the minerals created sufficient economic incentives for the establishment and promotion of industries in areas endowed with mineral resources (Coleman, 1993:195).

The growth of the mining industry was responsible for the establishment of a rail system, the opening up of the coal-fields for the generation of electricity, and the establishment of urban concentrations, commercial farming and most important, manufacturing development (Abedian & Standish, 1992:1).

The most notable linkage exists between mining and manufacturing industries (Fedderke & Pirouz, 2002:26). For instance, the mining industry has been a major source in the expansion of manufacturing in South Africa (Houghton, 1972:109). The initial stages of manufacturing development were strongly linked to the needs of the mines. It included manufacturing of explosives and production of boots for miners.

The mining industry has created a domestic market without which manufacturing consumer goods would have been impossible (Houghton, 1972:109). In areas like Witwatersrand, for instance, mining is attributed with the initiation of the great urban concentration of population that has become the great urban market for industrial goods. Therefore, the existence of the mining industry gave a great impetus to the South African manufacturing sector.

The subsequent development of the manufacturing sector depended heavily on the fortunes accumulated by the mining sector. Using the vast revenues from mining source, diversification into the manufacturing industry was made possible. Financial resources from the mining industry were not only used as start-up capital but also financed the manufacturing sector's high propensity to import capital goods and intermediate goods as well as input materials. Therefore, to ensure its growth, the South African manufacturing sector relied on the foreign exchange earned by the mining industry to meet the import bill (Joffe *et al*, 1995:151).

During its infancy stage, the South African manufacturing sector did not possess capable human resource capacity to ensure growth. Lumby (1990:76) argues that for demand of productive labour force, the manufacturing sector relied on a large skilled labour force with financial and business know-how, that had developed in the mining industry. Poor skill levels and task-specific production skill levels inhibited the growth of manufacturing (Joffe *et al*, 1995:187). Where domestic supply of labour could not meet skills needed in the manufacturing sector, the industry relied on the foreign links established by the mining industry. The foreign technical input included managerial skills and supplies of essential skills capable of efficiently operating imported technology. The South African manufacturing sector was characterised by numerous structural constraints, mainly a direct consequence of patterns of economic development in the country. Consequently, foreign technology became a prominent factor in the production functions of large manufacturing firms in South Africa.

Although import substitution policy managed to significantly reduce the import of consumer goods; this was accomplished at a higher growth of import of input materials. When foreign technology increased, investment was heavily directed to the more capital-intensive manufacturing industries. This feature is attributed to the industrial policy which was geared towards substitution of imported consumer goods with locally produced goods. The size of the market and skewed distribution of income led to the import substitution policy achieving sub-optimal outcomes in the form of sub-optimal utilisation and restrictive expansion of the manufacturing capacity. Table 2.1 shows the transformation of the economy of South Africa from an agro-mining to a diversified manufacturing and service sector economy.

Table 2.1: Share of selected production sectors as % of GDP

Year	**Sector**		
	Agriculture	**Mining**	**Manufacturing**
1911	21	28	4
1920	22	18	7
1930	14	16	9
1940	13	13	12
1950	17	13	19
1960	12	13	19
1970	8	9	24
1980	5	21	23
1990	5	11	26
2000	6	7	29

Source: Series of SARB quarterly bulletins

By the time the Union of South Africa was formed in 1910 economic activities were predominantly agriculture and mining (Table 2.1). During that period, agriculture and mining contributed a combined figure of 49 percent, while the manufacturing sector contributed a mere 4 percent to GDP.

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In 1925, the South African manufacturing growth was boosted by the national deliberate policy of import substitution and direct state involvement in the economy. The manufacturing sector began to grow much faster than the rest of the economy. While mining and agriculture experienced relative declining growth, manufacturing recorded a 2.2 growth rate. Since its early stages of development, the manufacturing sector has developed into the largest contributor to GDP (SARB, 1999:107).

The Great Depression in 1929 brought contrasting performances for mining, agriculture and the manufacturing sector of the South African economy (Abedian & Standish, 1992:1). The agricultural sector experienced various endogenous and exogenous crises, and since then the sector has been decreasing in terms of importance to the economy. Between 1920 and 1930 the sector's share in GDP declined by more than 10 percent. The downward growth trend is not unique to South Africa; it is regarded as a common feature of most developing countries (Abedian & Standish, 1992:3).

Various global political and economic events increased the growth of the mining industry until late 1970s, notably the oil crisis of 1973 and 1979, which appreciated the value of gold. But the sudden rise in the value of gold was not sustained since the early 1980s, leading to the meltdown of the mining industry as the heartbeat of the South African economy (Abedian & Standish, 1992:3). These trends indicate two contrasting developments in the South African economy during the period under review: first, the absolute contribution of agriculture and mining continued to decline at a very alarming rate with serious socio-economic implications and second, the manufacturing sector consistently increased its share of GDP (Barker, 1993:59).

2.3 Changes in the structure of the manufacturing sector in South Africa

The term 'manufacturing' relates to activities that transform raw materials or combine with intermediate goods into final goods with higher value (Nyilas, 1976:6). The development of the manufacturing sector has certainly changed the structure of the South African economy. Industries within the manufacturing sector can be categorised in terms of size of operation. Large-scale operation industries refer to huge operations employing a large number of labourers. According to Matthews (1983:124) large-scale operations require more capital techniques and modern technology. It includes industries such as chemical and steel. On the other hand, small-scale industries refer to small firms hiring few workers, often not using sophisticated technology. They are usually labour-intensive, producing traditional products such as clothes and shoes (Dowling & Salvatore, 1997:74).

Manufacturing industries can also be classified as being light, heavy and high tech in the nature of production techniques (Mazumdar & van Seventer, 2002:13). Heavy industries are generally more capital-intensive, meaning that they tend to use a higher proportion of capital to labour (Abedian & Standish, 1992:106). Light industries are those that use a higher proportion of labour than capital in their production techniques (Chandra *et al*, 2001:56). According to Nyilas (1976:280) light industries mostly produce consumer goods, whereas heavy industries produce more capital goods. High-tech industries are those that use the highest volume and state-of-the-art technology. They produce very high value goods such as electrical machinery, electronics, professional and scientific equipment (Mazumdar & van Seventer, 2002:13). There are manufacturing industries that utilise labour and capital in more equal proportion. These industries are called intermediate and include rubber and motor vehicles (Abedian & Standish, 1992:106). Heavy industries and high tech, in particular, are growing at a higher rate than light industries in South Africa. The manufacturing sector plays an important role and remains dominant in the secondary sector of the South African economy (Matthews, 1983:123).

The role of manufacturing relates to contribution to GDP, provision of employment opportunities and expansion of trade of manufactured exports. Moreover, the importance attached to the growth of the manufacturing sector is the need to improve the standard of living (Schrire, 1991:447). According to Elias (1992:118) manufacturing in South Africa grew much faster than the rest of the economy, particularly in recent years as in most countries. Even though the manufacturing sector in South Africa overtook the mining sector to become the largest contributor to GDP, its growth has only been sustainable until the 1990s.

The manufacturing sector has plausible and dynamic multiplier effects expressed as forward and backward linkages with other sectors. Linkages can be defined as the effect which the establishment of one industry has on other industries either by expanding the market for industries which produce its inputs or facilitating the supply of the input materials and other industries. The former is a backward linkage and the latter is a forward linkage (Dowling & Salvatore, 1977:40). This feature is attributed to the influence of the external economies, economies of scale and high degree of supply and demand for economic resources (Elias, 1992:118). External economies refer to cost reductions of a firm resulting from the expansion of the entire industry, whereas economies of scale refers to the reduction in the LAC of a firm as it expands its own output (Dowling & Salvatore, 1977:76).

The economy of South Africa has changed considerably over the past decade. Most notably is the decline in the primary sector and the increase in the size of the tertiary sector. The primary sector involves the extraction of basic materials from land, sea, or air. Mining and agriculture are most noticeable examples. Growth in this sector gives employment and supplies raw materials to the secondary sector. The secondary sector is the major feature of the modern economy, entailing a vast range of manufactured goods. In South Africa, people are increasingly working in the manufacturing industries – rather than primary industries – to produce the material goods that are characteristic of the modern economy. Since production does not cease until the final consumption stage, the tertiary sector plays an important role in the modern economy to ensure the goods reach the final consumer.

Table 2.2: Value-added contribution of broad economic sectors to GDP (%), 1971-2000

Broad economic sectors	**Average share 1971-1980**	**Average share (%) 1981-1991**	**Average share (%) 1991-2000**
Primary	16.1	13.3	11.4
Secondary	29.5	29.6	27.7
Tertiary	54.3	57.0	61
Total	100	100	100

Source: TIPS database (www.tips.org.za), 2002

From a macro perspective, there has been a noticeable structural change in the reasonably diversified South African economy since the 1970s (table 2.2). The share of the primary sector (largely agriculture and mining) in overall GDP has decreased over the past three decades, although the secondary sector' share (manufacturing, construction and electricity, gas and water) of GDP has maintained a more or less constant level between 1970-2001. The most significant growth trend, though, is that of the tertiary sector, which traditionally has had the largest GDP share. It is increasingly growing, at the expense of the primary sector, which is in line with trends towards less reliance on primary products and more on high value-added services such as business services, transport and communication and wholesale and retail trade. Table 2.3 shows the value-added contribution of South Africa's economic sectors to GDP between 1991-2001, measured in 1995 constant prices at broad 9-sector level. Table 2.3 reveals that for the agricultural, mining and construction sectors there has been significant changes considering both halves of the decade. The deterioration of the mining sector is linked to the decline in commodity prices, notably gold mining, coal mining and iron ore.

Regarding the share in net output during the 1990s, it appears that the manufacturing sector and community services are the most important contributors to value-added by 9-sector aggregation, though its share in GDP has remained constant at around 20 percent.

Table 2.3: Value-added contribution of sectors to GDP (%), 1991-2001

Sectors	Average share 1991-1996	Average share 1997-2001	Average annual change 1991-1996 (%)	Average annual change 1997-2001 (%)
Agriculture	4.8	4.5	-0.4	1.4
Mining	7.3	6.2	-0.1	-1.0
Manufacturing	21.2	20.3	1.6	1.5
Construction	3.3	3.1	-0.7	1.3
Electricity	3.5	3.7	4.5	-0.1
Transport and Communication	8.5	10.5	5.2	5.6
Trade	14.0	13.5	2.2	1.8
Business Service	15.7	18.0	2.9	6.0
Community service	21.9	20.3	1.6	0.1
All industries	100	100	2.0	2.3

Source: TIPS database (www.tips.org.za), 2003

Table 2.3 further indicates that business services (6 percent) and transport and communication (5.6 percent) had the highest growth rate in value-added between1997-2001 measured in 1995 constant prices. By contrast, the lowest growth rate in value-added was recorded by mining and electricity. The high performance of the transport and communications sector in the mid-1990s is largely attributed to the rollout of the telecommunications services, both by mobile service providers and the national fixed-line operator, TELKOM. On the negative note, manufacturing sector's growth performance has not improved significantly in both halves of the period under study and more so its performance has been below the economy-wide average. By the same length, fiscal policy introduced during the mid-1990s (GEAR Policy, 1996) has had a negative effect on the performance of the community services sector.

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In the early stages of manufacturing in South Africa the output of the sector was greatly aligned towards the production of goods for the domestic consumer market and the mining industry (Nattrass, 1982:169 & Fedderke & Pirouz, 2002:26). Moreover, the development of manufacturing in South Africa began with light industries as in most developing countries. Light industries such as food, clothing and textiles accounted for a larger share of total manufacturing in mid-1910. According to Coughlin *et al*. (2001:2) textiles were one of the earliest offshoots of the peasant economy and served as an engine of early industrialisation.

Another feature of the manufacturing sector was the high need for unskilled and semi-skilled labour to start light industries. Since most developing countries possess a comparative advantage in this regard, it became 'easy' to establish these industries. Soderbom and Mazumdar & van Seventer (2001: 49 & 2002:8) broadly classify labour in terms of the skill levels as follows:

- Highly skilled labour – relates to workers with at least two years of education and training – usually formal - after completion of standard ten (matriculation);
- Skilled labour – comprises of workers in occupations for which at least a number of weeks or months of training is required; and
- Semi-skilled labour – those for which the required expertise is acquired after short training.

The role of the government in the early years of industrial development in South Africa led to the promotion and dominance of heavy industries through the establishment of strategic government enterprises such as TELKOM, ESKOM and ISCOR.

The internal structure of manufacturing had changed significantly *vis-à-vis* firms, size as well as composition of the manufacturing sector (Cassim & van Seventer, 1999:7-8). However, the exhaustion of the import substitution strategy in most light industries and skewed income distribution restricted demand for goods produced by the light industries. The allocation of production resources, consequently, shifted even more intensively towards heavy industrial output because of the high-income elasticity associated with it.

The Second World War also contributed to the growth of heavy industries in areas such as chemicals and armaments (Houghton, 1972). Another feature of structural change in South Africa's manufacturing sector relates to growth in foreign trade. The export-oriented approach was based on the premise that exploiting the export market will increase foreign exchange earned necessary to pay for imports. As a result, the value of exports to the rest of the world increased since the last half of 1980.

The structure of the manufacturing sector can also be analysed in terms of its factor content-intensity. This includes heavy, medium, and light industries. The table 2.4 indicates the growth rates of the different broad categories of manufacturing industries. Until 1970s manufacturing activities in South Africa were characterised by the dominance of light manufacturing sub-sectors. This is attributed to the policy of inward industrialisation in the early stages of industrial revolution in South Africa. However, the growth rate was sustained until the second half of the 1990s. This is attributable to the re-integration of the South African economy into the world economy (Calitz, 2002:248). By comparison, the heavy industries managed to shrug off the effects of globalisation in the 1980s and first half of 1990s, although at a much slower rate than in the 1970s (Mazumdar & van Seventer, 2002:13). But the growth of the heavy industries became stagnant in the latter half of the 1990s. The high tech manufacturing industries, by contrast, became the only manufacturing category that recorded increasing growing rates in the 1990s, thereby reversing the decline of the 1980s. More important though is the fact that in the 1990s, the high tech category registered growth rate of 2.2 percent.

Table 2.4: Growth rates in real value-added for manufacturing groups (%), 1970-1990s

Group	**1970s**	**1980s**	**1990s-1st half**	**1990s-2nd half**
Light industries	5.3	1.6	0.5	-0.5
Heavy industries	4.0	1.6	1.9	0.0
Hi-tech industries	4.5	0.1	0.5	2.2

Source: Development Policy Research Unit (www.uct.ac.za/dpru), 2000

The increasing growth rate of capital-intensive industries in South Africa is primarily because of the importance of these industries in general economic growth. Other factors include technological advancement of the whole economy, defence industries and the promotion of consumer durables (Nyilas, 1976:281). Put differently, the growth rate of capital-intensive industries is as a result of changes in aggregate demand.

2.4 Concentration of industry in South Africa

When the South African economy began its diversification policy, the main question was where will the economic activity locate for the development of the manufacturing sector (Houghton, 1972:130)? Within a free market economy, there may be various forces operating in the direction of the spread of manufacturing production evenly across both the efficient and spatial concentration of industrial production. However, not all sources of concentration are known and knowable (Burgess, 1989:75).

Concentration measures the market structure, which includes the degree of product differentiation and barriers of entry and exit (Ferguson & Ferguson, 1994:38). Some determinants of concentration are natural, underlying the forces of structural operation such as economies of scale while others are artificial, promoted by the strategic behaviour with a view to eliminate competition. Naturally, firms will be in regions with good market accessibility. In other words, manufacturing clusters are in pure pursuit for exploitation of economies of scale.

The degree of manufacturing concentration is determined by the relationship between cost and production curves, affirming that the determinants of locational advantage are the ease of interaction of demand and supply forces. Such market forces include consumers, suppliers and various sources of information and technology, which are responsible for the rate of innovation of new products into the market. Venables and Petersson (1999:45 & 2000:3) maintain that the presence of positive externalities between firms can take many different forms.

The beneficial externalities include, among the others, knowledge spillovers and human resource pooling effects which encourage production to locate where they can benefit from the readily available labour skills, as well as linkages between consumers and producers. Assuming that there is free movement of factors of production and/or firms, spatial clustering of production activities become inevitable (Venables, 1999:14) In fact, concentration of manufacturing production reduces transaction costs and facilitates the separation of production and consumer activities. In brief, the agglomeration of manufacturing industries is a consequence of advantages of industrial location.

The history of the South African manufacturing sector reflects high levels of concentration in four major metropolitan areas (Nattrass, 1982:181). More than 70 percent of South Africa's output is generated in the PWV area, Durban/Pine Town/Inanda, Cape Town/Belville/Simonstown/Wynberg, and Port Elizabeth/Uitenhage (Dagut, 1991:39). The government influenced the location of the industry by establishing and promoting state parastatals and the channeling of funds through the IDC (Lipton & Simkins, 1993:56).

Capital investments were made in urban areas at the expense of infrastructure development in rural areas, thereby promoting industrial concentration in Gauteng, the Western Cape, Eastern Cape and KwaZulu-Natal Provinces (SSA, 1996:1). According to Chandra (2001:52) manufacturing activities are evenly distributed between the other provinces: Limpopo, Northern Cape, North-West, Free State and Mpumalanga. The pattern of unequal distribution of industries is further reinforced by the varying provincial economic performance vis-à-vis employment, contribution to GDP and total manufacturing output.

Even in world terms manufacturing activities are unevenly distributed between developed and developing countries (Hayter, 1997:49). Industrialised countries such as the United States, United Kingdom, Japan, Italy, Germany, and France accounted for more than 62 percent of world manufacturing output in 1990, with the other percentage shared by the remaining countries including Canada and South Africa.

The socio-economic complexities brought about by the relative concentration of manufacturing firms were a major concern for development in South Africa. The negative externalities of industrial development patterns included pollution and excessive pressure put on environmental resources to provide for the growing urban population (Nattrass, 1982:182). Faced with the increasing urbanisation difficulties, the government introduced Border Area policy to "redistribute" industries to the rural areas closer to the metropolitan areas. Consequent to this policy was the establishment of manufacturing factories in Hammarsdale (Durban), Rosslyn, Pelindaba (Pretoria) and Pietermaritzburg. Employment generated by the de-industrialisation policy was 11600 jobs, which was inadequate to counter the continued urbanisation. The policy of decentralisation was then followed with more conviction to redress economic polarisation and to reduce the flow of people into the cities (Nattrass, 1982:260 & Swanepoel *et al*, 1997:112-113). Some of the objectives of the decentralisation policy were:

- Creation of employment opportunities in rural areas;
- Counteracting urbanisation;
- Improvement of economic development in rural areas; and
- Encouragement of Black economic participation in the manufacturing industry.

However, there exists a widespread believe among economic policy observers in South Africa that industrial decentralisation policy was a resounding failure (Dewar, 1996:33). Some of the reasons highlighted are:

- Rural-urban migration rates continued to increase;
- Due to high opportunity cost, the programme resulted in net loss of jobs;
- The programme was motivated by political motives rather than issues of economic efficiency;
- The programme was not self-sustaining;
- Large-scale corruption became rampant; and
- The multiplier effects of the programme were poorly anticipated.

In order to offset locational disadvantages, manufacturing entrepreneurs establishing factories in the designated Border Areas were offered special inducement packages in the form of capital assistance for building and layout of industrial sites (Houghton, 1972:141). The unequal distribution of the manufacturing industries is responsible for migration into the cities in search of better living conditions. Welfare observers view industrialisation as a source of improving living conditions in poor countries. But the fruits of industrialisation in South Africa were shared based on racial lines, thereby alluding poor communities. This is strongly attributed to the effective measures introduced under the Apartheid government to restrict the mobility of African labour and ownership of assets (property) mainly in the so-called White designated areas (Nomvete, 1993:14).

Ownership of manufacturing groups was concentrated in six diversified conglomerates in 1992 (Joffe *et al*. 1995:149). The top six conglomerates – Anglo American Corporation, the Rembrandt Group, Anglo Vaal, the Liberty Group, SA Mutual and Sanlam, have substantial financial muscle as indicated by their market capitalisation of approximately 85 percent of the JSE in 1992 (Joffe *et al*, 1995:149).

Furthermore, fourteen firms out of 270 largest corporations dominate the extent of ownership and control in the corporate sector. These firms own manufacturing groups which accounted for some two-thirds of employment, sales and total assets in the JSE (Henrekson & Jakobsson, 2000:16).

Although these conglomerates have the financial power, they could inhibit manufacturing growth in the form of anti-competitive behaviour, establishment and growth of small manufacturing enterprises, sub-optimal expansion and promotion of manufactured export, retarded technology, development and capacity (Joffe *et al*, 1995:143). In the Swedish manufacturing sector, new industries have been decreasing since the 1950s, attributed to barriers of entry into the highly concentrated ownership and control of few private-sector enterprises (Henrekson & Jakobsson, 2000:17 & Davis & Henrekson, 1997:7).

At output level, concentration levels in the manufacturing sector relate also to the dominance of certain manufacturing groups insofar as output distribution is indicated (SSA, 2002). Of the 27 manufacturing groups in South Africa, a large amount of output distribution is shared by food division (14,4 percent), motor vehicles (11,2 percent), chemicals (10,7 percent), basic metal (9,7 percent), paper (5,1 percent) and petroleum products (4,8 percent). The other 21 manufacturing groups share the remaining 44 percent.

A literature review on the recent industrial strategy in South Africa indicates the active involvement of the government mainly via fiscal and monetary incentives and various initiatives. Among these are the SDIs, IDZs and macroeconomic considerations such as Holiday Tax Schemes are promotion of manufacturing by the SMEs (DTI, 1999:42-45).

These initiatives of stimulating manufacturing growth in South Africa are promulgated by the GEAR policy (1996) and RDP (1994) and are in line with international successful experiences as was the case in Taiwan (Hosking, 1999:1-3 & Sono, 1994:155). The establishment of the Pietermariztburg/Msinduzi SDI with special attention to the manufacture of leather, timber, wood and wood products is an example of such steps designed to develop export-oriented manufacturing in South Africa (DTI, 1999:45). The SDIs and IDZs have so far played a key role in the drive for higher levels of investment, export and international competitiveness in world markets (SDI, 2000:1). In 2002, DTI adopted a new industrial development strategy - IMS – based on two competing developments in South African manufacturing for the past five years: the rise of the automotive industry and the decline of the textile and clothing industry. Mainly the IMS strategy aims at promoting competitiveness and providing infrastructure and logistical support to eight key manufacturing sectors. These are: clothing and textiles; agro-processing; metals and minerals; tourism; automotive and transport; crafts; chemicals and biotechnology; and knowledge-intensive industries. The sectors chosen highlight the different facets of the South African economy, ranging from its strong agricultural and minerals base to its newer information technology manufacturing industries.

2.5 Manufacturing productivity in South Africa

The South African manufacturing sector is characterised by poor productivity performance (Joffe *et al.* 1995:21). Productivity, defined as the relationship between real output and the quantity of input used to produce that output, measures efficiency levels in the economy (Swanepoel *et al*, 1995:256; Meier, 1989:97 & Barker, 1992:89). Productivity can be measured in three ways:

- Labour productivity can be defined as the number of units of output obtained from a unit of labour;
- Capital productivity shows the number of units of output per unit of capital input; and
- Multi-factor productivity indicates capital-labour ratio.

Most productivity studies tend to prefer a labour productivity index as a measure of productivity in the economy (Barker, 1992:89). It is, however, cautioned that the focus on labour productivity does not in any way suggest that labour is the only important factor contributing to productivity but rather the opposite. McConell & Brue (1995:560) argue that it is because of the close correlation between changes in productivity and the real wage rate. Growth of productivity in the economy and in particular labour productivity, is essential for the following reasons:

- Productivity is the basic source of improvement in real wages;
- Productivity growth leads to economic growth;
- A higher productivity level raises efficiency in the economy; and
- Increase in productivity is anti-inflationary.

South Africa's productivity made a relatively low contribution to GDP (Barker, 1992:89). The performance of the manufacturing sector has deteriorated considerably over the past three decades (NPI, 1994:15). Between 1960 and 1970 real manufacturing output rose by 9,1 percent per annum, only to decline by 5,3 percent between 1970-1980. By comparison, the United States

had similar productivity trends though for South Africa's stagnation, which became the feature of the 1980s and 1990s, has had far-reaching effects on the socio-economic conditions in South Africa.

Because of the economic importance attached to productivity growth, identifying and analysing such trends in the manufacturing sector is important. The rise in productivity levels leads to production efficiency, better use of existing resources by either bringing into employment of some factors previously lying idle or reorganising the use of those already employed, thus increasing their productivity.

However, productivity performance depends on the level of education and training, the health and vitality and the age-gender composition (Kokko, 2002:36). The position with regard to skilled and unskilled labour in South Africa is very similar to that in other developing countries -- where there is a high shortage of skilled labour (Kibuuk, 1997:47).

In the light of the declining productivity growth levels, it becomes imperative that the nurturing of skilled labour becomes a direction of human resources development design. The reallocation of labour from less productive to more productive employment results in productivity gains (Mc Connel *et al*, 1999:542). Production efficiency gains have been realised historically by the transfer of labour from agriculture where the average productivity of labour is relatively low, to the manufacturing sector where the average productivity of labour is higher (Todaro, 2000:84)

By the same length, capital widening and capital deepening can contribute to productivity growth. The former means using the existing portion of capital more efficiently and the latter relates to an increase in the amount of capital per worker, which then raises the worker's productivity (Dowling & Salvatore, 1977). An example of capital widening would be a case where an operator may purchase an extra lorry identical to those he is already using, employ an additional driver to increase delivery frequency.

A major concern is the fact that productivity in South Africa also seems to increase at lower rate than it does in South Africa's major trading partners (Barker, 1992:93). This is a worrying factor since the manufacturing sector is regarded as a main source of wealth and welfare improvement in South Africa (Sono, 1994:44). The reasons for the poor performance in South Africa's manufacturing sector are complex. Du Toit & Falkena (1994:24) identified some of the main factors adversely inhibiting productivity growth in South Africa as follows:

- Lack of capable human resources;
- Increasing outdated technology owing to conditions prior democracy;
- Inadequate awareness and knowledge regarding productivity standards;
- Political factors such labour unrest and violence; and
- Social factors such as poor infrastructure and cultural differences.

Capital-intensive industries seem to dominate the manufacturing sector, while labour-intensive industries contributed only modestly to total output. In the 1990s, manufacturing became more capital intensive mostly in historically capital-intensive industries, thereby elevating the rates of employment losses in the manufacturing sector as a whole. But still capital productivity remained low, largely because of capital flight, poor savings levels and political instability in the 1980s (Joffe *et al*, 1995:21).

Table 2.5: Manufacturing production (%), 1998-2002*

Variables	**1998**	**1999**	**2000**	**2001**	**2002**
Sales	91.7	92.0	100	105.1	113.7
Volumes of production	96.9	96.4	100	102.8	108.2
Capacity utilisation	80.1	78.9	100	79.8	80.8
Labour productivity	90.3	94.1	100	104.8	107.8

Source: SARB

*Base year = 2000

The manufacturing sector has been in decline mainly because of the structural changes that took place in the 1990s. This has brought about the contraction of uncompetitive industries such as clothing and textiles. Low economic growth and a shortage of skilled labour have put a ceiling on growth. Labour productivity has been increasing, though analysts argue that this has largely been a result of job losses. But significant production capacity exists to meet higher demand. Between 1998 and 2002, capacity utlilisation has stayed fairly constant at around 80 percent.

Table 2.5 indicates that with the exception of the 2002 financial year, manufacturing production either grew at lower margins or declined, especially in 1999. The strength of the Rand has since undermined the performance of the sector and as a result, production volumes dropped by 1.7 percent in the first half of 2003. Table 2.5 indicates a rise of 6.2 percent in production volumes between 2001 and 2002, largely due to the depreciation of the external value of the Rand in 2001, which led to robust manufacturing growth, especially in exporting industries (Chandra, 2002:3).

Despite the rapid growth in labour productivity during 1998, the growth in nominal unit labour cost still increased between 1997 and 1998 (SARB, 1999:9). Unit labour cost is derived as the ratio of nominal compensation per worker to output per worker. When productivity rises at a lower pace than nominal compensation per worker, the cost of the labour required to produce one unit of output rises (SARB, 2002:21). In 1999, the real output of the manufacturing sector showed signs of strength. The performance improved mainly as a result of growing external demand for South Africa's manufactured exports. It also emerged that since the 1990s productivity rises have become a permanent feature of the South African economy (SARB, 1999:6).

2. 6 Employment performance of manufacturing in South Africa

The crisis in the employment creating capacity of the South African economy since the middle of the 1990s is well-documented (Schoeman & Blignaut, 1998; Loots, 1998; Barker, 1999; Sellars,

2000; Lewis, 2002; Chandra, 2002 & Fedderke, 2002). During this period, unemployment has emerged as the most serious socio-economic problem facing the economy of South Africa. The employment share of the secondary sector showed an increase from 16,6 percent in the postwar period to 25,1 percent in 1996, but the sharpest increases were in the tertiary sector (Barker, 1999:88). Significant declines in employment were registered in the mining and agricultural industry.

Employment growth in the formal non-agricultural sectors to total formal employment has been declining in the 1990s (Mahadea, 2003:23). The reduction in employment in the formal economy attributed for approximately 70 percent of the total employment in the economy in 1989 (SARB, 2000:20-21). But by 1999, the rate had declined to about 65 percent, meaning that 20 percent or about 78 000 employment opportunities were lost over the past decade. Major losses were recorded in the mining (45,percent), construction (43, 9 percent) and manufacturing industries (18 percent) (SABR, 2000:21). The declining growth of employment in the formal sector of the economy is mainly attributed to the low growth in GDP (Barker, 1999:183).

Table 2.6: Employment contribution of sectors to formal non-agricultural employment (%), 1950-2001

Sector	1970	1980	1990	1996	2001
Manufacturing	17,6	19,3	19,4	19,3	26,9
Electricity	0,7	1,0	1,1	1,0	0,8
Construction	5,2	5,3	5,8	4,8	4,6
Trade	11,9	12,5	12,5	12,1	19,2
Transport and communication	5,9	6,6	5,4	4,4	4,5
Finance and insurance	3,1	3,9	5,5	6,4	4,1

Source: SSA, 2001; SARB data series, cited in Barker F S, 1999

Other factors responsible for the decline in employment and in manufacturing in particular, include labour legislation, stiff competition faced by local producers in the increasingly globalising world markets, capital intensity of production processes, and downsizing in the public sector (SARB, 2000:202-21). Chandra *et al.* (2001:8) and Samson *et al.* (2001:11) reckon that manufacturing firms in South Africa have responded anti-employment to regulations post-1994. In many instances, manufacturing enterprises have responded by either hiring fewer workers, becoming more capital intensive or hiring more temporary workers.

Furthermore, the dominance of the large manufacturing firms, which are more capital intensive is a major factor constraining the absorptive capacity of the manufacturing sector in spite of growth in value added (Chandra, 2001:53, 64). For instance, there are 1 911 larger manufacturing firms as against 1 095 smaller firms in Gauteng, indicating the impact such dominance would have on employment growth in the manufacturing sector. The large firms employed 73 percent of full-time employees in 1998. The food industry registered 37 percent job growth higher than sectoral job growth combined figures of capital intensive industries: chemicals, electricity and iron (Chandra, 2002:6-9).

Mazumdar & van Seventer (2002:4) attribute the poor employment in the South Africa manufacturing sector to a direct consequence of a sharp decline and negative growth rates of real output in the 1980s and 1990s, respectively, and rise of labour unit costs. The growth rate of real output at current prices has been at the expense of job creation thus "*jobless growth*" – economic growth without job creation (Todaro, 2000:272). Sono (1994:46) indicates that while South African manufacturing ranks lowest in labour productivity relative to Taiwan, United Kingdom, and United States, it worryingly ranked the highest in unit labour cost in the period 1970-1991. Although output growth in manufacturing was no where the level of East Asia, it would appear that South Africa shared the fruits of economic growth equally between wages and employment increases (Mazumdar & van Seventer, 2001:6).

According to Gibson (2000:146) increases in labour earnings above productivity may lead to increased growth of the economy. However, this will depend on various considerations such as income elasticity of manufactured goods, the accelerator mechanism of investment, consumer and producer price indices, the impact on export competitiveness and labour market responses. Growth in unit labour cost above productivity increases the propensity to employ more capital than labour, but employment growth will respond through an inverse functional relationship dependent on firm-level factors and the associated production function (Teal, 2001:2 & Soderbom, 2000:1)). In South Africa, it is estimated that a 10 percent increase in wages will often lead to a 70 percent decline in employment (Barker, 1999:150).

Table 2.7: Manufacturing sector employment (%), 1995-2001

Industry	**1995**	**1997**	**1999**	**2001**
Food	12.8	12.7	12.9	12.3
Beverages	2.3	2.2	2.3	2.1
Tobacco	0.2	0.2	0.2	0.2
Textiles	4.6	5.3	4.1	4.2
Footwear	1.9	1.7	1.4	1.0
Printing, publishing and recording equipment	3.7	3.6	3.3	3.3
Basic chemicals	2.1	2.0	2.4	2.2
Plastic products	3.4	3.2	4.0	4.5
Rubber products	1.2	1.2	1.1	1.0
Non-metallic minerals	4.5	4.5	2.4	2.2
Basic iron and steel	4.2	4.1	3.2	3.1
Machinery and equipment	5.1	5.3	5.4	5.4
Electrical machinery	6.6	6.0	6.3	6.3
Television, radio and communication equipment	1.0	1.1	1.3	1.1
Motor vehicles, parts and accessories	5.6	5.6	5.8	6.2

Source: Calculated from Economic Research Unit database (DTI), 2003

Another factor retarding employment growth in the South African manufacturing sector has been the low rate of investment and the character of industrial investment made (Joffe *et al*, 1995:6 & Nattrass & Brown, 1977:7). Heavy and low labour-intensive industries tend to be overdeveloped at the expense of more labour-intensive industries. Manufacturing groups with a high employment elasticity of growth include clothing, textiles and footwear. Textiles accounted for 16 percent of sectoral jobs in 1998, higher than metals (9 percent) and vehicles (4 percent) (Chandra *et al*, 2001:64). Yet the more capital-intensive industries experienced higher investment rates as compared to the labour-intensive industries.

Since the manufacturing sector employs mostly semi- and unskilled labour, which South Africa has in abundance, raising investment levels evenly is crucial for generating employment opportunities. Unemployment data obtained from SSA (2003) showed that the economy of South Africa failed to create job opportunities for new entrants into the labour market, thus requiring an annual growth rate of 5,4 percent in order *just* to employ the new entrants in the labour market – let alone the backlog. The unsatisfactory employment performance of the South African manufacturing sector has undermined its "engine of growth" status, with falling socio-economic indicators (van Dijk, 2003:119).

The period 1995-1997 was characterised by low or stable employment growth rates. The labour-intensive industries dominated employment, led by food, clothing and textiles. For natural-intensive industries a stable or moderate decline in job creation was prevalent, with marginal increases in employment recorded by metal products excluding machinery, machinery and equipment. For durable goods less job creation was more eminent in electrical machinery, declining from 6.6 percent in 1995 to register 6.3 percent in 1997. In the final analysis, it appears that while the structure of the South African economy has adopted the global trends with a move in the direction of a "New Economy" and has seen a shift in production towards tertiary activities, it now becomes clear that this alone is not able to address the employment crisis.

2.7 Summary and conclusions

It was the discovery and exploitation of diamonds and soon afterwards, of gold which were responsible for developing modern industry in South Africa. South Africa's early stages of manufacturing development were dominated by heavy industries; unlike in most developing countries were textiles and clothing led the industrial process longer. The deliberate involvement of government through provision of infrastructure and promotion of import substitution strategies had been the driving force behind development of industry in South Africa. Industrial development in South Africa has not been without its difficulties.

Significant growth of manufacturing in South Africa was hampered by various structural constraints such as high levels of import-intensity, bias against export of manufactures, the small size of the domestic market and skewed income distribution and the industrial strategy of import substitution. In an attempt to curb the wide divergence of economic opportunities around South Africa, an industrial policy shift towards decentralisation around major cities was deemed necessary. The economic structure of South Africa is divided into three broad sectors, primary, secondary, and tertiary. The manufacturing sector dominates the secondary sector and occupies a very important role in the economy. The South African manufacturing sector is characterised by high levels of concentration with regard to geography, total distribution of output, employment, sales and ownership and control.

Through special programmes such as SDI and IDZs the post-1994 South African government hopes to stimulate the growth of the manufacturing sector by increasing competitiveness, levels of investment and sustainable foreign trade balance to create “a better life” for all South Africans. To expedite and facilitate manufacturing growth the government has adopted a new industrial development strategy - IMS – based on two competing developments in the manufacturing sector evidenced for the past five years. Mainly, the IMS strategy aims at promoting competitiveness and providing infrastructure and logistical support to eight key manufacturing sectors.

In the light of the growing employment deterioration and the subsequent increasing poverty levels in South Africa, the growth of manufacturing is imperative. This requires a clear identification of sources of growth to ensure that manufacturing will begin growing towards a situation where it is self-supporting. Evidently, while the structure of the South African economy has adopted the global trends with a move in the direction of a "New Economy" and continues to experience a shift in production towards tertiary activities, it has become clear that this alone is not able to address the unemployment crisis.

CHAPTER THREE

Structural change and trade theories on patterns of trade

3.1 Introduction

As the structure of the economy changes from being predominantly agricultural to industrial so does the kind and composition of its exports to the rest of the world. Although controversial in its application, the process of an economic shift based on the experiences of the now developed nations of Western Europe and North America still remains the thrust of policy advice from global institutions to the developing economies of Africa, Asia and Latin America. What is not disputed, though, is the diversification brought about by the shift in economic production from the agricultural predominance such that manufacturing occupies the central role as the driver and/or facilitator of economic growth.

Consequently, the developing economies in Africa, Asia and Latin America reformed their development strategies by adopting export-orientated strategies in search of wider export market access. But still the extent of successes and failures has been a matter of debate when considering the comparative experiences of economic development in the regions of the developing economies. Chapter three focuses on the overview of theories of growth that encourage structural shifts in the production activities such that the secondary sector, manufacturing in particular, dominates the secondary sector. It also discusses trade theories on patterns of trade.

3.2 The linear-stages of development

Originating in the 1950s and 1960s, it views the process of the changes in economic structure as a simple way of succession of a number of stages based on the path that the now developed nations had adopted in transforming from poor agricultural to modern industrial economies.

Primary lessons are acquiring a right quantity and mixture of savings, investment and foreign aid to proceed along the path towards prosperity as followed by the now developed economies. Rostow's stages of growth, which propagates the mobilisation of domestic and international savings in order to generate sufficient - not necessary – investment to accelerate the dominance of the manufacturing sector, is quintessential of the linear stages of development. Presenting the descriptive yet logical and practical possibilities through which a country must pass during the course of development, Rostow's stages of growth are sequentially partitioned as follows:

- The traditional society stage;
- Pre-condition for take-off;
- Take-off into self-sustaining growth;
- The drive to maturity; and
- The age of high-mass consumption.

The linear-stages growth theory is logical in identifying a country's level of development even though its critics point to the theory's shortcomings. These include the failure to consider the constraint of relatively low levels of capital formation in developing countries; the higher saving and investment rates are considered a sufficient – not necessary – condition for change in economic structure and confusing economic growth to mean development (Todaro, 2000).

3.3 Contextualising Rostow's stages of growth to the South Africa economy

Prior to the beginning of industrialisation, South Africa was an agricultural and pastoral economy with low levels of living and less involvement in trade (Leftwich, 1974:30). The first stage of development occurred before the late 1800s when subsistence agriculture dominated the economic activity. This was primarily because of limited scope for exports and input materials.

Another constraint was the small and scattered domestic market which apart from the isolated natives was made up of Dutch and British settlers and French colonisers in the late 1600s (Beaumont, 1995:11).

The second stage began around 1860 until early 1920 with agriculture and mining dominating the economic activities. Agriculture was second to mining with a contribution of 21.5 and 27.3 percent to GPD in 1911, respectively. In the same period, manufacturing was dominated by light industries (Lumby, 1990:6). The sector contributed about R17 million and R80 million in 1911 and 1921 to GDP, respectively (De Kock, 1924:45). The mining industry's dominance was spurred by the mineral discoveries in the first stage with further substantial discoveries of diamonds and gold into the second stage (Beaumont, 1995:14).

The pre-condition stage in South Africa was cemented further by laying conditions for the take-off stage. According to Konczacki *et al.* (1991:82) railway lines were constructed between Johannesburg and Kimberly as two sources of wealth and magnets attracting the labour force into these areas. Construction of railway lines facilitated efficient international trade that was vital for importation of consumer and producer goods to meet increasing domestic demand, which was financed by export of gold and diamonds.

Social infrastructure in the form of hospitals and schools was built to improve the health conditions and literacy levels of the people. Banks, harbours and ports were improved to kick-start trade with merchants in items such as wine and animal skin. Infrastructure played a very important role of attracting investment necessary for economic development (Mody & Yilmaz, 1994:4). During this stage, agriculture turned into a commercial activity with wool pioneering as a large consignment into foreign markets.

Agriculture played a minimal role relative to mining, gold in particular, as the engine that propelled the shift of production process in the South African economy, as S.H. Frakel reverted: "Gentlemen, this (gold) is the rock upon which the future success of South Africa will be built?.

Indeed it was the need for explosives in the gold-mining industry, which directly stimulated and accelerated manufacturing. Reinforced by the adoption of protection policy in mid-1920s, the import substitution process during the WWI further oiled the growth machine of manufacturing, which was later hampered by the Great Depression of 1929-32.

Although industrial possibilities of South Africa became evident as early as 1914, it was not until the 1920s that the real foundation giving impetus to industrial expansion was laid. This led to the third stage of economic development in South Africa. The devaluation of the South African currency and establishment of ISCOR gave a new impetus to South African economic development. The literature review reveals that whilst the service sector accounted for a large contribution to GDP, the natural resource-intensive industries played a declining yet important role in the growth of the economy. As the economy grew, manufacturing and the service sector became dominant and today the trend is still that reminiscent of the 1920s.

Manufacturing grew in both size and number of establishments in the variety of products produced. This, according to van Zyl (1998:207), can be attributed to the efficient organisation of agricultural marketing, discriminatory labour market policies and the protection of domestic industry through tariffs to promote import substitution in 1925, which also served as source of revenue. This stage ended in 1933.

The maturity stage was driven by various demand-led factors highlighted by Lumby (1990:8) as follows:

- Import substitution industrial policy;
- The drive to expand exports of manufactured goods;
- Gold standard was abandoned and currency devalued;
- The international minerals boom of the 1960s; and
- Gold became a safe haven as a result of the1973 and 1979 oil price shocks.

These factors laid the foundation for economic progress in South Africa between 1933-1974. Diversification and sophistication of manufacturing was the mainstay of the drive to maturity the stage of economic development in South Africa. The development of textile, metals and engineering, and the growth of liquid fuel and chemical industries, the strengthening of the gold-mining industry and improvement in the quality of farming sailed South Africa into the stage of high-mass consumption (Lumby, 1990:78).

The main feature of the South African economy is the pervasive unequal distribution of income between population groups and provinces thus the prevalence of widespread poverty. This nearly served as a major deterrent for South Africa's final stage of high mass consumption. Despite this factor South Africa arrived at her final stage of high mass consumption in 1975 (Hartland-Thunberg, 1978:7).

Since this period the South African economy has been constantly constrained by declines in real output levels in various sectors of the economy, particularly manufacturing in the 1980s. A negative mood in the international community manifested in the form of political and economic sanctions. Despite these negative developments, the contribution of both manufacturing and services are higher than that of agriculture in relative terms. But still, the manufacturing performance has contracted in the 1990s.

3.4 Structural-change models

The mechanism of this theory involves primarily shifting domestic production structures from heavy reliance on traditional subsistence agriculture to a more modern, urbanised and more industrially diverse manufacturing and service economy.

(i) Lewis two-sector theory

Under this theory, the underdeveloped economy consists of two interdependent sectors, namely:

- A traditional, overpopulated rural subsistence sector which is characterised by zero marginal productivity of labour. Labour is regarded as being in surplus due to the assumption that it can be withdrawn from the agricultural sector without any loss in output; and
- A high-productivity modern urban industrial sector into which labour from the former sector is gradually transferred.

The Lewis theory is relevant to the dualistic economic system of South Africa with a developed and prosperous core co-existing with a large underdeveloped and relatively poor periphery. Although the Lewis two-sector model is both simple and roughly in line with the historical experience of economic growth in the developing nations, three of its main assumptions do not fit the institutional and economic realities of most contemporary Third World countries (Todaro, 2000).

Firstly, the tendency of capital flight and labour-saving technology resulting in jobless growth contradicts the assumption of proportional labour transfer rate, employment creation and modern sector capital accumulation. Secondly, contrary to the assumption that labour surplus exists in rural areas while there is full employment in urban areas, the reverse is true in most developing countries where empirical evidence indicates that the assumption is more evident in urban economies than in rural areas. Lastly, the assumption of existence of constant urban real wages until the supply of rural labour is exhausted contradicts with the rising urban real wages in spite of the growing pool of the unemployed in developing countries.

(ii) The industrial patterns of growth theory

It defines the structural transformation of a developing economy as a set of changes in the composition of demand and supply as per capita income increases. The transition of economic activity allows new industries to replace traditional agriculture as the driving force behind economic growth.

In contrast to the linear-stages of growth, this model recognises the fact that developing nations are part of a web of the international system that can either promote or hinder their process of shift from exporting mainly agricultural commodities to growth of manufactures.

3.5 Transformation towards export dominance

Within the development stages one can identify the economic structure and transition of a country such that the decline of one economic sector tends to give way to the emergence of another. In the early stages of development, agriculture tends to dominate. The position of the manufacturing and service sectors will surpass agriculture along the course of development. Subsequently, the contribution and composition of a country's exports begin to manifest the changing production landscapes (Jalilian *et al*, 2000:7).

Even though the economy will be predominated by subsistence agriculture with most of its resources being allocated to provide basic needs of life, the pre-manufacturing phase will be dominated by the processing of exportable raw materials. Characterising this stage will be manufactures such as handicraft, food and shelter-construction materials (Nyilas, 1976:274). In South Africa, the dominance of subsistence agriculture was primarily dictated by the small size of the domestic market as well as the limited scope for exports and input materials (Leftwich, 1974:30).

As the intensity of production modernisation, induced by foreign role-players, creeps into the economy, stumbling blocs to accumulate the necessary modern production facilities impinge on the transition towards a diversified economy (Beaumont, 1995:45; Mody & Yilmaz, 1994:4). While the economy continues producing traditional consumer goods, technological improvement becomes central to new production functions in both agriculture and manufacturing industries.

With output levels surpassing the subsistence level, labour is freed to engage in other duties, which include employment in manufacturing, thereby greasing the wheels of manufacturing development (Browett, 1990:4). The weakening of rudimentary traditional economic system has thus given way to the establishment of enterprises, the spread of education, the widening of trade and commerce and the development of infrastructure crucial to the industrial growth and nature of output produced. However, these sources of industrial growth are insufficient to trigger the economy to engage in manufacturing of capital goods. The transition is curtailed by the lack of capital formation institutions necessary for the development of manufacturing base (Thoburn, 2000:14 & Meier, 1995:363).

To acquire such necessary capital, exportation of natural resources and/or inflow of foreign aid become essential for the production of quality manufactured capital goods and its subsequent exportation. For the consolidation of this stage of transition, rising levels of investment, expansion of industrial sectors with external economies of scale and internal structural adjustments are paramount to self-sustaining growth. As new industries expand and the wave of technology is adopted and adapted across the economy, the transition from light to medium-heavy manufacturing industries is curtailed by the lack of skilled labour in the domestic market. However, the facilitation of manufactured exports should not be in isolation from the stimulation of the agricultural sector lest it poses deleterious implications on the manufactured export growth path through the importation of consumer goods and other raw materials for agro-processing industries. It is important that during this phase, goods formerly imported are produced locally and new import requirements developed, as should the production of new commodities for foreign markets. For South Africa it was the economic linkages between the agricultural, mining and manufacturing sectors that drove the transition period towards a competitive export-oriented economic system with the latter's industries dominant.

The increasing level of total income generated from the high value-added manufactured exports partly financed by foreign technology is a reflection of the changing structure of the manufacturing sector, whereby light industries give way to heavy and hi-tech industries. The latter industries are stimulated by the increasing demand for manufactured goods for consumption and exportation. As the economy experiences increasing diversification with rising levels of per capita incomes, investment and continued improvements in manufactured exports, the service sectors are growing in significance, driving the capacity of the economy to experiment with the hi-tech manufacturing industries. As a result, the volume of output traded locally diminishes while the earnings from exports of manufactures increase significantly. Eventually, the manufacturing sector grow in both size and number of establishments in a variety of products produced.

3.6 Trade theories on patterns of trade

In pursuit of economic growth capable of driving development, developing economies have adopted varying trade reform initiatives in an attempt to overcome domestic market constraints. Since trade is used as a proxy for participation in international trade, it could thus be used as an indicator of openness of a country's trade regime. Central to adopting a more liberalised trade policy is the notion that it allows importation of capital goods essential for capital formation and higher investment on the one hand and technology transfer, higher productivity and economy-wide prosperity on the other.

While extensive literature exists *vis-à-vis* the varying tendencies of trade levels between countries, common sense informs that bigger economies, measured in GDP terms, (United States) are likely to generate more trade than smaller nations (South Africa). However, there is no simple theory of trade as, in reality, stimulants of trade differ from one country, region and continent to another. Nevertheless, principles guiding the rationale behind trade exist, explaining basic variables influencing patterns of trade.

Such is the several different ways in which trade can be analysed as distinguished by Stopford (1995:266):

- Trade by country indicating why they trade and how trade fits in with the growth of their economies;
- From a geographical viewpoint and research the regional distribution of trade and trade flows between the trading regions of the world; and
- View trade as a collection of commodities and study the economic characteristics of each commodity.

From the distinction listed above, a researcher can choose the approach suitable to the research interest. Literature on international trade (Ellworth, 1964; Gouwland, 1984:17; Stopford, 1995 & Abdi & Edwards, 2002) broadly distinguishes different strands of thoughts on trade as follows:

(i) Ricardo's trade theory

Ricardo's trade theory focuses on labour as a relative factor of production and suggests that differences in labour productivity exist across commodities where each commodity has a unique method of production. In other words, it is the localisation of production between different countries following the principle of comparative cost. The differences in production techniques across countries would give rise to differences in relative prices of commodities, thereby creating a platform for trade. For instance, South Africa imports footwear from Zimbabwe where wages are lower, which accords with the traditional trade assumption.

(ii) Hecksher-Ohlin trade theory

The H-O theory argues that one of the most important causes of trade is the fact that different countries are endowed with different natural resources. It considers both capital and labour as major basis of trade.

The theory proposes that same techniques of production for all commodities are available in all countries, but the relative differences in factor possessions between countries form a basis for trade. However, it is the relative abundance or scarcity of a resource that will determine lower or higher factor costs, thereby implying varying prices for the products. The main assertion of the theory is that a country should export the commodity that uses relatively intensively the relatively abundant factor of production and import the commodity which uses relatively intensively the relatively scarce resource. The H-O theory is somewhat more sophisticated than the Ricardian theory in acknowledging that there exist at least some commodities that can be produced with various production techniques. Basically, this assertion implies that it is not only the relative abundance of a resource that will be important in determining the comparative advantage of a country, but also the intensity of the use of resources in producing the commodities across different countries that will determine the pattern of trade.

(iii) Leontieff theory

The Leontieff theory uses an input-output matrix to determine factor-intensiveness of exports and imports. It modifies the factor-content assumption even more sophisticatedly, but it still revolves around the factor endowment theory. It includes the composition of factors of production (mainly labour), not just capital and labour, in explaining varying patterns of trade. For instance, differences in the composition of the labour force are regarded as an important determinant of comparative (dis)advantage. Broadly speaking, labour can be divided into unskilled, semi- and skilled labour. In this case, labour is treated as a heterogeneous factor, unlike the classical economists.

(iv) Neo-technology trade theory

This is the most radical departure from the endowment assumption by dropping the common production function assumption and to argue that technology is integral for trade to occur.

The neo-technology school of thought features the technical know-how and the ability to innovate in a country as a major factor influencing trade patterns. The theory acknowledges the influence of technology on methods of production and the role that this variable has on the capacity of a country to innovate a new structure of exportable products. Manufactured goods often require specialist investment and expertise. As a result, countries can develop a competitive advantage based on technical innovation that can act as a barrier to other countries due to the high cost of entry.

(v) Taste-differences trade theory

The premise of this trade theory is the assertion that tastes - rather than factor endowments - influence pattern of trade. It is based on demand differentials for certain goods to be imported to either supplement or replace domestically produced goods. This stems from inter-industry trade where countries import and export the same goods. For example, if most Americans prefer to drive larger cars, while South Africans prefer smaller cars, then trade can take place to meet demands for the respective markets. The minority of the consumers in America who wish to purchase smaller cars can import them from South Africa and vice versa. In a world economy where demand is constantly changing, an important source of trade is the temporary local shortage of goods or commodities, which would normally be obtained locally at a competitive price. The temporary shortages that may arise from business cycles include factors such as demand, mechanical failure, disaster, poor planning or sudden bursts of commodity inflation which could encourage manufacturers to build stocks of raw materials.

3.7 Determinants of sources of trade

Since the manufacturing sector has linkages with other economic sectors, both the direct and indirect capital and labor impact on manufacturing's ability to export are deemed crucial for the success of export growth.

Dias (1998:6-8) identified five variables as major sources of trade: (i) Research and Development (ii) economies of scale (iii) natural resource intensity, and (iv) multi-factor productivity. Some of these variables are briefly explained below.

(i) Research and Development

R&D measures the propensity to innovate in the manufacturing industry. It represents actual expenditures on R&D, which will affect the growth of exportable manufactures. R&D should be treated with caution since a significant amount of technology in developing countries is imported from industrialised countries. R&D could be less reliable when measuring the ability of an industry in a country to innovate. It can be used as an indicator of R&D activity (rather than innovation) and regard locally produced technology as the measure of innovative capacity of the manufacturing sector.

(ii) Economies of scale

The economies of scale is measured by the ratio of the output in industry valued in monetary terms per annum and the total output of manufacturing per annum. The scale variable is not meant to establish a relationship between the location of the long run average cost curve and its level of exports and imports, but rather to propose that an industry with a larger share of output and consumption is more likely to experience economies of scale essential for higher export performance.

(iii) Natural resource intensity

The pattern of trade in manufactures is greatly influenced by the (non-) availability of natural resources such as gold and diamonds as it was the case in South Africa.

According to this variable, those industries associated with a high intensity of natural resources-use include Ricardian sectors, food, beverages, tobacco, paper and related products, wood and wood products, leather as well the non-metallic mineral industry and the basic iron an steel and non-ferrous mineral sectors.

3.8 Possible underlying factors influencing export growth

There are several factors considered as determinants of export growth in several countries. Due to the multiplicity of these factors and different country-patterns of trade, the following factors will be highlighted below and discussed thoroughly when they emerge as dominant factors when analysing export growth trends in the South African manufactured export industry in the remaining chapters.

(i) Currency fluctuations

In the light of many countries'? practice of determining or fixing nominal exchange rate, the real exchange rate is seen as a crucial determinant of exports. It stems from the fact that exporters tend to be willing to export more if their domestic cost ratio is less than the real exchange rate. Most firms in most African countries remain loyal to the domestic market and in this context are likely to find trade liberalisation and real exchange devaluation problematic. Overvaluation of exchange rates is considered as a common factor that contributed to the dramatic decline in export volumes during the 1970s and early 1980s in most developing countries (Kuma, 1985:8).

(ii) Trade reforms

Trade liberalisation will be beneficial for a country's exports as it will benefit the input used most intensively in its production. A country's access to imports at world markets is an important determinant of export.

In more recent times the effects of imperfect competition, economies of scale and distribution of trade patterns have been analysed, mainly as part of endogenous growth theory and strategic trade policy. The gist of this literature is that a country's successful integration into the world economy and its share of exports in world trade is a significant determinant.

As a vent of surplus, trade could benefit the economy by utilising those economic resources that are idling, thereby optimising the capacity of the sectors of the economy (Thirlwall, 1999:337 & Giersch, 1987:45). Moreover, in periods of recession, which are characterised by slackening domestic demand, local producers may try to export more abroad to reduce idle capacity in an effort to compensate for the declining domestic demand. Thus the rate of capacity utilisation and the efficient use of available factors of production are important determinants of manufactured export behaviour.

(iii) World economic demand

The impact of business cycles in global markets (especially in major industrialised economies), which depends on the share of a country's export and structure of its exports in the world markets, a nation's export destination and commodity composition are major factors determining its export growth. If export ratios to emerging economies are higher than to developed markets, export performance will decline with negative performance for such industrialised economies.

(iv) Firm-level factors

Recent literature on determinants of exports shows that firm-level specifics constitute heavily on the ability of a firm to either enter export markets or remain focused on domestic markets. Firm-level factors emphasise the importance of production and cost functions for a firm to participate in exporting.

Entry into exporting is associated with fixed costs, predicting that only relatively productive firms with relatively high returns from exporting will choose to enter the world export market. Since the emergence of this line of thought, many countries have set aside funds for research and development to investigate any relevance of firm-level theory and traditional trade theory. If anything, these developments suggest that in order to better understand the nature and determinants of a country's export potential, there is a need to explore beyond traditional factors (Rankin, 2003:4).

(v) Monetary and fiscal policy instruments

Whilst trade reforms have higher prospects of increasing manufactured exports, the role of stable monetary and fiscal policy should not be overlooked. Policy measures introduced to enhance the exports promotion strategy are important in facilitating export-entry and may become particularly rewarding in terms of improving export performance of a country (Teal & Soderbom, 2000:9).

3.9 Summary and conclusions

Diversification of developing countries' economies requires a well thought of establishment of manufacturing industries, which could make in-roads into foreign markets. This emphasises the promotion of international trade, in manufactures in particular, as an integral part of the development strategy for developing countries. Trade can be broadly analysed by studying trade by country, geographical area and commodity.

In pursuit of the reasons why trade takes place, different theories of trade emerged to explain forces behind international trade. The most notable ones include Ricardo?s and the H-O trade theories, which are based on comparative advantage. Both theories attribute trade to different factor endowments, although the H-O theory is regarded as the more sophisticated.

Trade can also be explained through theories such as the Leontieff, technology, taste differences and cyclical conditions in the economy. Many economists consider R&D, economies of scale and natural resources among the possible determinants of the sources of trade. There are various possible factors underlying the growth of export, which range from individual firm-level factors to macroeconomic policies.

Foreign trade in South Africa has been characterised by restrictions, incentives, exhortations and other forms tinkering with the economy. But since the 1990s, the key features of South Africa's patterns of trade changed significantly. Today, the composition of the South African exports is diversified with manufacturing contributing a sizeable exporting value to the total GDP.

However, export growth trends indicate that South Africa's exports are mainly derived from the skill-intensive and mineral-intensive industries. The structure and pattern of export growth by factor intensity in South Africa explain partly why the manufacturing sector has not seen any major job creation despite rapid export growth in the 1990s. Reducing the import bill in the manufacturing sector could be achieved with a concerted effort to encourage R&D, thereby increasing the innovation capacity of the manufacturing sector and the economy in general.

CHAPTER FOUR

The impact of trade liberalisation on the manufactured export industry

4.1 Introduction

In the chapter trade patterns in the South African economy are analysed with a particular reference to the 1990s. The chapter provides a background analysis of South Africa's main trading partners in the 1990s and most important, the degree of the structural changes of South Africa's trade policy orientation and the extent of its effect on the manufacturing sectors' trade behaviour.

The analysis will be made based on export orientation and import penetration subsequent to South Africa's simplified tariff phased-down programme under WTO for periods of which data is available and less complicated. Thus the chapter concentrates on the effects of the new trade policy reforms on the capacity of South Africa's manufactured export industry to penetrate world markets.

4.2 The direction of South African trade

The last few decades have witnessed an increased global integration as well as the opportunities and challenges it presents to the economies of the world, producing "winners" and "losers" in the same country, region and the rest of the world. The period of globalisation has led to a dramatic expansion of world production and trade. Encouraging is the growing participation of developing countries in world trade, but still these groups of economies should vigorously formulate fruitful policies for diversification of production activity. In comparison to other larger emerging economies, South Africa still appears to be a moderate globaliser (McCarthy, 1998: 436, Calitz, 2002: 566 & Loots, 2002: 265-267).

South Africa's diversification of its economic activity and growth of manufactured exports, in particular, was halted (and even reversed) by the imposition of trade and financial sanctions by several major United States banks, some members of Commonwealth Nations and the Nordic countries (Jonsson, 2000:3). In an effort to maintain a positive balance of trade, South Africa (against its will) became more focused on developing industries for foreign markets.

The nature of South Africa's direction of trade has changed significantly since the 1990s, subsequent to improved political and economic relations with the rest of the world. The new democratic dispensation has since stimulated trade growth and inflow of investment (Calitz, 2002:248). Consequently, some of the traditional trading partners recorded strong increases in trade flows and others have registered declining growth rates while new market opportunities were identified.

Table 4.1: South Africa's main trading partners (%), 1995-2002

Country	1995	1996	1997	1998	1999	2000	2001	2002
EXPORTS								
United Kingdom	14	11	1	17	18	15	17	16
United States	8	10	11	15	15	18	16	15
Germany	8	8	8	12	15	13	14	12
Japan	9	11	10	11	9	9	9	9
Netherlands	5	5	6	9	8	7	8	7
Zimbabwe	8	8	7	8	6	5	4	4
Italy	4	4	4	6	5	6	5	6
IMPORTS								
Germany	19	18	17	20	21	22	20	20
United States	14	15	15	19	19	20	16	15
United Kingdom	13	14	14	14	14	14	11	12
Japan	12	10	9	11	11	13	9	9
France	5	4	4	6	6	7	5	5
Italy	5	5	5	6	5	6	5	5
Rep.of China	6	4	3	4	5	4	6	7

Source: Customs & Excise database (www.sars.gov.za), 2003

Evidently, since the mid-1990s the distribution of South African trade has shifted somewhat from traditional markets in Europe to Asia and America (Budget Review, 2000:19).

Notably, trade by income level indicates that South Africa trades more with high-income economies (Western Europe, North America, East Asia and Pacific). However, South Africa's trade is not limited to the high-income countries as it also does trade with middle-and low-income countries. The former category includes Sub-Saharan and South Asian economies; and the remaining trading partners make up the middle-income group (Alleyne & Subramanian, 2001:14).

Germany, the United Kingdom (UK), the United States (US) and Japan have consistently affirmed their position as South Africa's major trading partners, consistently accounting for more than 70 percent of trade between 1990-2002. This emerging trend can be attributed to various structural changes, particularly the shift in trade policy paradigm, which has been taking place in the South African economy. Conversely, France, Italy and the Netherlands compensated for the relatively declining import shares of the major consumers of South Africa's exports – Germany, US, UK, and Japan – beginning in the latter part of the 1990s.

4.3 Trade liberalisation in South Africa

Historically, South Africa had pursued a development policy based on import substitution. But by late 1960s, policy changes became inevitable and a commitment towards export-led growth designed to encourage diversification into global markets became dominant. In an effort to raise exports of manufactures amid the declining export share of the primary exports, South Africa embraced re-integration into global markets in the early 1990s through economic reforms.

Theoretical arguments in recent development literature indicates that countries that followed outward-oriented trade policies generally perform better economically than those that pursued protectionist trade policies (Valodia, 1997:2). For a country to become fully committed to export growth, dismantling of tariff barriers is essential for the following reasons:

- Inflating tendency of tariff barriers on costs of input materials;
- Foreign competition fosters efficient allocation of resources by domestic firms;
- Trade is a reciprocal business in which protectionism provokes protection in response; and
- Tariff barriers create an artificially profitable home market as businesses have no incentive to compete in foreign markets.

In pursuit of the fruits associated with outward-oriented trade policy, South Africa underwent different episodes of trade liberalisation. Notwithstanding effects on other economic sectors, South Africa's trade regime was viewed as a main constraint for the growth of the manufactured export industry.

4.3.1 Trade liberalisation prior to the 1990s

The first liberalisation episode was heralded by the 1972 report of the Reynders Commission of Inquiry into South Africa's export trade. The report was an outcome of a commission of enquiry that was appointed by government in 1971, headed by Dr H.J.J. Reynders, to investigate the export trade of South Africa (Struthers, 1990:15). The report was instrumental in reforming the trade regime of South Africa and stimulated measures necessary for the liberalisation of trade as early as the 1970s (Jonsson & Subramanian, 2000:3).

The main recommendations of the Reynders Commission were:

- The promotion of exports in the manufacturing sector;
- The introduction of export incentives to countervail the effects of distance from major markets and the influx of subsidised exports from other countries; and
- The need for South Africa to earn more foreign currency by diversifying away from gold exports into manufactured exports.

However, the real appreciation of the Rand owing to a gold-led export growth reduced the competitiveness of South Africa's manufactures, resulting in increased calls for protection. The start of 1980s signaled the process of intensification of trade liberalisation. The eventual strategy was thus on export promotion rather than on liberalisation of the import regime. It was only in 1983, when about 77 percent of imports were subject to direct import controls that the first systematic attempt was made to dismantle the controls. In 1985, South Africa switched from a positive list of permitted imports to a negative list of prohibited imports covering about 23 percent of imports (Kusi, 2002:2).

Towards the end of the 1980s, South Africa's commitment to trade liberalisation became even more evident, especially with the BTT, which had succeeded the BTI, hardening its stance towards private sector requests for protection. Export promotion was further enhanced by the introduction in 1989 of sectoral "Structural Adjustment Programmes" for certain industries, notably for the motor vehicles and textile-clothing industries. These selective sectoral programmes had been at the heart of the BTI's 1988 policy document entitled *"A Policy and Strategy for the Development of Structural Adjustment of Industry"*.

4.3.2 Trade liberalisation after 1990

The 1990s experienced the birth of a massively significant period of economic, political, and social change in South Africa. After years of political struggle, the first democratic elections in 1994 marked the end of Apartheid government and thus the birth of new economic and development challenges for the new government – led by the ANC. The ANC policy framework (1994) on the economy is clear: The expansion of production for internal market is essential for redistribution, increasing manufactured export competitiveness to achieve a high productivity and diversification away from primary exports towards reliance on exports of manufactures. A major turnaround of trade liberalisation in South Africa was motivated by a publication of IDC entitled *The Modification of the Application of Protection Policy* (Lipton & Simkins, 1993:213).

The report argued for export orientation to replace the import substitution strategy. In contrast to the BTI's recommendation, IDC recommended for a much more uniform and lower tariff structure to reduce the dispersed and complex relatively high protective structure and encouraged anti-dumping measures and gradual downward adjustment of tariffs to predetermined levels.

Against traditional observation, Naude (2000:246) states that South Africa has been forced to shift to an outward orientation strategy primarily because of the need for accelerated export growth to overcome the balance-of-payments constraint and not because of other benefits attributed to trade liberalisation. Globally, growth rates of export of the trade liberalising group of countries are much greater than among the non-liberalisers. However, a comparative study on trade policy changes in a sample of developing countries by Holden (2000:295) shows that the majority of these countries suffered terms of trade deterioration upon reform of protective structures. By contrast, enhanced trade conditions in South Africa have in recent years improved efficiency reasonably, even though chronic unemployment and poverty levels remain major a concern (Jonsson & Subramanian, 2000:3).

In order to solve the problems of declining average economic growth, rising unemployment and absolute poverty the new government formulated the GEAR strategy in 1996. Mostly the strategy aims to stimulate economic growth by liberalising the economy with special reference to encouraging manufactured export growth (Edwards, 2001:57; Naude, 2000:246; Dias, 2002:1).

From a macro perspective, it is very important that South Africa stimulate its non-traditional exports. It is generally accepted that export-led growth is the way for increasing global competitiveness and growing the economy. This will, in turn, increase the wealth and living standard of South Africa.

Without any doubt, the impetus for trade liberalisation in South Africa started gaining momentum in the early 1990s, reflected in a consultative process under the auspices of the Tripartite National Economic Forum involving government, labour and organised business (Holden & Gouws, 1997; Tsikata, 1999; Jonsson & Subramanian, 2000; Onyango & van Seventer, 2001). To reduce supply-side impediments in the manufactured export industry, the DTI introduced an incentive package in the form of the GEIS, which was later eliminated in 1997 for it contravened WTO rules. With certain exceptions, all exports qualified automatically for assistance in terms of a formula that made the rate of subsidisation an increasing function of the stage of production and local content. A local content rule simply requires that certain amounts of local input material must be combined with foreign input material for manufacturing. For example, manufactures with high value-added and local content qualified for a nominal subsidy of 19.5 percent of export turnover; while those firms with low value-added and low domestic content qualified for a meagre 2 percent.

4.3.4 South Africa's trade liberalisation under the WTO

Although agreed to under GATT in 1994, South Africa engaged in a far-reaching trade liberalisation programme implemented under the WTO. In addition to tariffs being simplified and reduced for almost all South Africa's imports, non-tariff barriers such as local content requirements and export subsidies were abolished for they contravened WTO trading rules. The acceleration of the tariff phase-out was further boosted by the commitment of South Africa to bilateral free trade agreements such as the EU-RSA FTA and unilateral trade liberalisation programme.

The main reasons for the recent structural reforms, trade policy in particular, were deteriorating economic performance, socio-political factors and the inappropriateness of the Apartheid-inherited economic system (Calitz, 2002:248 & Roberts, 2000:607). In a declaration to the unilateral tariff reduction programme that exempted the agriculture and mining sectors, which were granted a longer phase-out period, South Africa aimed to:

- Reduce the number of tariff lines (from over 13, 000) at the six-digit level by 15 percent in the first year and by 30 percent or higher by 1999;
- Convert all quantitative restrictions (QRs) on agricultural imports to bound ad valorem rates; lower all bound agricultural tariffs; and reduce the number of tariff rates to six – 0 percent, 5 percent, 10 percent, 15 percent, 20 percent, and 30 percent – with the exception of the "sensitive" industries (textiles, clothing and motor vehicles);
- Liberalise the sensitive industries over an eight-year period; and
- Phase out the GEIS by 1997.

Table 4.2 shows a declining trend of tariff relaxation across South Africa's economic industries, notably manufacturing industries. The only exceptions to the five-year tariff liberalisation process were the clothing and textiles and automotive sectors, which were granted eight years to attain the levels made in the WTO offer (Cassim & Onyango, 2001:2; Jonsson & Subramanian, 2000:8; Black, 1998:2 & Roberts, 1988: 13). Notably, the South African economy appears to be heading for a relatively full-scale tariff liberalisation with certain "sensitive" industries enjoying a gradual liberalisation progress (table 4.5).

Cassim & Onyango (2001) point to the fact that South Africa's average weighted import duties were also to be reduced from 34 percent to 17 percent for consumption goods, 8 percent to 4 percent for intermediate goods, and 11 percent to 5 percent for capital goods. With the WTO bindings for these categories being 26 percent, 4 percent and 15 percent, respectively, South Africa's commitment to import liberalisation to allow foreign competition to the sectors is more than generous by WTO benchmarks.

Table 4.2: Tariff phase-down under the WTO

New ISIC	Description	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
3	Textiles	30.1	33.8	31.8	24.9	23.4	21.9	20.3	18.7	17.3	17.3	17.3
4	Clothing, excl., footwear	73.7	73.7	68.2	54.6	50.5	46.4	42.4	37.7	33.2	33.2	33.2
5	Leather, leather products	14.9	14.8	14.1	16.5	15.7	14.8	14.8	14.8	14.8	14.8	14.8
6	Footwear	37.5	41.6	39.1	36.8	34.2	29.1	29.1	29.	29.1	29.1	29.1
7	Wood, wood products	13.9	3.6	3.4	3.5	3.3	3.1	3.1	3.1	3.1	3.1	3.1
8	Paper, paper products	9.6	9.3	9.1	8.8	8.7	8.5	7.9	7.3	-	-	-
9	Printing , publishing	8.1	1.3	1.2	8.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
10	Petroleum, and petroleum products	1.6	-	-	-	-	-	-	-	-	-	-
11	Industrial products	9..3	7.5	7.5	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6
12	Other chemical products	9	3.8	3.7	2.7	2.6	2.5	2.4	2.5	2.5	2.5	2.5
13	Rubber products	30.5	14.5	14.1	15.8	15.4	14.6	14.4	14.4	14	14	14
14	Plastic products	19.8	14.7	13.7	13.2	12.6	12	12	12	12	12	12
15	Glass, glass products	11.8	9.5	9	8.3	7.9	7.6	7.6	7.6	7.6	7.6	7.6
16	Non-metallic and mineral products	10.6	8.7	8.1	8.4	8	7.7	7.7	7.7	7.7	7.7	7.7
17	Basic iron, steel products	7.6	4.4	4.2	4.2	4.1	3.9	3.9	3.9	3.9	3.9	3.9
18	Non-ferrous metal products	2..3	2.3	2.3	2.3	2.2	2.0	2.0	2	1.9	1.7	1.7
19	Metal products, exclu., Machinery	13.1	8.2	7.8	7.8	7.6	7.4	7.4	7.4	7.4	7.4	7.4
20	Non-electrical machinery	6.5	1.4	1.3	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3
21	Electrical machinery	11	6.1	6	5.8	5.8	5.7	5.7	5.7	5.7	5.7	5.7
22	Radio, television and Communication apparatus	12.1	5.1	3.7	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3
23	Professional equipment etc	7.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
24	Motor vehicles, parts, accessories	55.4	33.5	31.7	29.3	27.9	24.8	23.2	22.1	22.1	22.1	22.1
25	Other transport equipment	1.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
26	Furniture	28.1	21.4	20.8	20.2	19.6	18.9	18.9	18.9	18.9	18.9	18.9
27	Other manufacturing	2.9	1	1	5.2	5.1	4.9	4.9		4.9	4.9	4.9
82	Mining	2.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total		11.7	7.2	6.8	6.1	5.8	5.3	5.1	4.9	4.9	4.9	4.9

Source: Customs & Excise (www.sars.gov.za), 2003 & TIPS, 2003 (**www.tips.org.za**) databases

From a cross-sectional empirical analysis on trade liberalisation it is evident that not all countries and regions benefited to the same extent (Meier, 1995:33-66). It is therefore essential to establish the impact of trade liberalisation on the manufactured export industry in South Africa to ascertain whether this phenomenon stimulated growth in manufactured exports.

4.4 Implications of South Africa's free trade agreements for the manufactured export industry

Many developing countries have been reluctant participants in multi-lateral trade liberalisation agreements. South Africa is not one of these.

Following the lifting of sanctions, South Africa succesfully participated in the Uruguay Round of negotiations of the then GATT and has concluded a development and cooperation trade pact (based more on trade) with the EU and SADC and has made significant progress towards strengthening bilateral ties with main trading partners. This has taken mainly a form of free trade agreements to gain greater market access in these regions (van Seventer & Mlangeni, 2001:1; Masters, 2001:1 & Black, 2001:14).

4.4.1 South Africa's trade with SADC

Historically, southern African economies were characterised by a highly interventionist and protectionist trade regime (Kalenga, 2000:6). Since the mid-1980s, there has been a fundamental shift in the domestic policy and outward-orientation of SADC economies (Sandberg & Martin, 2001:412; Visser, 2001:2 & Evans, 2000:674). The region has made substantial reforms of its foreign trade regimes either as a part of IMF/World Bank SAPs or unilateral and multi-lateral reforms.

By world standards, SADC has considerably high tariff schedules (van Seventer, 2001:6). However, in recent years Kalenga (2000:7) & van Seventer (2001:6) have noticed a considerable lowering of tariff barriers even though significant non-tariff barriers still exist. Zambia is regarded as having the most liberal trade regime in SADC, while Tanzania, Mauritius (the most export oriented economy in SADC) and Zimbabwe have the highest tariff peaks (Tsikata, 2000:14). In addition, there are several bilateral preferential trade agreements amongst the SADC economies. These include South Africa and Zimbabwe (largely confined to textiles and clothing), South Africa and Mozambique, South Africa and Malawi, Malawi and Zimbabwe, Namibia and Zimbabwe as well as Botswana and Zimbabwe.

A survey conducted by the IDC (1998) among South Africa's importers of food and beverages from the SADC region confirmed that the low levels of imports were, to a large extent, related to the existing business culture and lack of information rather than the restrictive trade rules and the absence of competitive supply forces in the region. Moreover, lack of trade finances, high freight costs and unfavourable macroeconomic policies continue to exert an inhibiting pressure on regional trade expansion.

Exports from South Africa to the rest of the non-SACU SADC countries have seen a significant growth since the early 1990s, in particular (Valentine & Kransnik, 2000:273 & Table 4.3). Since the 1990s countries that traditionally had less trade with South Africa (Angola and Mozambique) recorded high growth of imports (although from a low base) from South Africa and the more traditional trading partners (Zimbabwe, Zambia and Mauritius) had their imports from South Africa growing at lower rates. Overall, SADC-SACU trade data indicate that South Africa export share to the rest of SADC has increased although at a lower rate (13 percent), mainly because of poor economic growth in Zimbabwe (Elyea & Mlangeni, 1999:14).

Table 4.3: South Africa's share of manufactured exports in SADC (%), 1990-2002

Year	Angola	DRC	Malawi	Mauritius	Seychelles	Zambia	Zimbabwe	Mozambique
1990	1.1	12.2	14.0	8.4	1.2	15.3	34.6	13.1
1992	7.7	5.3	14.5	7.1	1.1	18.9	31.9	14.0
1994	4.0	4.2	9.1	9.8	1.3	13.1	34.0	24.5
1996	5.0	7.9	7.3	7.4	1.4	13.7	38.8	18.6
1997	5.7	5.7	7.7	8.2	1.4	14.9	37.0	19.5
1998	7.6	5.6	8.7	7.3	1.4	14.4	35.4	20.0
1999	7.9	4.9	8.8	7.4	1.3	14.5	30.3	24.6
2000	6.5	4.4	8.3	10.0	1.1	22.4	23.9	23.6
2001	11.1	4.0	7.6	9.00	1.0	20.5	22.9	23.9
2002	12.6	4.9	8.4	8.7	1.3	18.7	24.1	21.3

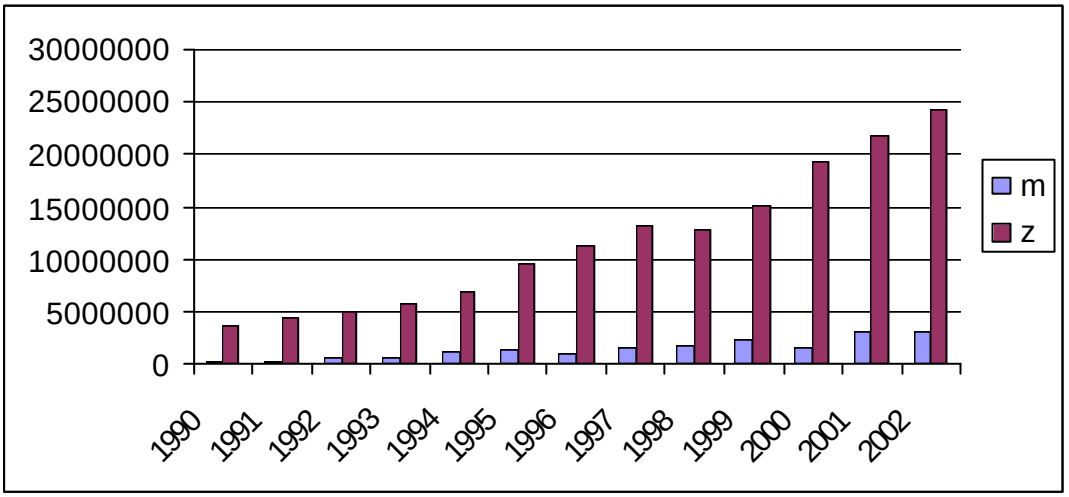
Source: Calculated from Economic Research Unit database (DTI), 2003

Table 4.3 indicates that Mozambique is fast becoming South Africa's largest trading partner in Africa, overtaking Zimbabwe, which has been declining following its political instability and economic slump since 2000.

Manufactured exports to Mauritius and Zambia are steadily growing while trade with Malawi is declining despite its bilateral trade agreement with South Africa.

The African market, SADC in particular, is important for South African export opportunities (Ginsberg, 1998:8 & Matlanyane & Harmse, 2002:442-23). The favourable trading conditions with the African economies, particularly the SADC market, have been a very notable feature of the 1990s. The composition of South Africa' s exports of manufactures to the region is of great significance and is mainly made up of machinery and appliances, motor vehicles, chemical products, plastic and rubber products foodstuffs and beverages and textiles and clothing. Given the high income-import elasticity of demand in developed markets, South Africa should focus on the large developed markets of the world if the country wishes to effect a quantum on its growth performance in spite of the higher current manufactured export earnings in the SADC market.

Figure 4. 1: South Africa's trade of manufactured exports with SADC (Rm), 1990-2002



Source: Economic Research Unit (DTI), 2003

GROWTH TRENDS IN THE SOUTH AFRICAN MANUFACTURED EXPORT INDUSTRY

Figure 4.1 shows growth trends in South Africa's manufactured exports (Z) and imports (M) in the SADC region for the period 1990-2002. Since post-1994 there has been increased trade in manufactures, with manufactured exports dominating imports, resulting in a positive balance for South Africa's manufactured export industry. Figure 4.1 clearly shows South Africa's large trade surplus with the SADC market and this performance raises questions of export growth sustainability. Sub-Saharan Africa cannot be seen as the market that will provide South Africa with sufficient export-oriented growth opportunities to overcome its lethargic growth.

On the other hand, South Africa's large trade surplus with most of SADC economies is a major concern for manufacturing growth and development in the region. Researchers argue that the situation offers South African exporters a more competitive edge over SADC exporters in the region and South African market. Furthermore, a literature review has shown that there are competitive exporters of certain manufactured products (food, beverages, tobacco, furniture, cotton, leather, refined copper and copper wire) in the SADC economies but South Africa continues to import such products from the rest of the world. Even though South Africa has begun importing small quantities of these products, evidence exists that there is potential for SADC export expansion into the South African market.

However, trade policy changes alone cannot explain the increasingly growing manufactured exports into SADC market. Factors such as the high growth in the SADC member states' real GDP and special agricultural, mining and industrial projects (e.g. the construction of the Mozal Aluminium Smelter in Mozambique) have been instrumental in the performance of the manufactured export industry in South Africa.

The growth in exports of manufactures to the SADC market has been achieved in spite of the historically high levels of barriers to trade in the region. In contrast to exports of South Africa to the other regions of the world, the SADC market is the only region to which the country's major exports are manufactured goods.

It is expected that the Trade Protocol adopted by SADC in 1996 will lead to more export opportunities for the South African manufacturing firms (Kalengu, 2000:19; Evans, 2000:663).

4.4.2 Implications of South Africa's free agreement with EU on manufactured export growth?

The RSA-EU FTA has strengthened South Africa's position in the global economy. The European Union (formerly know as European Economic Union or European Community) was formed in November 1993 and now consists of 25 member states[2]. It was formed to enhance political, economic and social co-operation among member states. The signing of the EU-RSA FTA deal on 11 October 1999 marked the conclusion of four years of rigorous negotiations.

The agreement covers a wide range of areas including trade, economic relations, finance and technical change. A free trade agreement with the EU is indicative of the wider strides South Africa has taken since re-integration into global markets. The trade aspects of the agreement cover all industry sectors and many agricultural goods as well as services.

Table 4.4 shows that at the end of a 10-year transition period, 95 percent of South African exports will enter the EU market free of duty and, after 12 year, 86 of the EU exports will enter the South African market duty free. The free trade deal with the EU is a landmark bilateral achievement because it is the only such agreement South Africa has with a developed regional economy.

[2] Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Nederland, Portugal, Spain, Sweden, United Kingdom (1 May 2004 new member states – Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia).

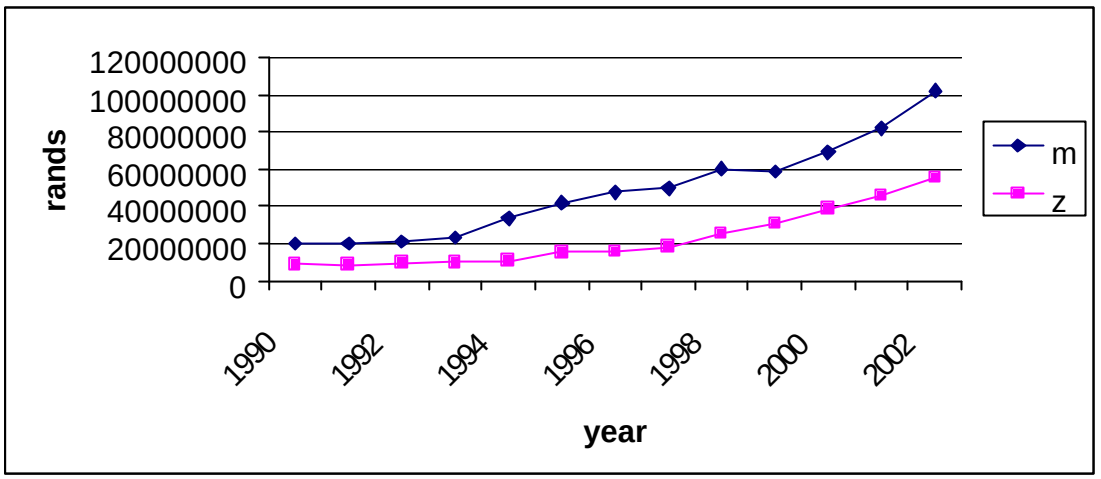
Table 4.4: Reduction in tariffs of South Africa's imports from the EU (%), 1999-2012

Sector	**As % of RSA imports from the EU**	**1999**	**2000**	**2003**	**2006**	**2009**	**2012**
Food, beverages & tobacco	2,1	15,6	15,4	14,1	10,5	7,4	4,3
Chemicals	12,6	2,9	2,8	2,7	2,0	1,3	0,7
Plastics	4,6	10,2	10,1	9,8	7,4	4,5	1,8
Leather	0,3	10,9	10,9	10,1	8,3	6,2	4,9
Wood	0,4	7,7	7,7	7,3	5,1	3,1	1,1
Paper	3,2	6,7	6,7	5,5	2,6	1,4	0,2
Textiles	2,1	-	20,9	16,1	10,1	10,6	10,4
Footwear	0,3	22,2	22,6	21,2	17,2	11,6	7,4
Machinery	46,4	4,4	4,0	3,6	2,3	1,4	0,5
Vehicles	5,5	10,8	9,9	8,5	7,0	5,5	4,3
Optical & photographic equipment	3,9	0,3	0,3	0,3	0,3	0,2	0,1
Other manufactured goods	1,1	9,4	9,4	9,2	7,3	4,7	2,2

Source: National Treasury, 2000

The EU accounts for more than 42 percent of South Africa's total merchandise trade and two of its members – Germany and United Kingdom – are consistently among South Africa's top four trading partners. The beginning of 1994 signaled the end of all sanctions against South Africa thus paving way for increased trade between the EU and South Africa. The dominance of primary exports to the EU market is a major concern (Akinbugbe, 2000:645-46).

Figure 4.2: South Africa's trade of manufactured exports with the EU (Rm), 1990-2002



Source: Economic Research Unit database (DTI), 2003

Manufactured exports accounted for about 30 percent of South African exports to the EU economy. The composition of South African imports from the EU indicates a heavy concentration on manufactured and capital goods – a common characteristic of a typical developing economy. These include machinery, chemicals, fuels, scientific instruments and special metals (Pallango, 2000:72). Figure 4.2 clearly shows that growth in manufactured exports (M) is associated with growth of manufactured imports (Z), creating a perpetual trade deficit for South Africa's manufactured export industry. Boosting exports, particularly of manufactures, is now regarded as one of the best ways of overcoming the domestic market constraint by stimulating sustainable economic growth and development in South Africa.

At regional level, the implementation of the EU-RSA FTA, which is based on the free trade approach, is likely to further complicate SADC trade relations (Lewis *et al*, 2002:1). By implication, the free trade deal considers Botswana, Lesotho, Namibia and Swaziland as party to the trade pact.

Moreover, the SACU and non-SACU/SADC countries are likely to have no options in terms of their relationship with the EU other than those defined within the context of the EU-RSA trade pact (Kalenga, 2000:10).

4.5 Import penetration in the manufacturing sector

In South Africa, growth in production is strongly correlated to imports of intermediate and capital goods that consistently exceeded 73 percent of total imports prior to 1988. The higher intermediate and capital goods composition of imports implies that import growth is closely related to output growth (Edwards, 2001:4). Using trade data from 1980-1998, Abdi & Edwards (2001) conducted a study into the export and import behaviour of South Africa's manufacturing sector. For import penetration analysis, they spread the time periods between the 1980s and 1990s to indicate the impact of the changes in trade regimes over these periods. Their finding overwhelmingly showed that across the economy, relatively high import penetration levels are most prevalent in the manufacturing sector.

The manufactured import data by SIC was valued at current prices between 1994-2002. By referring to table 4.2 (Tariff phase-down under WTO) and table 4.5 (Growth of imports in the manufacturing sector) an observable trend for so-called sensitive industries is that while tariff liberalisation increased momentum (tariff dropped by more than twice the original rate) during the period 1994-2002, import growth has more than doubled for clothing and textiles and four times for motor vehicles. It appears that while South Africa's manufacturing sector is consistently and continuously liberalising its industries, it has resulted in an upward growth of import penetration. Accordingly, the researcher attributes (as did Abdi and Edwards, 2002) the increasing import penetration momentum to the trade liberalisation of the South African economy, manufacturing in particular, notwithstanding other factors. It could also imply that the process of liberalisation was introduced too fast for the South African manufacturing sector.

Table 4.5: Growth of imports in the manufacturing sector (%), 1994-2002

Industry	1994	1995	1996	1997	1998	1999	2000	2001	2002
Food	6.7	8.3	9.2	11.2	11.0	10.6	12.0	14.2	16.9
Beverages	5.9	7.0	9.7	11.6	13.4	13.1	10.8	12.3	16.1
Tobacco	10.2	9.1	10.5	8.7	16.1	13.3	8.7	10.6	12.8
Textiles	7.7	8.9	8.9	10.2	11.1	10.8	12.2	13.2	17.1
Wearing apparel	5.7	5.7	7.3	9.3	11.0	12.0	15.1	16.5	17.4
Leather & leather products	8.0	8.9	10.0	11.2	11.5	11.9	14.6	15.2	8.7
Footwear	4.7	6.6	8.3	9.2	9.5	107	14.2	16.8	20.1
Wood & wood products	6.8	8.0	9.0	10.2	9.7	9.8	13.2	14.1	19.2
Paper & paper products	7.6	10.2	10.2	10.4	11.6	12.0	12.9	14.0	11.2
Printing & publishing	7.2	8.4	11.8	9.7	11.7	10.9	11.7	12.9	16.2
Coke & refined petroleum	3.5	4.4	9.5	7.6	12.0	12.0	14.4	25.7	11.0
Basic chemicals	6.4	8.5	8.7	9.4	10.2	10.5	12.8	14.3	19.3
Other chemicals	5.4	6.3	8.1	8.9	10.4	11.6	13.4	15.7	20.2
Rubber & rubber products	5.6	7.3	7.9	9.3	11.1	11.7	14.0	15.3	17.8
Plastic & plastic products	5.4	6.9	7.8	8.9	10.1	11.1	13.1	15.6	21.0
Glass & glass products	6.7	8.2	9.8	10.0	12.0	11.0	12.3	13.1	16.8
Non-metallic minerals	4.7	6.3	7.9	8.4	10.0	11.7	14.5	16.5	20.2
Basic iron & steel	6.2	8.2	9.6	8.8	11.0	10.1	12.2	14.5	18.9
Non-ferrous metals	3.3	6.5	7.4	9.2	11.1	11.6	22.1	12.1	16.8
Metal products	5.6	7.4	8.7	9.3	11.4	11.4	11.9	14.6	19.4
Machinery & equipment	6.6	8.0	9.8	10.2	11.7	10.5	11.6	13.9	17.8
Electrical machinery	7.1	9.6	8.3	8.8	11.1	10.8	12.5	14.2	17.7
TV, radio & communications	4.2	5.1	6.3	8.9	15.1	11.9	15.1	15.5	17.9
Professional & science equipment	6.0	7.0	8.5	9.0	10.7	10.9	12.8	15.5	19.6
Motor vehicles, parts & accessories	5.5	7.4	8.0	7 .3	8.1	9.7	13.7	17.3	23.0
Other transport	4.2	5.4	4.5	8.1	9.8	12.3	14.6	19.5	21.8
Furniture	3.3	4.4	6.7	6.9	8.4	12.2	14.0	18.6	25.5
Other industries	6.7	6.0	7.8	10.1	12.7	11.8	11.9	13.9	17.3

Source: DTI and Customs & Excise databases, 2003

The overall findings of Fedderke & Vaze (2001), Abdi & Edwards (2002) and the researcher show that in some industries there has been a very strong growth in import penetration emerging mainly in the 1990s, with some experiencing no significant change in protection and others experiencing increased protection. These findings therefore seem to suggest that it is difficult to *only* ascribe the pattern of increased import penetration in 1990s to the on-going trade liberalisation.

An analysis of "protected" (column 1) and "liberalised" (column 3) manufacturing industries in table 4.6 shows the sectors that have become more protected have experienced an average growth in import penetration (0.93) closer to that of liberalised sectors (1.10) during the 1990s.

Table 4.6: Trade liberalisation by manufacturing industry in the 1990s

More protected	**Little or no change**	**Liberalised**
Food	Machinery and equipment	Basic iron and steel
Textiles	Beverages	Motor vehicles, parts
Tobacco	Non-metallic minerals	& accessories
Leather and leather products	Coke & refined petroleum products	Paper and paper products
		Basic chemicals
	Printing, publishing & recorded media	Basic non-ferrous metals
		Electrical machinery
	Wood and wood products	Wearing apparel
	Rubber products	Plastic products
	Metal products, excl. machinery	Furniture
	Other transport equipment	Glass and glass products
		Footwear
		Professional & scientific equipment
		Other industries

Source: Fedderke and Vaze (2001)

This finding may imply that trade liberalisation does necessarily appear to have been associated with a higher growth rate of import penetration and that the effective rate of protection does not serve to prevent growth in import penetration. The 1990s experienced a high average import penetration relative to the 1980s partly because of the "catch-up" syndrome as foreign products made up for the lost time in the 1980s. The analysis shows that it is difficult to ascribe the pattern of increased import penetration in the 1990s to one factor.

It also appears that import penetration increased in sectors that did not experience a lowering of effective protection. Even though some sectors (textiles) experienced relative rising effective protection rates, they also experienced a moderate to high import penetration. Plausible reasons for increases in import penetration amidst increasing effective protection rates include:

- Inefficiency within the domestic industry;
- Increase in productivity and efficiency ; and
- Already liberalised industry.

In theory, sectors that have been liberalised are expected to experience increased import penetration and vice versa. But this is far from theory in the South African manufacturing industries. Of the liberalised sectors, increased import penetration has been observed in footwear, furniture plastic products and television, radio and communication equipment (in that order).

While these outcomes are expected, by contrast, basic iron and steel, basic non-ferrous products and paper and paper products have experienced a decreasing growth in import penetration despite undergoing liberalisation.

4.6 Export orientation of the manufacturing sector

Since at least 1994 there has been a number of major structural changes in the South African manufacturing sector.

One of the major significant changes is the sectoral composition of output and exports and a growing export orientation (Onyango, 2003). There has been a steady increase in the share of exports in manufacturing output. Whereas in 1994 exports contributed 14 percent of manufactured output, this had doubled to 28 percent in 2001 - consistent with the world trend (DTI, 2002:14). Manufacturing's share of exports rose from 35 percent to over 50 percent at the end of the 1990s.

Total trade as a percentage of GDP was almost 65 percent in 1997, up from 45 percent in 1990. Food and food products (6.6 percent) and basic iron and steel products (13.3 percent) registered the highest contribution to total exports in 2001. Although the overall performance of individual manufacturing industries was satisfactory between 1994 and 2001, the percentage of total exports in 2001 remained low as shown on table 4.7.

Table 4.7 shows the following trends in export orientation:

- All sectors have increased export orientation – but at widely differing rates;
- A number of wage goods (such as food, leather, footwear and textiles) have experienced only slow rates of increase in export orientation;
- A number of "traditionally" more export oriented manufacturing sectors – notably the four sectors[3] that were the most export oriented sectors in 1994, have had low rates of increase in export orientation; and
- A number of technology sectors are increasingly becoming export oriented.

[3] Basic iron and steel, precious and non-ferrous metals, basic chemicals and leather.

Table. 4.7: Manufacturing: ratio of exports to output (%), 1994 and 2001

Exports as a percentage of manufactured output, 1994 and 2001.			
Sector	1994 (%)	2001 (%)	% of total exports in 2001
Food and food products	8,5	13,6	6,6
Beverages	5,8	14,3	2,5
Wearing apparel	6,0	18,7	1,5
Textiles	12,1	20,1	1,6
Footwear	3,5	5,5	0,1
Wood and wood product	14,1	27,8	1,5
Furniture	18,0	51,4	2,3
Paper and paper products	20,5	26,0	4,7
Publishing & printing	2,0	3,4	0,1
Other chemical products	8,8	18,9	4,0
Rubber products	7,3	23,4	0,9
Plastic products	3,3	8,5	0,8
Glass and glass products	8,8	18,3	0,4
Other non-metallic minerals	5,8	11,2	0,9
Electrical machinery	7,5	19,2	1,9
Basic iron and steel products	48,8	52,4	13,3
Radio, television ad communication	8,2	59,3	1,8
Basic precious and non-ferrous metals	44,4	50,8	6,5
Motor vehicles and trailers	8,9	28,4	13,3
Other transport equipment	33,9	86,3	2,0
General and special purpose	16,8	80,0	12,5
Other manufacturing industries	0,8	4,2	0,5
Total manufacturing	14,3	27,7	

Source: DTI Annual Report, 2001-2002

GROWTH TRENDS IN THE SOUTH AFRICAN MANUFACTURED EXPORT INDUSTRY

It is essential for South Africa to sustain its export growth as nations that wish to import must do so by exporting to the rest of the world (McCarthy, 1998:448 & Brown 1979:122). Increased export revenues provide countries with the foreign exchange needed to import intermediate and capital equipment necessary to sustain output growth. Thus, growth in export orientation becomes essential for an improved growth performance, either as engine that drives the economy, or the facilitator of growth in avoiding balance-of-payments constraint.

Export orientation of the manufacturing industries in South Africa and anywhere else in the world is of paramount importance as it stimulates export diversification. Substantial diversification has been taking place as new export sectors and markets emerge and there has been encouraging signs of fundamental reorientation of South African manufacturing firms towards foreign markets (Black & Kahn, 1998:9).

The growth in export performance of the South African manufacturing sector has been due to a few exporting industries led by non-ferrous metals, petroleum and coal products – all of which are large-scale capital-intensive in their nature of production. The strong export performance of transport equipment, machinery and electrical machinery appears to substantiate export-led growth through trade liberalisation.

This trend is expected to be sustained given the increased market access in developed economies, notably the EU and the US and the growing prospects of a free trade regime in the SADC region in 2008. As a result of the shift in trade policy paradigm leading to the noticeable outward orientation in the manufactured export industry in the 1990s, the manufacturing sector in South Africa continued to achieve significant trade performance, although at differing rates. It is therefore plausible to suggest that trade liberalisation in South Africa has had a major effect on improved export orientation and performance in the manufactured export industry.

4.7 Summary and conclusions

Since the 1980s, there has been unprecedented global integration. Societies and economies around the world are being more integrated. The spread of globalisation is a direct consequence of reduced costs of transport, lower trade barriers, faster communication of ideas and increasing capital flows. In South Africa, the process of globalisation is largely credited with the pace of trade liberalisation. However, compared to other larger emerging economies, South Africa remains a moderate globaliser.

Although the first step of trade liberalisation was heralded by the recommendations of the Reynders Commission, the beginning of the 1980s signaled the process of intensification of a strategy of trade liberalisation. Towards the end of the 1980s, South Africa's commitment to trade liberalisation became more evident with the BTI hardening its stance towards private sector's requests for protection and instead opted for the introduction of "Selective Sectoral Programmes". For the manufactured export industry, the South African economy appears to be heading for a relatively full-scale tariff liberalisation with certain "sensitive" industries under gradual liberalisation progress. The 1990s saw the birth of a massively significant period of economic, political and social changes following the first democratic elections. Consequently, South Africa undertook a massive trade reform programme.

But most important was market access initiatives that resulted in various bilateral and multilateral agreements. These market access initiatives significantly altered the composition, structure and the destination of the South Africa's manufactured exports. The fact that the 1990's saw a change in the orientation of trade policy and that such changes had a significant impact on trade performance of the manufactured export industry is a plausible one. It therefore appears that trade liberalisation in South Africa has had a major effect on improved export orientation in the South African manufactured export industry.

CHAPTER FIVE

Growth trends in South Africa's manufactured export industry: Interpretation of results

5.1 Introduction

South Africa's economy is reasonably diversified, with manufacturing and services contributing a sizeable share to total GDP. As a percentage of world exports, South Africa showed a declining trend throughout the 1980s and 1990s. This is attributable, among others, to the dominance of gold (its value declined) as South Africa's major export commodity and the declining price of primary commodities. Since re-integration into global markets, South Africa has initiated a rigorous export policy aimed at reducing dependence on mineral export revenues and boosting the manufactured export sector. Consequently, a remarkable feature of the South African economy has been the sharp rise in manufacturing exports in the 1980s and its predominance in the 1990s. This is in accordance with South Africa's industrial and trade policy thrust: to significantly increase the growth of "non-traditional" exports in the wake of the declining importance of gold and question marks over the growth of certain "other" traditional commodity exports.

This chapter is crucial in determining and analysing what factors are responsible for export performance and growth in the manufactured export sector. But most important is the identification of "manufacturing export industry champions" generating export revenue greatly essential for economic growth and development in South Africa.

5.2 Growth trends of South Africa's trade

Superficially, conditions for growth of exports were very favourable in the 1970s as a whole. The main influential factor was the commodity boom of the 1970s. The effect on foreign currency value of South Africa's goods was dramatic.

Table 5.1: Growth trends of South Africa's total trade (%), 1970-2000

Year	Merchandise exports	Net gold exports	Total exports	Merchandise imports
1970-1975	9.4	13.1	10.8	9.6
1975-1980	9.6	19.8	14.0	5.5
1980-1985	-8.9	-14.2	-11.4	-13.1
1985-1990	10.4	-2.1	5.8	7.5
1990-1995	5.2	-2.8	2.9	8.1
1995-2000	1.7	-9.9	-0.3	-1.3

Source: NEIP, 2001

Table 5.1 shows growth trends of South Africa's total exports and imports for the period 1970-2000. It emerges that South Africa's overall export performance was superior in the period 1970-1980. This period recorded the best average annual rates of growth of total exports than any other of the decades. Table 5.1 further shows that the contribution of net gold exports to total exports has been declining in real terms. Starting from 19.8 percent beginning 1980, it recorded 9.9 percent by end of 2000. With the exception of merchandise exports, which registered a growth percentage of 10.4 percent in the period ending 1980, South Africa's exports declined during the period under scrutiny, albeit at varying rates. A noticeable feature of the above table is the accompanying rise in merchandise imports as merchandise exports grow.

It must be emphasised though that since 1985 the percentage of merchandise exports continuously has exceeded the contribution of net gold exports and the growth rates of total exports. It therefore seems clear that total export performance has been significantly affected by the decline in gold exports, mainly as a result of a weaker gold price and falling production since 1980. It was however, offset by a strong increase in non-gold merchandise and service exports, especially since the early 1990s.

Kusi (2002:9) noted that the volume of gold produced and exported fell dramatically from the 1970s and the drop in output was halted as a number of new shafts and some dump processing schemes came on stream. Poor industrial relations led to many strikes that evidently later contributed to the decline in output in the mid-1980s. Consequently, gold and "other mining" exports as a share of total export earnings show a downward trend, as shown in table 5.1.

5.3 Export growth by major economic sectors

During its emergence as the key exporting sector, South Africa's manufactured export sector experienced various inhibiting factors, with the most prominent in the 1980s. At the centre of negative factors constraining growth was the decline in the foreign value of South Africa's overall export earnings. Between 1970 and 1980, at sectoral level, the performance of the mining sector as a percentage of total export was the greatest, followed by manufacturing. Starting at 44.6 percent in 1970, the mining sector makes up 54.1 percent of total exports in 1980. For manufacturing, exports make up 43.5 and 37.5 percent, respectively, during the same period (Lipton & Simkins, 1993:91).

Measured in current US dollars, South Africa's total exports rose at an average annual rate of 22.2 percent in the 1970s, but fell sharply by 8.8 percent per annum in the1980-1990 period. The export performance of all three major exporting sectors (agriculture, mining and manufacturing) registered a dismal growth trend. Agriculture was the most affected, whilst mining and manufacturing experienced moderately lower rates of export growth.

The structural change in the composition of South Africa's export basket set in motion the emergence of the manufacturing sector as a major contributor to export growth. A major concern was, however, the continued deterioration of the export performance of the mining sector as a share of South Africa's total export sector. The mining sector had (still has) a principal role as major generator of foreign revenue essential to finance the import deficit bill of the manufacturing sector. It must be noted that for a technology-scarce economy of South Africa's

nature it is not surprising that the requirements for intermediate and capital inputs have led to a deficit as a permanent feature of South Africa's manufacturing sector.

In the absence of a significant reversal of capital outflow and the declining mining export earnings, the need for a significant increase in the rate of "non-traditional" exports, manufactures in particular became inevitable. By comparison, recent growth trends exhibited by the DTI trade data (2003) indicated that the relative contribution of the agricultural sector to total exports has never exceeded seven percent during the 1990s. In 1990, the share of the manufacturing sector to total exports overtook the mining sector's share to record 47.8 percent against 42.4 percent of mining sector. This trend has since become a permanent feature of South Africa's sectoral share by kind of economic activity to total export. Despite the continued decline in the share of primary clusters to total manufactured exports, it appears that the RCA of South Africa still remains in primary commodities (basic iron and steel, non-ferrous metals and, to a lesser extent, paper). The emergence of durable exports such as motor vehicles, accessories and parts (subsequent to the introduction of Motor Industry Development Programme) indicates that with a concerted effort by relevant government institutions it is possible to break the traditional pattern of RCA of South African trade.

Recent trends in South Africa's GDP, compared to other emerging economies (Thailand, Korea Republic, Indonesia, Malaysia and Mauritius), show that exports of manufactures and manufacturing production experienced a lesser contribution to the growth rate. The trend in South Africa's GDP growth rate has been, since 1994, less than 1 percent, even though real exports have increased by about 5 percent (Onyango & van Seventer, 2001:11). Although this is poor in comparison with the other emerging countries, it is at least an improvement. It must be noted that it is the manufacturing rather than the primary export sector that has a significant positive impact on GDP growth rates in less developed economies.

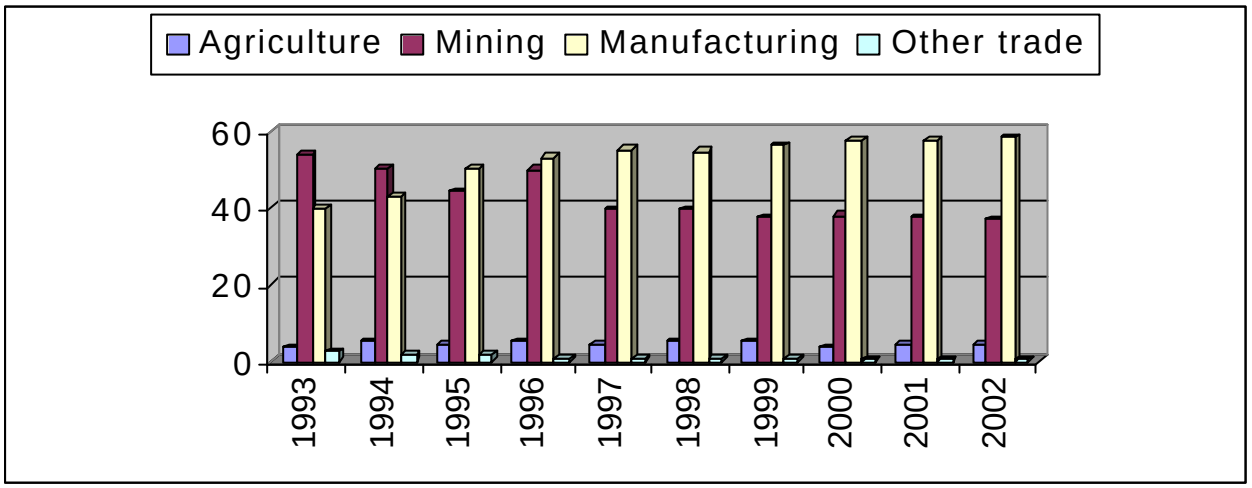
GROWTH TRENDS IN THE SOUTH AFRICAN MANUFACTURED EXPORT INDUSTRY

In recent years, South Africa's economic policy has been driven by the need to refocus industrial and trade policy to increase the contribution of industrial products to total exports. Moreover, a closer analysis of the manufacturing sector in South Africa in the 1990s indicates the lowest ratio of the manufactured exports to merchandise exports of all the countries considered. This was about 57 percent of the ratio for Malaysia, Mauritius and Thailand, but only fractionally smaller than Indonesia. The mean value of South Africa manufactured exports for this period was smaller than all the East Asian economies. However, in per capita terms, Mauritius produced more than three times the value of South Africa's manufactured exports (Rankin, 2003:5).

But the ratio of merchandise export to GDP, as noted by Rankin (2003:1), has increased since 1990. Moreover, manufacturing exports as a share of total exports have increased significantly from 17 percent in 1988 to 54 percent in 1998. Since 1991 the ratio of manufactured exports to GDP has increased by more than three times from 3.1 to 9.6 percent. This suggests that manufacturing exports are increasingly becoming an integral part of GDP. The growth of manufactured exports as part of GDP is essential as it generates foreign exchange, allows firms to benefit from economies of scale, provides a mechanism for the transfer of know-how and technology and encourages efficiency and job opportunities. South African trade by major economic sectors - division of traded good in the manufacturing, mining and agricultural sectors - shows an important structural change. Over the last decade, the proportion of manufactured goods in total exports has increased significantly as more of South Africa's raw materials are processed before being exported and the proportion of manufactured imports has fluctuated considerably. Figure 5.1 shows the structure of South Africa's trade by kind of economic activity between 1993-2002. The agricultural sector is second from the last after "other trade" with 5.2 percent as the highest contribution to total exports since 1995. The share of mining exports declined considerably since 1994, recording 36.9 percent in 2002 down from 58.3 percent in 1996. Noteworthy is the significant growing share of manufacturing export since 1992.

As expected, 1998 was characterised by declining growth of exports mainly due to depressed markets in the Eastern Asia markets following the 1997/8 Asian financial crisis. It is evident that the manufactured export industry has become the engine of trade growth in South Africa as it continues to account for the lion's share of total exports. By contrast, the growth trend of South Africa's imports by kind of economic activity shows a different performance.

Figure 5.1: Export growth by major economic sectors as % of total exports, 1993-2002



Source: Economic Research Unit database (DTI), 2003

Imports by agricultural and mining sectors indicate the well-documented self-reliance of the South African economy *vis-à-vis* these sectors. But even so, imports by the mining sector have been steadily rising while a downward trend is identified for the agricultural sector. The growth in imports by the mining sector can be traced to the recent surge in "high-tech" mining to increase the competitiveness of the South African mining sector in global markets. On the other hand, deficit has become a permanent feature of the South African manufacturing sector.

This is a worrying phenomenon for economic policy-makers since the manufactured export industry is highly regarded as the engine of economic growth and the lack of "self-reliance" by the industry could serve as a constraint to growth in the long run.

For instance, South Africa's manufactured exports in 1993 amounted to R15.7 billion, whereas manufactures imports were R45.1 billion. By 1998 their values were R42.4 billion for exports (+170 percent) and R106 billion for imports (+135 percent). Therefore, South Africa has a marked trade deficit in manufactured goods, although the relative (not absolute) increase in exports was rather higher than for imports for the periods examined.

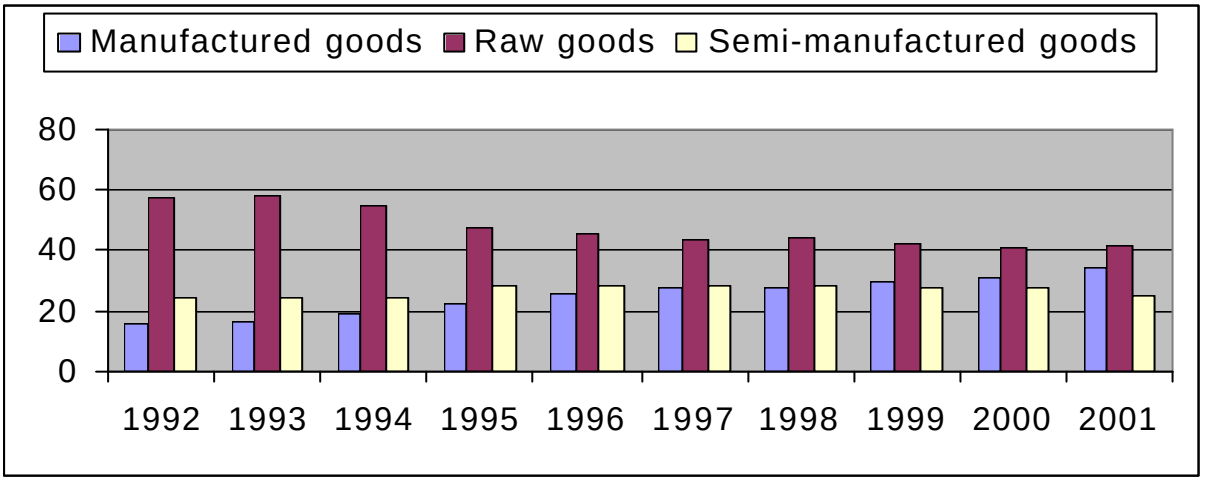
Overall export performance by 9-sector aggregation (Business services, Manufacturing, Community services, Transport, Agriculture, Trade, Electricity, Mining and Construction) in South Africa provided a broader analysis of export growth between 1991-2001. TIPS trade data (2002) showed that the highest growth rate in exports between 1997-2001 came from of business services (7.3 percent), manufacturing (6.9 percent) and community services (6.9 percent). The moderate growth performers included transport, agriculture and trade, whereas amongst the negative achievers mining stand out – a major policy concern considering its importance to employment creation and foreign currency generation.

5.4 Export performance by stage of production

Rapid growth in exports of manufactures has been a central feature of the successful development of the high growth economies in East and South-East Asia during the past four decades. The success of the larger developing economies (China, Thailand, Malaysia, and Indonesia) that achieved high growth rates of manufactures exports in the 1980s has prompted policy-makers in similar countries to adopt growth strategies relevant to manufactures as a policy central for the development of their economies (Martin, 1993:1). South Africa has since adopted the strategy and is reaping rewards for diverting more of its resources from extraction to processing of natural resources destined for world markets. The shift in the structural composition of the South African economy has thus, to an increasing degree, rubbed off in the changing composition of the export basket in the 1990s. Following the reintegration of South Africa into the global economy in the early 1990s, there has been improved export orientation towards world markets.

It has contributed towards the diversification of South African exports away from mining towards manufactures. The rising economic significance of manufactured exports bears testimony to the outward orientation of South Africa's production, and a shift from just extraction of natural resources to the beneficiation process.

Figure 5.2: Exports by stage of production as % of total exports, 1992-2000



Source: Economic Research Unit database (DTI), 2003

Exports by stage of production in the early years of 1990 show a slender dominance of raw products. But the dawn of 1994 has since changed the production landscapes. This period has seen a higher real growth of export of manufactured goods and an increase in the percentage share of semi-manufactured exports, whereas exports of raw materials continue to decline. Figure 5.2 shows that the contribution of raw products (22.3 percent) to total exports was the greatest, followed by manufactured goods (47.2 percent) and semi-manufactured products (27.2 percent). Manufactured exports recorded 45.5 percent to the share of total exports, with raw products and semi-manufactured goods accounting for 27.6 percent and 36.9 percent, respectively.

Clearly figure 5.2 shows a shift in commitment of resources away from the primary sector to the secondary, which is consistent with industrial and trade policy prescription in South Africa. However, the position of the trade balance by stage of production paints a typical characteristic of a developing economy. Growth in output of the South African manufacturing industry is regrettably associated with an increase in imports of intermediate and capital goods – a trend that dates back to the primitive years of industrialisation in South Africa (Parr, 2000:299). Therefore, it is not surprising that the manufactured export sector have the greatest deficit counter-balanced (as expected) by the greatest surplus generated by the raw products. Semi-manufactured goods faired better than manufactured goods, only registering deficits in 1996 and 1998, and then gaining strength in the remainder of the 1990s and beginning of 2000s.

5.5 Export growth trends by major regional markets

The trade reforms adopted by the South African economy post-1994 gave impetus to manufactured exports destined for the key international markets, following the lifting of trade sanction against South Africa by the international community. In terms of percentage growth rates year-on-year change of the total manufactured export value, there have been a dramatic acceleration to the SADC and North Atlantic countries in the first half of the 1990s. By contrast, EU's growth rates steadily accelerated in the last half of the period under review. A fairly steady growth of manufactured exports is experienced for the East Asian market. From 7.5 percent in 1990 SADC grew by more than 5 percent in 1995, only to decline by 2.1 percent in 2002. Although from 6.7 percent in 1995, NAFTA recorded the highest growth rate of 11.6 percent in 2002 from 3.9 percent in 1990. Following the 1997/8 East Asian crisis the region's absorptive capacity of South Africa's manufactured exports was severely dampened, dropping by more than 2 percent between 1996 and 1999. Measured at average annual growth percentages (not shown in table 5.2), the EU (21.4 percent), followed by East Asia (11.8 percent), SADC (11.7 percent) were star performers with NAFTA (7.8 percent) a moderate performer.

The other regions failed to grow at more than 2 percent. The research outcome of manufactured export growth by major regions indicates that with the exception SADC, South Africa's manufactured exports are mainly destined for developed markets in the EU and North America.

Table 5.2: Regional destination of South African manufactured exports as a percentage of total manufactured exports, 1990-2002

Regions	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Eastern Africa	0.5	0.5	0.8	0.8	1.3	1.7	1.7	1.9	2.0	1.7	1.4	1.7	1.7
SADC	7.5	8.5	10.0	10.2	11.5	13.4	13.7	13.7	12.7	13.1	12.9	12.8	11.5
NAFTA	3.9	3.7	6.0	6.0	7.3	6.7	7.8	7.7	9.2	9.2	11.0	10.8	11.6
Eastern Asia	10.5	11.1	11.4	9.9	10.2	12.4	13.9	13.6	11.1	12.2	13.0	11.0	12.5
S. Eastern Asia	1.2	1.1	1.7	1.8	4.6	3.9	4.2	4.4	2.1	2.8	3.0	3.1	3.0
European Union	18.3	16.3	19.3	17.0	17.9	21.7	18.7	18.9	24.7	26.8	25.8	26.6	26.2

Source: Economic Research Unit database (DTI), 2003

Table 5.2 provides the top regional destination of South Africa's manufactured exports between 1990-2002. The table shows that there has been a fairly consistent pattern of the top five trading regions over the period examined. As always the top three major markets were EU, SADC and Eastern Asia. These results are hardly surprising given South Africa's top trading partners analysed in chapter 4. East Asia includes notables like Japan, South Korea and Taiwan; NAFTA's totals are primarily attributed to the US, with Canada a distant second. Zimbabwe, Mozambique, Malawi, Mauritius, and Zambia dominate the SADC market. For North America and Asia one could argue that South African manufactured export growth was more or less in line with global trends (van Seventer, 2001). Average annual growth of the manufacturing industry was 6.5 percent (SADC), 19.3 percent (the Rest of Africa), and 3.8 percent (North America) while Europe and Asia recorded -4.9 percent and -8.3 percent, respectively, during the period under review.

5.6 Geographical breakdown of manufactured exports

The geographical breakdown of South Africa's manufactured exports (percentage) indicates that the SADC region is the major market for more than half of the export manufacturing firms. Food processing and beverages industries are prime examples. Table 5.3 indicates that since 1990, the geographical destination of manufactures remained relatively constant, with food, chemicals, basic iron and steel and non-ferrous metals prominent in almost all the regional markets. Television, radio and communication equipment (1998), machinery and equipment, and motor vehicles, parts and components (2002) had considerable growth rates.

The rest of Africa market is the second most important export destination for a large number of the South African manufacturing firms. The electronic sector is dominant in this market. The rest of the Americas and Central and Eastern Europe are also important major market for firms in South Africa. Asia emerged as a major market for a number of iron and steel manufacturing firms whilst North America is an important major market for firms in the metal products and machinery industry.

Table 5.3: A geographical breakdown of manufactured exports at industry level (% of total manufactured exports), 1990-2002

Clusters : 1990	SADC	NAFTA	EA	EU
Food	10.8	1.1	14.8	13.4
Beverages/tobacco	2.9	0.1	0.3	0.7
Textiles/clothing	3.1	1.0	4.9	3.1
Chemicals	15.1	11.3	7.3	7.6
Basic steel/ iron	10.5	29.1	42.6	14.2
Non-ferrous/metal products	9.7	14.6	13.5	17.2
Machinery/equipment	13.5	6.9	0.9	5.4
Electrical machinery	4.1	0.5	0.2	0.9
TV, radio/comm..equipment	0.5	0.5	0.1	0.9
Motor vehicles	7.5	8.8	1.2	4.4

Continue on next page

Continued from lastpage

Clusters : 1994				
Food	9.4	4.9	8.5	13.0
Beverages/tobacco	4.0	0.1	0.1	0.1
Textiles/clothing	3.2	5.1	5.1	4.5
Chemicals	15.7	21.3	10.9	10.6
Basic steel/ iron	7.5	31.7	34.8	14.1
Non-ferrous/metal products	5.7	7.9	14.1	8.7
Machinery/equipment	12.1	4.2	1.0	4.9
Electrical machinery	2.6	0.4	0.5	1.9
TV, radio/comm..equipment	0.5	0.2	0.1	0.4
Motor vehicles	9.1	4.1	4.4	9.2
Clusters : 1998	**SADC**	**NAFTA**	**EA**	**EU**
Food	11.5	4.7	8.7	6.8
Beverages/Tobacco	3.7	1.1	0.6	3.5
Textiles/clothing	2.2	4.9	1.4	4.5
Chemicals	17.0	16.7	10.4	7.8
Basic steel/ iron	14.1	6.7	1.4	8.4
Non-ferrous/metal products	19.0	8.1	9.9	14.3
Machinery/equip	2.8	0.6	0.6	2.5
Electrical machinery	1.9	0.4	0.1	0.7
TV, radio/comm.equip	8.7	6.2	3.5	16.9
Motor vehicles	5.8	6.3	23.8	5.5
Clusters : 2002	**SADC**	**NAFTA**	**EA**	**EU**
Food	11.9	3.6	5.6	5.9
Beverages/tobacco	4.2	1.8	0.4	4.6
Textiles/clothing	3.2	8.2	1.5	3.0
Chemicals	18.7	17.7	6.5	8.2
Basic steel/ iron	6.9	16.8	26.9	12.4
Non-ferrous/metal products	7.4	7.0	24.1	4.2
Machinery/equipment	13.2	10.1	2.0	17.5
Electrical machinery	4.0	0.7	0.6	2.2
TV, radio/comm.equipment	1.9	0.2	0.3	1.1
Motor vehicles	10.8	20.5	14.5	16.5

Source: Calculated from Economic Research Unit database (DTI), 2003

Table 5.3 shows that mechanical goods and parts; electrical machinery, equipment; furniture; iron and steel; motor vehicles and parts; paper and paper products have been dominant.

The North America market was dominated by primary exports in the early 1990s, with a dramatic acceleration of manufactured exports since mid-1990.

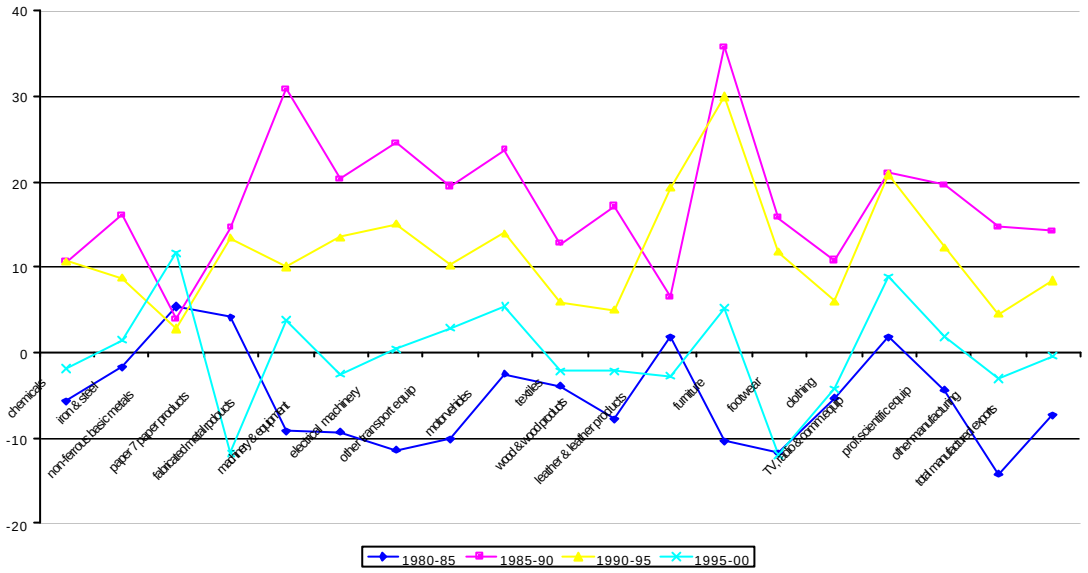
Whilst electrical machinery and equipment and motor vehicles and parts exports have featured prominently in recent years, agricultural and minerals goods still contributed a sizeable share of total manufactured exports. The SADC market exhibits a sectoral dispersion of manufactured exports different from the other major markets analysed. Equally important are both the primary and manufactured exports although the manufactured export industry is the only industry wherein South Africa consistently registers a trade surplus.

5.6.1 Growth trends of manufactured exports, 1990-2000

The changing structure of South African manufacturing sector shows that export orientation has become an integral part in the mid-1980s. As a result, manufactured exports have since become a main component of foreign demand in the South Africa economy. Figure 5.3 shows average annual rates (five-year time scale) of growth trends of South Africa's 18 manufactured export industries between 1980-2000, based on constant 1995 US Dollars. During 1980-1985 period, only paper and paper products (4.1 percent), non-ferrous basic metals (5.4 percent) and leather and leather products (1.8 percent) were star performers.

Negative rates of growth were recorded by footwear (-11.8 percent), electrical machinery (-11.4 percent), furniture (-10.4 percent) and wood and wood products (-7.8 percent – dropped from 38.1 percent in 1970-1975 period). As a result, manufactured export growth for this period was the worst ever in the South African manufacturing sector. Though at varying rates, the period 1985-1990 saw all 18 manufacturing exporting industries registering positive growth rates. Furniture (35.7 percent) and fabricated metal products (30.8 percent) were champion exporting industries, with motor vehicles, accessories and parts (23.7 percent), television, radio and communication equipment (21.0 percent) and professional equipment (19.6 percent) completing the list of moderate performers.

Figure 5.3: Growth trends of manufactured exports at 18-industry level (%), 1980-2000



Source: Economic Research Unit database (DTI), 2003 and NEIP, 2001

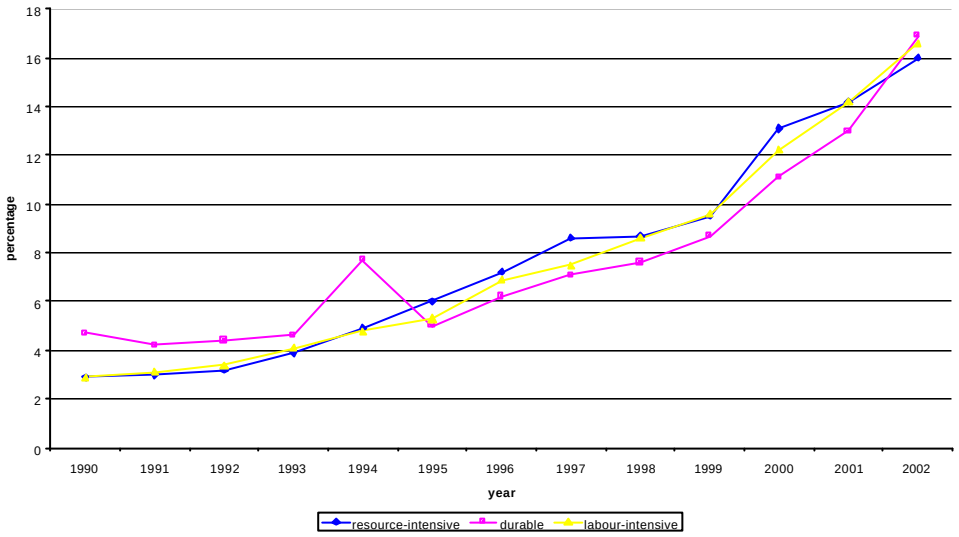
With the exception of leather and leather products and non-ferrous metals, the remaining 16 industries experienced double-digit growth rates. In fact, during this phenomenal manufactured export growth period only non-ferrous metals fell by 1.5 percent but still retained a positive growth trend. Although the impressive growth trend of the 1985-1990 period fed into 1990-1995 period, the latter period experienced a downward growth trend. Only chemicals and leather and leather products managed to achieve positive growth rates, all other industries experienced a decline in real growth rates and yet retained positive growth rates. Fabricated metal products, electrical machinery, other transport equipment and professional and scientific equipment were the worst performers. The growth trends of 1995-2000 were similar to those of 1980-1985, characterised by the reversal of the growth period of 1985-1990. The only relative star performer was non-ferrous basic metals, registering 10.5 percent between the periods in comparison. All other industries continued with a downward growth trend either retaining a positive or negative growth rate.

5.5.2 Growth trends of manufactured exports since 1990

The beginning of the 1990s brought with it remarkable changes in the history of manufactured export industry. Following the democratisation of the South Africa economy in 1994, the manufacturing sector's trade was boosted with improved access to key international markets. Economic democratisation in South Africa presented the manufacturing sector with increased challenges from seasoned competitors and also brought with it vent-of-surplus opportunity. Having analysed manufactured export performance for the period 1980-2000 on a five-year basis, the 1990s shows an interesting analysis into the growth trends of South Africa's manufactured export sector. In recent years, the South African economy experienced a continued decline in the role of commodities as main components of the total export basket. This is informed by the rising export performance of the manufacturing sector relative to other sectors such as mining. The growth of South Africa's manufactured export by sector and industry as a percentage of total manufactured export between 1990-2002 shows growth in every industry. Albeit at varying rates, major industry groups (natural resources-based, durable and labour-intensive) have shown significant growth rates.

Despite South Africa's large endowment in raw materials, primary exports make up a smaller share of total exports in the 1990s. The early years of the 1990s shows a dominance of durable manufactured exports, with labour and resource-intensive exports following from a distance. The annual rates of growth for the durable manufactured exports grew dramatically by 3.8 percent in 1993-94 period.

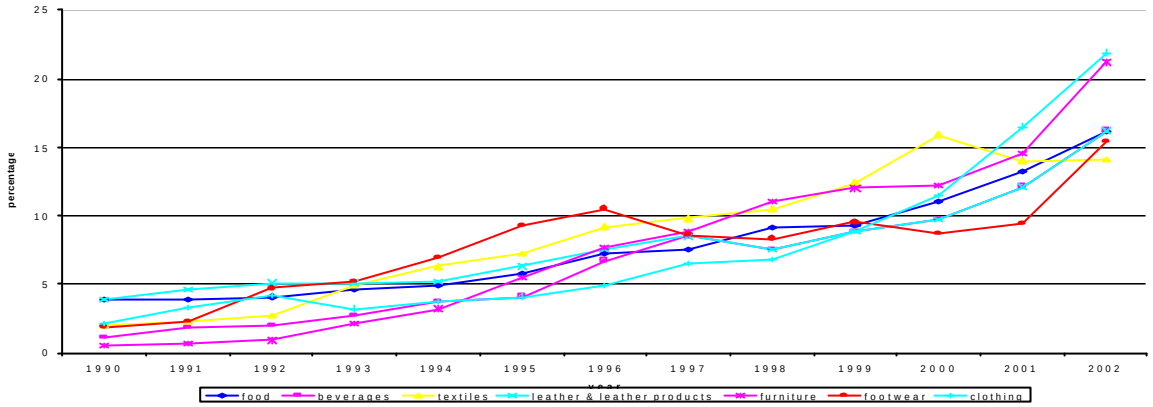
Figure 5.4: Growth trends of major manufacturing industry groups (%), 1990-2002



Source: Economic Research Unit database (DTI), 2003

During the same period, resource-intensive manufactured exports overtook labour-intensive manufactured exports, recording higher annual growth after durable goods. Although labour-intensive manufactured exports grew, it was lower than the rest. By the dawn of the mid-1990s, the growth trends at broad manufactured export level changed significantly. Although manufactured export growth trends still appeared in favour of resource-intensive and labour-intensive, the figure indicates the growing share of durable exports – a trend that has become a permanent feature of South Africa's manufactured export industry. The implication is that the increasing shift of the manufactured export industry towards high-value export has changed the structure and composition of manufactured exports destined for world markets. It appears that year-on-year growth analysis between 1990-2002 at current prices shows that high growth rates were more prevalent for the durable goods, distantly followed by labour-intensive manufactured exports. The trend emerging is that of a declining role of primary commodities as main component of the total manufactured export industry in South Africa.

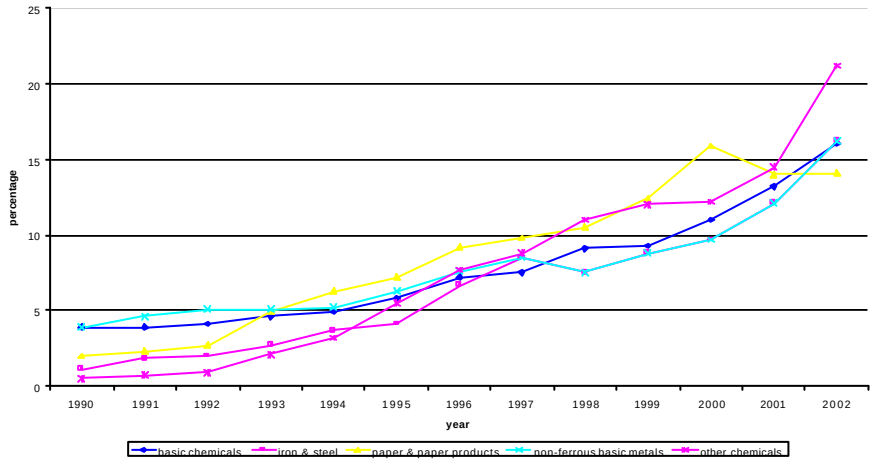
Figure 5.5: Labour-intensive manufactured export trends (%), 1990-2002



Source: Economic Research Unit database (DTI), 2003

Figure 5.5 shows that beverages, furniture and clothing were star performers for the labour-intensive category between 1990-2002. All but furniture experienced almost double annual rates of growth between 1990-2002. The industries that performed well (food, textiles, leather products and footwear) in 1994 captured relative deteriorating export performances.

Figure 5.6: Resource-intensive manufactured export trends (%), 1990-2002



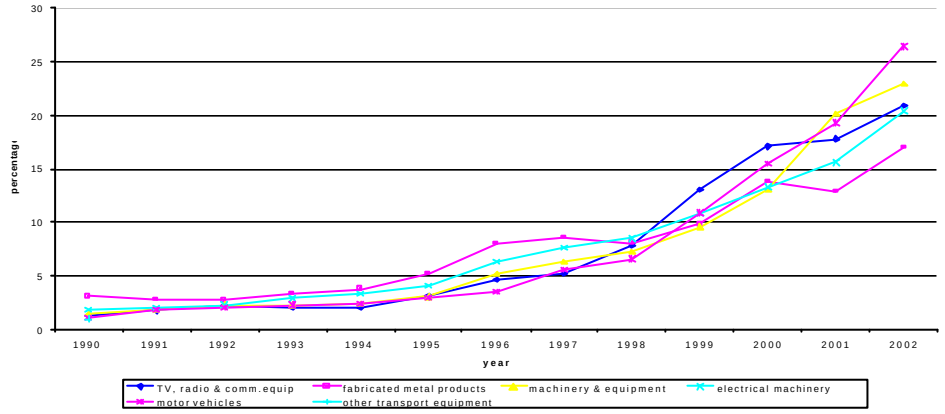
Source: Economic Research Unit database (DTI), 2003

GROWTH TRENDS IN THE SOUTH AFRICAN MANUFACTURED EXPORT INDUSTRY

Although the total resources-based exports (basic chemicals, paper and paper products, non-ferrous basic metals and other chemicals) have experienced steady growth rates, most of the industries show a decreasing share in the total manufactured exports relative to other industries in the 1990s.

Owing to beneficiation of natural resources, annual rates of growth of durable manufactured export performance have been impressive during the period 1990-2002. Figure 5.7 shows the performance of the durable manufacturing industry group.

Figure 5.7: Durable manufactured export trends (%), 1990-2002



Source: Economic Research Unit database (DTI), 2003

Star performers include motor vehicles, television, radio and communication equipment and machinery and equipment. Whilst motor vehicles and machinery and equipment grew by 1.3 percent and 0.9 percent between 1990-94, these industries registered 6.6 and 7.3 percent in 1998 to remarkable growth rates of 26.4 and 23.0 percent in 2002, respectively.

Summary of manufactured export growth trends: 1980-2002

The following growth trends highlight some of the key findings of the research.

- Whilst the early 1980s experienced negative growth rates, significantly higher growth trends were prevalent in the last half of the 1980s. By great contrast, the rest of the 1990s were characterised by a positive yet relatively downward trend in South Africa's manufactured export industry.

- Although the manufactured export industry experienced significant positive growth rates between 1990-2002, it was not enough to surpass the annual average rates of growth achieved since mid-1980s and early 1990s.

- South Africa's manufactured exports by sector and industry as a percentage of total manufactured exports between 1990-2002 showed a significant growth trends for all major manufacturing industry groups (natural resources-based, durable and labour-intensive). A star performer during the period under review was the durable industry – a trend that has become a permanent feature of South Africa's manufactured export industry – implying an increasing shift towards high-value manufactured exports destined for world markets.

- A remarkable feature of the South African economy in the 1980s has been the sharp rise in manufactured exports and its predominance in the 1990s. This was spurred by the industrial and trade reforms with a view to improve the contribution of high-value exports amid the declining importance of commodity exports.

- Average annual rates of growth at 18-sector analysis between 1980-1985 showed that paper and paper products, non-ferrous basic metals and leather and leather products were star performers.

✍✍The period 1985-90 recorded phenomenal growth trends spurred by furniture and fabricated metal products as champion industries with motor vehicles, accessories and parts, television, radio and communication equipment completing the list of moderate performers.

✍✍A downward trend was evident during the period 1990-1995, with only chemicals and leather and leather products performing well. Fabricated metal products, electrical machinery, other transport equipment and professional and scientific equipment were the worst performers.

✍✍The growth trends of the 1995-2000 period were a replica of the 1980-1985, reversing the growth period of the 1985-1990. As the other manufactured export industries retained either a declining positive or negative growth rate, the only relative star performer was non-ferrous basic metals.

✍✍Manufactured exports growth trends by regional markets showed that South Africa's manufactured exports were mainly destined for developed markets (EU and NAFTA). SADC, the regional economic bloc of developing countries in Southern Africa, is the only market in which the manufactured export industry continues to record a trade surplus.

5.7 Growth factors influencing manufactured exports in South Africa

In recent years, South Africa's manufactured export industry underwent a fierce structural adjustment process prompted by the new industrial and trade policy reforms. As a result, considerable changes of competitiveness were deliberately manipulated, leading to the fluctuations of the performance of South Africa's capacity to trade in manufactured goods. Levels of competitiveness, geographical and product specialization and elasticity to changes in world demand were consequently influenced by these structural changes (Golub, 2000:15).

Table 5.4: Position and changes index in the manufactured export industry, 1997-2001

Industry	**Position index**	**Changes index**
Clothing	58	51
Mis. Manufacturing	41	58
Leather products	39.9	39
Non-electrical machinery	37.5	60.5
Textiles	31	18.5
Consumer electronics	31	39.5
Electronic component	28.7	41
Transport equipment	18.5	62
Chemicals	17.8	38.5
Processed food	10	99.5
Minerals	8.5	62
Wood products	5	37
Basic manufacturing	9.5	98.5
Fresh food	7.6	20.5

Adapted: TIPS (www.tips.org.za), 2003

The position and change indices are ranked in an ascending order such that a lower composite index shows dominance of that particular variable in a certain sector. Table 5.4 indicates the dominance of traditional sectors composing of basic manufacturing (9.5 percent), wood products (5 percent) and food (10 percent) at static trade performance level. Although these sectors fared well under the static trade measurement, they performed poorly when measured by the dynamic trade performance, which is greatly influenced by competitiveness, adaptability and geographical specialisation level. A change towards a negative level of these influential factors of dynamic trade performance will lead to a declining growth trend for that particular sector. Table 5.4 reveals that leather products, textiles and clothing and consumer electronics showed higher dynamic trade performances over the period examined.

The ability to adjust to the changes of trade conditions in the markets of these sectors was pivotal to the export growth experienced during the period under study. As for the adaptability level, i.e. the ability to adjust to fluctuations in world demand, only non-electrical machinery and clothing (mainly due to the competitiveness effect) emerged as star performers.

The 1997-2001 period showed that poor export growth performance were recorded by basic manufacturing, chemicals and food, while some improvement was registered by exporting manufacturing industries such as non-electrical machinery, textiles and information technology and consumer electronics. However, the combination of competitiveness and geographical specialisation effect indicates that the South African manufactured exports industries were relatively low (in the exception of leather and transport equipment exports), suggesting that the export of manufactures specialised in relatively poor export growth performance markets and lacked competitiveness. The outcomes of the survey showed that South African manufactured exports have access to all global markets but still grew either in declining markets or had declined in growing markets, with adaptability and competitiveness effects central to the direction of the growth trends.

These trends are based on the outcome of the ITC research in which South Africa's economy and its sectors were compared against 184 economies around the world and 14 economic clusters for the period 1997-2001. The research used *changes* (which measures the export performance of the economy and its sectors) and *position* (which measures recent growth trends in export performance) indicators which were then compared with those of economies and its sectors to measure trade performance. The former measured dynamic and the latter measured static trade performance. Although there has been a general improvement in competitiveness in most manufacturing industries in the 1990s relative to other countries, it has been due to declining wages rather than a rise in relative productivity rate.

Golub & Edwards (2003) revealed that labour-intensive industries had large improvements, led by leather and footwear. Industrial chemicals, non-ferrous metals and professional equipment were other industries that experienced large declines in relative unit labour costs. Compared to other developing countries, South Africa's absolute advantage is rather weak for aggregate manufacturing; but not as much as against developed economies.

The analysis is important in that South Africa competes with other developing countries for developed country markets. Further it emerged that natural resource based sectors (food, paper, iron and steel, with the exception of non-ferrous metals which appeared highly competitive) showed a decline. Labour-intensive industries showed mixed growth trends with leather and footwear improving sharply but others (textiles and clothing) loosing ground. Similarly, indifferent competitiveness levels emerged for chemicals, machinery and metal products. For the durable manufactured exports, there has been significant improvement in this regard with electrical machinery, motor vehicles, parts and accessories and transport equipment leading.

The results indicate that levels and changes in competitiveness in South Africa are inconsistent with sectoral characteristics such as factor content, skills intensity, size and trade orientation. As a result, it is difficult to choose "winning" and "loosing" industries in the manufactured export sector *vis-à-vis* competitiveness tendencies. Therefore, industry and trade policy biases against and/or in favour of some industries over others are not advisable. Instead, a general environment that fosters productivity growth and wage moderation, as well as a competitive exchange rate, will entail rapid growth. Then, forces of the market will determine which industries particularly succeed in exporting.

Other influential factors include foreign links and the size of the firm. The former factor seems to suggest that foreign links is an important conduit for the transfer of technology and technical know-how, whereas the size (in combination with efficiency) of a firm emerged as a driving force behind South African manufacturing firms' choice of exporting, in the SADC region.

However, once firms start exporting, size does not seem to count. In South Africa manufacturing firms at middle size level tend to export more than smaller and larger exporters. It therefore seems to imply that there are fixed costs and the efficiency thresholds that need to be overcome in order for a firm to venture into global markets.

South African manufacturing firms tend to regard exporting as a risky venture and thus concentrate on the domestic market. This is indicated by the lower output-export ratios in spite of having more firms exporting. For South African manufacturing firms, it was found that firms that export outside SADC are more efficient than firms that export only to SADC or do not export at all. This may suggest that efficient firms self-select into export markets or that firms become efficient once they are exporting (Giersch, 1987).

Furthermore, manufacturing firms may lack information about potential markets or it may be considered unprofitable (and even risky to find out). Other factors relate to supply-side constraints such as lack of skilled workforce, outdated capital and/or lack of access to finance. Alternatively, there may be limited demand for South African products because they do not meet international standards, or too expensive because of variable costs such as transport charges, high domestic costs and the strength of foreign exchange (Cooper, 1995 & Naude, 2001:124).

5.6. Summary and conclusions

In the wake of the declining importance of traditional exports, South Africa has adopted a rigorous export policy aimed at boosting the manufactured export sector. It emerged that South Africa's overall export performance was superior in the period 1970-80 compared to the 1980-2000 decades. The poor performance of 1980-2000 was mainly due to the weaker gold price and falling production.

Export growth by major economic sectors (mining, agriculture and manufacturing) indicates a downward growing trend for mining and agriculture such that structural change in the composition of South African export basket set in motion the emergence of the manufacturing sector as a major contributor to export growth. Despite the continued decline in the share of the primary clusters to total manufactured exports, it appears that the RCA of South Africa still remains in the primary commodities.

South Africa's top regional markets for manufactured exports show a fairly consistent pattern, with EU, SADC & Eastern Asia and NAFTA dominant. These results are hardly surprising given South Africa's top trading countries. Geographical breakdown of South Africa's manufactured exports shows that SADC is the main market for South African manufacturing sector.

The geographical destination of manufactures remained relatively constant for most industries with food, chemicals, basic iron and steel and non-ferrous basic metals prominent in almost all the regional markets. Manufactured exports are increasingly becoming a dominant feature in the EU market, but agricultural and mining products still contribute a sizeable share of total exports. The SADC market exhibits a sectoral dispersion of manufactured exports different from the other major markets. Equally important are both primary and manufactured exports, although the former is the only sector wherein South Africa consistently registers a trade surplus. Growth trends in the South African manufactured export industry show growth in every exporting industry, and natural resource-based, durable and labour-intensive industry groups have shown significant growth rates. The growing trend towards dominance of durable manufactured exports indicates the structural shift towards high-valued exporting behaviour. A major challenge for South Africa's manufactured export industry is the low levels of competitiveness, specialisation and adaptability rates in key major exporting groups and regional markets.

In recent years, there has been an increasing improvement in these variables and somewhat positive growth trends by key durable exporting industries inclusive of non-electrical machinery, information technology and consumer electronics. The lack of competitiveness was seen as a major factor inhibiting growth in the manufacturing sector. The research outcome makes it clear that whilst the early 1980s experienced negative growth rates, significantly unprecedented growth trend was prevalent in the last half of the 1980s.

By great contrast, the rest of the 1990s were characterised by positive yet relatively downward trend in South African manufactured export industry. As the 1990-2002 current prices analysis indicated, the growth rates of manufactured export industry were not enough to surpass annual average rates of growth achieved since mid-1980s and early 1990s. The results of the analysis is essential in identifying growth trends and growing industries and markets with a view to channeling resources to such industries, and not waste on fading industries.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Concluding remarks

If exports are to play a pivotal role in the future economic growth and development of South Africa, then manufactured exports are specifically important. The primary aim of the research was to investigate the nature of growth trends and identify export industry champions in South Africa's manufactured export industry since the 1980s. The extent and nature of factors influencing the growth trends of manufactured exports were also researched with the view to identifying the possible prevalence of future obstacles and stimulants of South Africa's manufactured export industry.

The structure and performance of the manufactured export industry in South Africa was a direct consequence of natural-resources endowments, which also shaped industrial and trade policy design. It was indeed the discovery and exploitation of diamonds and soon afterwards, of gold which was responsible for developing the modern industry in South Africa. The deliberate involvement of government through the provision of infrastructure and promotion of import substitution strategies had been the driving force behind the development of industry in South Africa. In an attempt to curb the wide divergence of economic opportunities around South Africa, an industrial policy shift towards decentralisation around major cities was deemed necessary. The early stages of manufacturing development in South Africa were dominated by heavy industries, unlike in most developing countries where textiles and clothing led the industrial process. Industrial development in South Africa has not been without its difficulties. Significant growth of manufacturing in South Africa was hampered by various structural constraints such as high levels of import-intensity, bias against export of manufactures, the small size of the domestic market and skewed income distribution and the industrial strategy of import substitution.

Consequent to these features were low levels of investment, sub-optimal utilisation of capacity, and low levels of employment and productivity growth. Researching the structure of the South African economy, it emerged that the manufacturing sector dominated the secondary sector of the economy and occupied an important role in the economy of South Africa. The South African manufacturing sector showed high levels of concentration with regard to geography, distribution of output, employment, sales, ownership and control.

Through special programmes initiated under the SDI and IDZs, the post-1994 government hoped to stimulate the growth of manufacturing by increasing competitiveness, levels of investment and sustainable foreign trade balance. The government has adopted a new industrial development strategy - IMS – based on two competing developments in the manufacturing sector for the past five years. Mainly, the IMS strategy aimed at promoting competitiveness and providing infrastructure and logistical support to eight manufacturing sectors.

In the light of the growing employment deterioration and the subsequent increasing poverty levels in South Africa, the growth of manufacturing was deemed imperative. That required the clear identification of sources of growth to ensure that manufacturing would continue to grow towards a situation where it became self-supporting. However, it appears that while the structure of the South African economy has adopted the global trends with a move in the direction of a "New Economy" it also became clear that the structural change of the economy is insufficient to address the unemployment crisis.

The path of economic development in South Africa, just as in many developing countries, was first premised on import substitution with outward-looking strategy implemented later. The extent of success and failures concerning the diversification of the economy of South Africa and those of other developing countries remained a matter of serious debate.

The growth of the economy was achieved in most developing countries but with little improvement of the lives of ordinary people due the existence of pervasive unequal distribution of income-generating opportunities. Although some countries made some remarkable growth in non-economic variables, others continue to exist in the shadow of the successful industrialising nations.

World War II had a very important impact on the thought of what determines economic development in the economy. The linear stages of economic development explained the course of development as a simple series of steps, *which all countries must pass*, based on the phenomenal successful path of the now developed countries. Rostow's stages of growth model argues that countries must pass through successive stages along the development path. He identified five stages: the traditional society, pre-condition for take-off into self-sustaining growth, the drive to maturity and the age of high mass consumption. Each stage is identified by its characteristics, which overlap into those of the other stage(s). Of the five stages, the take-off stage is regarded as the most important as it involves overcoming stumbling blocs such as rising investment and accumulation of necessary technical know-how to expand industries.

The first stage of development in South Africa occurred before the late 1800s when subsistence agriculture dominated the economic activity. However, the course of development in South Africa was geared up by the mining industry, which laid the necessary conditions for take-off into self-sustaining stage. The political instability in the late 1970s and the unequal distribution of income in South Africa nearly constrained the stage of high mass consumption, which was achieved in 1975.

A number of constraints and criticism are being leveled against the linear stages of growth model. The main constraint concerned the low level of new capital formation in most developing countries attributable to the low levels of income and thus savings in these countries.

Criticisms against the stages of growth model included the assumption that savings and investment was the sufficient condition, when in reality, was rather the necessary condition for economic development; confusion of economic growth as meaning economic development; inability to recognise the diverse structural features of the developing countries; and the assumption that diversification into manufacturing equaled development.

It was because of these numerous obstacles and constrains, and criticisms of the strictly stages of growth model that led to the emergence of the structural-change model which took a differently radical position. The model recognised the fact that the contemporary developing countries are part of the web of external forces. One of the best-known early theoretical models of structural transformation was that of the Lewis Two-Sector model. The theory consisted of the traditional, overpopulated rural subsistence sector which was characterised by zero marginal productivity of labour, and a high-productivity modern sector into which labour from the former sector was gradually transferred. The three main assumptions of the model, for which proponents of the model were criticised, include the unlimited supply of labour from the rural sector, reinvestment of profits by capitalists and constant wage rate until surplus labour was exhausted. The model is criticised for failing to consider the possibility of upward pressure on wages despite the presence of unemployment and the possibility of capitalists competing among each other and the capital flight argument.

Like the Lewis model, the patterns-of-development analysis of structural change focuses on the sequential process through which the economic, industrial and institutional structure of an underdeveloped economy should be transformed over a period of time to permit new industries to replace traditional agriculture as the engine of economic growth. The well- and best-known patterns of development model is that based on the empirical work of H. Chenery.

According to the empirical structural-change theory developing countries are confronted by a host of domestic and international constraints that lie beyond these countries. These numerous structural forces could either promote or inhibit the structural transformation of these economies.

Sources of industrial growth include investment and growth, sources of demand, savings, channeling savings to investors, and the domestic capacity building and productivity. Diversification of developing countries' economies requires the well-planned establishment of manufacturing industries which could make inroads into foreign markets. It emphasises the promotion of international trade, in manufactures in particular, as an integral part of the development strategy for developing countries. Trade was broadly analysed by studying trade by country, geographical area and commodity.

In pursuit of the reasons why countries trades with each other, different theories of trade emerged to explain forces behind international trade. The most notable ones include Ricardo's and the H-O trade theories based on comparative advantage. Both theories attribute trade to different factor endowments, although the H-O theory was regarded as the more sophisticated. Trade can also be explained through theories such as the Leontieff, technology, taste differences, and cyclical conditions in the economy. Many economists considered R&D, economies of scale, and natural resources among the possible determinants of the sources of trade.

Foreign trade in South Africa has been characterised by restrictions, incentives, exhortations and other forms tinkering with the economy. But since the 1990s, the key features of South Africa's patterns of trade changed significantly. Consequently, the composition of South African exports was diversified with manufacturing, contributing a sizeable exporting value to the total GDP. However, export growth trends indicated that South Africa's exports were mainly derived from the skill-intensive and mineral-intensive industries. The export structure and pattern of export growth by factor intensity in South Africa explained partly why the manufacturing sector has not seen any major job creation despite rapid export growth in the 1990s. Reducing the import bill in the manufacturing sector could be achieved with a concerted effort to encourage R&D, thereby increasing the innovation capacity of the manufacturing sector and the economy in general.

GROWTH TRENDS IN THE SOUTH AFRICAN MANUFACTURED EXPORT INDUSTRY

To share in the fruits of outward-oriented trade policy, South Africa initiated trade liberalisation even before bounding itself to the WTO liberalisation programme in the mid-1990s. The first episode of trade liberalisation took place in the 1970s, heralded by the recommendations of the Reynders Commission which largely encouraged an "export incentive scheme" to achieve greater export orientation.

The start of the 1980s signaled a process of intensification of a strategy of trade liberalisation, characterised by the elimination of dual exchange rates and implementation of export subsidies. Towards the end of the 1980s, South Africa's commitment to trade liberalisation became more evident when the BTI begun hardening its stance towards private sector's requests for protection, and instead opted for the introduction of "Selective Sectoral Programmes". For the manufactured export industry, the South African economy appeared to be heading for a relatively full-scale tariff liberalisation with certain "sensitive" industries under gradual liberalisation progress.

The 1990s experienced the birth of a massively significant period of economic, political and social changes following the first democratic elections in 1994. Consequently, South Africa undertook a massive trade reform programme. But most important was market access initiatives that resulted in various bilateral and multilateral agreements. These market access initiatives significantly altered the composition, structure and the destination of the South Africa's manufactured exports. Major regional markets include the EU, SADC, Eastern Asia and NAFTA. These agreements encourage South African manufacturers to specialise in the industries in which they hold a degree of competitiveness and encourage investment by South African manufacturing firms to adjust to foreign competition.

GROWTH TRENDS IN THE SOUTH AFRICAN MANUFACTURED EXPORT INDUSTRY

In the wake of the declining importance of traditional exports, South Africa has adopted a rigorous export policy aimed at boosting the manufactured export sector. It emerged that South Africa's overall export performance was superior in the period 1970-80 compared to the 1980-2000 decades. The poor performance of 1980-2000 was mainly due to the weaker gold price, falling production and lack of competitiveness.

Export growth by major economic sectors (mining, agriculture and manufacturing) as a percentage of total exports indicated a downward growing trend for mining and agriculture. As a result, the structural change in the composition of South African export basket set in motion the emergence of the manufacturing sector as a major contributor to export growth. The main concern was the continued deterioration of the export performance of the mining sector as a share of South Africa's total exports given the principal role that the sector was expected to play in generating employment and foreign exchange.

Despite the continued decline in the share of the primary clusters to total manufactured exports, it appeared that the RCA of South Africa still remained in the primary commodities. However, the concerted efforts by the relevant government institutions hope to break the traditional pattern of RCA of South Africa trade. Even though recent manufactured exports showed an increasingly growing trend, it was lower than emerging economies. Furthermore, the well-documented consistently high manufacturing trade deficit was the worrying factor since manufactured export industry was considered as the engine and/or facilitator of economic growth, and the lack of "self-reliance" by the industry could serve as a constraint to growth in the long-run.

South Africa's top regional markets for manufactured exports showed a fairly consistent pattern, with EU, SADC & Eastern Asia and NAFTA dominant. These results were hardly surprising given South Africa's top trading countries. Geographical breakdown of South Africa's manufactured exports showed that SADC was the main market for the South African manufacturing sector.

The geographical destination of manufactures remained relatively constant for most industries with food, chemicals, basic iron and steel and non-ferrous basic metals prominent in almost all the regional markets. Manufactured exports were increasingly becoming a dominant feature in the EU market, but agricultural and mining products still contributed a sizeable share of total exports.

The SADC market exhibited a sectoral dispersion of manufactured exports different from the other major markets. Equally important were both primary and manufactured exports, although the former was the only one wherein South Africa consistently registered a trade surplus. Growth trends in the South Africa's manufactured export industry showed growth in every exporting industry, and natural resource-based, durable and labour-intensive industry groups have shown significant growth rates. The growing trend towards dominance of durable manufactured exports indicated the structural shift towards high-valued exporting behaviour.

A major challenge for South Africa's manufactured export industry is the low levels of competitiveness, specialisation and adaptability rates in key major exporting industry groups and regional markets. In recent years, there has been increasing an improvement in these variables and somewhat positive growth trends by key durable exporting industries inclusive of non-electrical machinery, information technology and consumer electronics.

The outcome of the research has shown that South African manufacturing firms have access to all global markets, and therefore a constraint to export growth rest on the fact that South African exporting manufacturers were not competitive with respect to similar from other countries. In the final analysis, it was clear that whilst the early 1980s experienced negative growth rates, a significantly unprecedented growth trend was prevalent in the last half of the 1980s. By great contrast, the rest of the 1990s was characterised by positive yet declining trend in South Africa's manufactured export industry. As the 1990-2002 current prices analysis indicated, the growth rates of manufactured export industry were not enough to surpass annual average rates of growth achieve since the mid-1980s and early 1990s.

The results of the analysis are essential in identifying growth trends and growing industries and markets with a view to channeling resources to such industries, and not waste on fading industries. The research found that there was a considerable shift of South Africa's manufacturing from resource-intensive to durable exports, which was in line with international trends. South Africa is not yet by world standards a major industrial economy even though the secondary sector (manufacturing in particular) plays an important role in the economy and foreign trade.

6.2 General recommendations

The more open trade environment has increased the outward orientation and external exposure of South Africa's manufactured export industry. Exports of manufactures have since grown strongly and the continued different supply-side programs in the wake of the current tariff reduction continue to further stimulate the manufactured export sector.

The limited absorptive capacity of the African market for South Africa's manufactured exports was likely to impact negatively on sustainability in the long run. The growing large manufacturing trade surplus in the African market could spike major economies (such as Zimbabwe where massive import duties hikes were reported) practicing protectionism, which could adversely disengage growth of South Africa's manufactured exports.

The successful integration of South Africa's manufactured export industry will depend largely on penetration of markets in major developed economies, but not neglecting market potential in Asia, South America and other regional markets in Africa. Large potential markets such as ECOWAS have hardly been tapped by the South African manufacturers and in the medium term, the establishment of free trade in SADC will improve South Africa's market access.

In order to attain and sustain international success in large difficult-to-enter markets, South Africa should vigorously structure its industrial and trade policy so as to create an environment in which a large and increasing number of manufacturing firms can optimise opportunities to develop the combination of technical skills necessary and dynamic managerial and organisational capabilities for efficiently and effectively responding to the competitive needs.

The most significant development of the three decades has been the massive extension and deepening of markets. Markets have extended globally to encompass those that previously excluded South Africa. Consequently, increasing market access for South African goods, especially manufactures, should be advanced vigorously.

The extent and pace of trade agreements that are being sought in key markets like India, China, Nigeria, Brazil, Japan and the US should be expanded. In cases where South Africa's exporters of manufactures are in the declining difficult-to-enter markets the focus should be on increasing diversification towards potentially realistic growth opportunities such as Turkey, Spain, Hungary, Poland, Sweden and former USSR economies. In addition, the Middle East, which emerged more prominently in the 1990s as a promising trading partner, offers a huge market potential. The strategy to develop a proper base for manufactured export diversification will require some of the following elements:

- Revision of incentives: Avoiding support to exporters whose export capabilities, experience and products are not sufficiently well developed to have realistic chances of competing successfully in difficult-to-enter markets. Furthermore, the DTI must be in the forefront of dissemination of information about foreign market opportunities.

- Intensify export entry strategy: Any grant or financial assistance in favour of the development of new markets and/or products should be a prerequisite. It emerged that the issue facing South Africa is to identify value added manufactured exports in which the industry can trade competitively.

If the future of economic growth of South Africa is dependent on export growth of manufactures, it is essential that South Africa understand the exporting industries that have the greatest competitive potential. It must be noted that while it may be possible to set up strongly selective support programs, it is difficult to identify those manufacturing industries that will become competitive in the future.

- The DTI should conduct impact analyses on the likely benefits and costs of trade agreements on specific sectors of the South African economy. This is necessary as some countries are likely to become a conduit for the export of cheap goods from the rest of the world.

- A shift in the orientation of the manufacturing sector towards exports at the early stages of development should be encouraged. Since manufactures exports is a policy goal in South Africa, then the focus should be on encouraging firms to export more, rather than having more firms exporting, i.e., increase the export-output ratio.

- Restructure government expenditure by (1) raising public investment in key infrastructure and (2) maintaining sound and stable macroeconomic policy capable of either supporting or driving growth of manufactured exports destined for the world markets.

- Foster a culture of high degree of competitiveness in manufactured export industry through technological upgrading. This should not be at the expense of labour and natural resource-intensive industries. These industries have the ability to cushion the rate of accumulation of technologically sophisticated sectors, increase the rate of learning; act as a hedge against the transition to hi-tech manufactured exports, and make it possible for South Africa's manufactured export industry to respond to competition from lower wage economies "coming from behind".

- Streamline and expand South Africa's shipping capacities in all modes of the transportation system (rail, road, air, and water) for efficient delivery frequency, and facilitate regular lead times.

Since South Africa's large manufacturing sector is a key source of sustained export-led growth path, the sector inherently has numerous structural constraints that require a well-thought approach from policy makers. The policy option will require alleviation of these constraints in an effort to better position South Africa's manufactured export industry so as to influence manufactured exports to take off. This requires a well-coordinated implementation of a supply-side export support system and technology measures, improved education and skills training and the relaxation of import of scarce skills controls. It also requires close coordination between key public sector institutions such as the DTI, Finance and Education departments, as well as the private sector. It must be considered that the problems of the South African manufacturing sector and its prospects of growth cannot be seen in isolation from the rest of the world. Global forces have contributed to the deterioration of South Africa's growth performance in the past and will affect its growth trajectory in future.

It is particularly difficult for a natural resource abundant South African economy, with an intermediate skills endowment, which despite having had a relatively mature and diversified manufacturing sector at the beginning of the 1970s, is a relative latecomer to export-oriented industrialisation. Policy arguments have suggested that South Africa should thus make the most of its comparative advantage in natural resource-based products to raise its exports and output, while upgrading its competitiveness levels in manufactured exports, hi-tech manufactured exports in particular.

The on going economic structural change to a "New Economy" should not lead to policy-bias against manufactured export industry as the growth of the service sector depends largely on improved growth of the durable goods manufacturing industries, which requires input materials from the agricultural sector.

The determinants and policy implications of the manufactured export industry and the change in the nature of growth trends must be understood if the prospects for sound export growth strategies in South Africa and the successful entry and growth in the global markets are anything to go by.

Bibliography

African National Congress, 1994. **Policy Framework**. Johannesburg: Umanyano Publications.

Abedian, I & Standish, B. 1992 (editors). **Economic Growth in South Africa: Selected Policy Choices**. Cape Town: Oxford University Press.

Akinbugbe, O. 2000. **The European Union-South Africa Free Trade Agreements and the SADC Region**. The South African Journal of Economics 68 (4):639-661.

Barker, F.S. 1992. **The South African Labour Market: Critical Choices and Reconstruction**. First edition. Pretoria: J. L van Schaik.

Barker, F.S. 1995. **The South African Labour Market: Critical Choices and Reconstruction**. Second edition. Pretoria: J. L. Van Schaik.

Barker, F.S. 1999. **The South African Labour Market: Critical Issues for Renaissance**. Western Cape: National Book Printers.

Bell, T. R. 1992. **Should South Africa Further Liberalise its Foreign Trade?** Working paper 16. Cape Town: Economic Trends Research Group.

Bell, T & N, Madula, 2001. **Where Has All the Growth Gone? South African Manufacturing Industry 1970-2001**. National Institute for Economic Policy (NIEP) occasional paper series, no 21, August. Braamfontein: NEIP.

Beaumont, T. 1995. **South Africa After Siege**. London: T & T Publications.

Black, A. 1998. **The Impact of Trade Liberalisation on the South African Automotive Industry**. A paper presented to the Trade and Industry Policy Secretariat Policy Forum. University of Cape Town: School of Economics.

Black, A. 2001. **Trade Liberalisation and the Global Integration of the South African Automotive Industry**. Trade and Industry Monitor, Vol, 19, pp. 14-17.

Black, A & Kahn, B. 1998. **The Performance of South Africa's Non-traditional Exports since 1980**. Trade and Industry Monitor, Vol 7, pp. 9-13.

Board of Trade and Industry. 1986. **Committee of Enquiry into Export Incentives**. Volume 1. Chapter 1-4. Pretoria: The Department of Trade and Industry.

Board of Trade and Industry. 1988. **Report No. 2614. A Policy and Strategy for Development and Structural Adjustment of Industry in the Republic of South Africa**. Pretoria: Government Printers.

Booysen, H. 1999. **International Trade Law on Goods and Services**. Interlegal Pulishers.

Pretoria: University of South Africa.

Botha, E & Engelbrecht, J. (editors). 1992. **Succeed at Dissertation**. Johannesburg: Orion Publishers.

Browett, J. 1990 (editor). **Industrialisation and Development in the Third World**. Adelaide: Papers and proceedings of a Conference held at Flinders University, October 13, 1990.

Brulhart, M. 1998. **Economic Geography, Industry Location and Trade: the Evidence**. The World Economy, Vol. 21, pp. 775-801. Stockholm: Bumbley Printing Works.

Burgess, R. S. 1989. **Industrial Organisation**. New York: Prentice-Hall International.

Calitz, E. 2000. **Fiscal Implications of the Economic Globalisation of South Africa**. South African Journal of Economics 68(4): 564-577.

Calitz, E. 2002. **Structural Economic Reforms in South Africa**: Some International Comparisons. Presidential address. South African Journal of Economics 70 (2): 218-262.

Cassim, R. & Onyango, D. 2001. **South Africa's Trade Reform and the World Trade Organisation: Background and Progress**. Trade and Industry Monitor, Vol. 19. pp 2-4.

Cassim, R & van Seventer, D. 1999. **Determinants of Investment Behaviour in South Africa: A Sectoral Perspective**. Trade and Industry Monitor, Vol. 12, pp. 6-8.

Cawker, G & Whiteford, A. 1993. **Confronting Unemployment in South Africa**. Pretoria: Human Sciences Research Council.

Chandra, V. 2002. **Constraints to Growth in South Africa's Manufactured Export Sector**. Trade and Industry Monitor, Vol. 13, pp.1-5.

Chandra, V. 2002. **Identifying the constraints to growth and employment in South Africa**. Trade and Industry Monitor, Vol 21, pp. 1-5.

Chandra, V. 2002. **South Africa's Formal Employment Problem** Trade and Industry Monitor, Vol. 21, pp. 6-9.

Coleman, F. L. 1993 (editor). **Economic History of South Africa**. First edition. Johannesburg: Haum Educational Publishers.

Cooper, C. 1995. **Panel II New Technologies, Innovations and Competitiveness: Technology, Manufactured Exports and Competitiveness**. New York: United Nations University for New Technologies: UNIDO.

Coughlin, P, Rubin, M & Darga, L. A. 2001. **The SADC Textile and Garment Industries. Constraints & Opportunities: Myopia or Global Vision**. Gaborone: Southern African Development Community.

Dagut, M. 1991 (editor). **South Africa: The New Beginning**. London: Euro-money Publishers.

Davenport, T. R. H. 1991. **South Africa: A Modern History**. Fourth edition. London: MacMillian Academic and Professional.

Davis, S. J. & Henrekson, M. 1997. **Explaining National Differences in the Size and Industry Distribution of Employment**. Stockholm: The Research Institute of Industrial Economics.

Department of Finance, 1996. **Growth, Employment and Redistribution: A Macroeconomic Strategy**. Pretoria: Government Printers.

Department of Trade and Industry, 2000. **Current Development in the Automobile Industry in South Africa**. Pretoria: DTI.

Department of Trade and Industry, 2000. **Creating New Wealth: The Spatial Development Initiative Programme, 2000**. Pretoria: DTI.

Department of Trade and Industry, 2003. **Accelerating Growth and Development: the Contribution of an Integrated Manufacturing Strategy**. Pretoria: DTI.

Department of Trade and Industry, 2002. **Annual Report**. Internet. http://www.dti.gov.za.

Department of Trade and Industry, 2000. **Creating New Wealth – the Spatial Development Initiatives**. Pretoria: DTI.

Department of Trade and Industry, 2002. **Annual Report 2001-2002**. Pretoria: Government Printers.

Dewar, D. 1996. **Small Town in Development: A South African Perspective**. South Africa: DBSA.

Dias, R. 1998. **Determinants of Trade, Inter- and Intra-industry Trade in South Africa**. University of Cape Town: DPRU.

Du Toit, J. & Falkena, H.B. 1994. **The Structure of the South African Economy**. ABSA: Southern Book Publishers.

Du Toit, C & Moolman, E. 2003. **Estimating Potential Output and Capacity Utilisation for the South African economy**. South African Journal of Economics 71(1): 96-118.

Edwards, L. 2001. **Globalisation and the Skills Bias of Occupational Employment in South Africa**. South African Journal of Economics 69 (2): 40-78.

Elias, V.J. 1992. **Sources of Growth: A Study of Seven Latin American Economies**. New York: International Center for Economic growth, Harvard Institute for International Development.

Ellworth, R.T. 1964. **The International Economy**. Third edition. New York: MacMillan.

Elyea, T & Mlangeni T. 1999. **An Analysis of South Africa's Export Trends in the 1990's: A Briefing Paper**. Trade and Industry Policy Secretariat. http://www.tips.org.za.

Evans, D. 2000. **Options for Regional Integration in Southern Africa**. South African Journal of Economics, 68(4): 662-685.

Faull, N & Wood, E. 1999. **Industrial Enterprise South Africa: Strategies, Innovations and Performance in the Manufacturing Sector, 1996-1998**. Cape Town: University of Cape Town.

Fedderke, J.W. 2002. **The Structure of Growth in the South African Economy: Factor Accumulation and Total Factor Productivity Growth: 1970-1997**. South African Journal of Economics, 70(4): 611-687.

Fedderke, J. W. & Priouz, F. 2002. **The Role of Mining in the South African Economy**. South African Journal of Economics, 70(1): 1-34.

Fedderke, J. W. & Vaze, P. 2001. **The Nature of South Africa Patterns by Economic Sector, and the Extent of Trade Liberalisation During the Course of the 1990s**. South African Journal of Economics, 69(3): 436-477.

Ferguson, P. R. & Ferguson, G. J. 1994. **Industrial Economics: Issues and Perspectives**. Second edition. London: MacMillan.

Hartland-Thurberg, P. 1978. **Botswana: African Growth Economy**. Gaborone: Westview Press.

Houghton, D. H. 1972. **The South African Economy**. Cape Town: Oxford University Press.

Howe, G & le Roux, P. 1992. **Transforming the Economy: Policy Options for South Africa**. Durban. University of Natal: Institute for Social Development.

Gelb, S. 1991 (editor). **South African Economic Crisis**. Cape Town: David Phillip.

Giersch, H, 1987. **On the Determinants of Brazil's Manufactured Exports: An Emperical Analysis**. Germany: Institut Fur Weltwirtschaft an der Unversitat Kiel.

Ginsberg. A. 1998. **South Africa's Future: From Crisis to Prosperity**. London: MacMillian.

Golub, S. 2000. **South Africa's International Cost Competitiveness: The Role of Labour Costs.** Trade and Industry Monitor, Vol. 16, pp. 14-17. http://www.tips.org.za .

Golub, S & Edwards, L. 2003. **South African International Cost Competitiveness and Exports: A Sectoral Analysis**. Trade and Industry Monitor, Vol 25. pp. 2-4. http://www.tips.org.za.

Gouws, A. 1997. **An Analysis of Export Support Measures with Specific Reference to South Africa; and the Impact of the General Export Incentive Scheme**. Unpublished Masters Dissertation. Durban: University of Natal.

Gouwland, D. 1983. **International Economics**. New York: Barnes & Nobel Books.

Greater Johannesburg Metropolitan Council – World Bank Partnership, 2000. **Constraints to Growth and Employment in South Africa – Report 1: Evidence from the Large Manufacturing Firms Survey**. http://www.tips.org.za.

Henrekson, M. & Jakobson, U. 2000. **Where Schumpeter was Nearly Right- the Swedish Model and Capitalism, Socialism and Democracy**. Stockholm: The Research Institute of Industrial Economics.

Hess, P. & Ross, C. 1997. **Economic Development: Theories, Evidence and Policies**. Orlando: The Hayden Press.

Hodge, J. 1998. **Developing a Trade and Industry Policy Agenda for Service Sectors in South Africa.** Trade and Industry Policy Secretariat working paper, September 1998.

Hoekoman, B. 2001. **Eliminating Excessive Tariffs on Exports of Less Developing Countries**. Research working paper 2604. Washington DC:World Bank. http://www.worldbank.org.

Holden, M. 2000. **Openness, Terms of Trade Policy in Natural Resource Economies**. South African Journal of Economics, 68(2): 286-296.

Holden, M. 1996. **Economic Integration and Trade Liberalisation in Southern Africa**. World Bank Discussion Paper No.342. Washington DC: World Bank. http://www.wordbank.org.

Holden, M. & Gouws, A. 1997. **Determinants of Exports in South Africa**. Presented at the Trade and Industry Policy Secretariat Annual Forum, Glenburn Lodge, September 1997.

Hosking, S. 1999. **The Experience with Trade Liberalisation of Selected Industries in the Port Elizabeth-Uitenhage Metropolitan Area**. TIPS Annual Forum at Glenburn Lodge, Muldersdrift, September 1999.

Houghton, D. H. 1972. **South African Economy**. Cape Town: Oxford University Press.

Industrial Development Corporation & Department of Industry and Trade, 1998. **Sectoral Prospects: Growth Guidelines for South Africa's 80 Industries 1997-2001**. DTI volume 1. Sandton: IDC.

Jalilian H, Tribe, M. & Weiss, J. 2000 (editors). **Industrial Development and Policy in Africa: Issues of De-industrialisation and Development Strategy**. London: Edward Edgar.

Joffe, A, Kaplan, D, Kaplinsky, R & Lewis, D. 1995. **Improving Manufacturing Performance in South Africa: Industrial Strategy Project**. Cape Town: UCT Press.

Jonsson, G. & Subramanian, A. 2000. **Dynamic Gains from Trade: Evidence from South Africa**. IMF working paper wp/00/45. Washington DC: International Monetary Fund. http://www.worldbank.org.

Kalenga, P. 2000. **Trade Integration in Southern Africa: Critical Issues, Industrial Strategy project of the DPRU:** University of Cape Town.

Kantor, B & Rees, D. 1982. **South African Economic Issues**. Johannesburg: Juta.

Kokko, A. 2002. **Export-led Growth in East Asia: Lesson for Europe transition Economies**. Workings paper no 142. Stockholm: Europe Institute of Japanese Studies.

Konckzacki, A, Parpart, J. L. & Shew, T. M. 1991 (editors). **Studies in the History of Southern Africa. Vol 12. South Africa, Lesotho and Swaziland**. Gaborone: Frank Cass.

Krueger, A. O. 1988. **Development and Trade in Less Developing Countries and International Economy**. California: Sequoia Institute.

Kuma, U. M. 1985. **The Development Strategy, Performance of Manufactured Exports and Economic Growth of the LDCs**. Unpublished Master's Dissertation. Information Service. Michigan: University Micro Films International, A Bell and Howell Information Company.

Kusi, N. K. 2002. **Trade Liberation and South Africa's Export Performance**. A paper presented at 2002 Annual Forum held at Glenburn Lodge, Muldersdrift. Trade and Industry Policy Secretariat.

Laubscher, P. 1997. **South Africa's Manufacturing's Exports: Recent Market Trends**. Trade and Industry Monitor, Vol. 4, pp.1-7.

Lawton, R. T. 1992. **The International Competitiveness of South African Industries**. Unpublished Master's Thesis. Pretoria: University of South Africa

Leftwich, A.1974. **South Africa: Economic Growth and Political Change with Comparative Studies of Chile, Sri Lanka and Malaysia**. London: Allison & Busby.

Lewis, J. D. 2002. **Promoting Growth and Employment in South Africa**. South African Journal of Economics, 70 (4): 725-776.

Lewis, J. D, Robinson, S. & Thirfelder, K. 2002. **Free Trade Agreement and the South African Development Community Economies**. African regional working paper series no 27. Washington D.C: World Bank.

Lindsay, D. 1993. **A Guide to Scientific Writing: Manual for Students and Research Workers**. Sydney: Longman Cheshire.

Lipton , M. & Simkins, C. 1993. (editors). **State and Markets: Post-Apartheid South Africa**. Johannesburg: Witwatersrand University Press.

Loots, E. 1998. **Job Creation and Economic Growth**. South African Journal Economics, 66 (3): 319-336.

Loots, E. 2002. **Globalisation, Emerging Markets and the South African Economy**. South African Journal Economics, 68 (2): 263-286.

Lumby, A. 1990. **Industrial History in South Africa: Past Trends Future Needs.** South African Journal of History, 10 (1): 74-88.

Mahadea, D. 2003. **Employment and Growth in South Africa: Hope or Despair**. South African Journal of Economics, 71 (1): 21-47.

Martin, W. 1993. **What Would Happen if All Developing Countries Increased Their Manufactured Exports**? The World Bank Working Paper Policy Research International Trade. Washington D.C: World Bank.

Matlalanyane, A. & Harmse, C. 2002. **Revenue Implications of Trade Liberalisation in South Africa**. South African Journal of Economics, 70 (2): 334-368.

Matthews, J. 1983. (Editor). **South Africa in the World Economy**. Johannesburg: McGrew Hill.

Mazumdar, D & van Seventer, D. 2002. **A Decomposition of Growth of the Real Wage Rate for South Africa 1970-2000**. DPRU Working Paper 02/63. University of Cape Town.

McCarthy, CL. 1998. **Problems and Prospects of African Economic Development**. South African Journal of Economics, 65(2): 287-678.

McCarthy, C. L. 1999. **Polarised Development in a SADC Free Trade Area**. South African Journal of Economics, 67(4): 437-785.

Mc Connell, C. & Brue, S. L. 1995. **Contemporary Labour Economics**. USA: McGraw-Hill.

Meier, G. M. 1989. **Leading Issues in Economic Development**. Fifth edition. Cape Town: Oxford University Press.

Milner, C. 1998, (editor). **Developing and Newly Industrialized Countries. VOL 12. The Globalization of the World Economy**. London: Edward Edgar.

Mody, A. & Yilmaz, K. 1994. **Is There Persistence in the Growth of Manufactured Export: Evidence to Newly Industrializing Countries**. Policy research working paper. March. Washington DC: World Bank.

Mohr, P. & Fourie, L. 1995. **Economics for South African Students**. First edition. Pretoria: J. L. Van Schaik.

Monton, J. 2001. **How to Succeed in Your Masters and Doctoral Studies: A South African Guide and Resource Book**. Pretoria: J.L. Van Schaik.

Morris, K. & Kaplinski, R. 1997. **Formulation and Implementation of Industrial Policy in South Africa: A View from the Edge**. A paper prepared for Trade and Industrial Policy Secretariat 1997 Annual Forum at Glenburn Lodge, Muldersdrift.

National Productivity Institute of South Africa, 1997. **Productivity Focus 1997**. Pretoria.

National Productivity Institute of South Africa, 1994. **Productivity Focus 1994.** Pretoria.

National Treasury, 2000. **Budget Review 2000: Economic Policy Outlook**. Pretoria: Government Printers.

Nattrass, J.1982. **Wealth or Poverty: Critical Choices for South Africa Economy**. Cape Town: Oxford University Press.

Nattrass, J. & Brown, R. 1977. **Black/White Income Gap Project: Interim Research Report No. 4**. Durban: University of Natal.

Naude, W. 2000. **The Determinants of South African Exports: An Econometric Analysis**. South African Journal of Economics, 68 (2): 246-264.

Nomvete, B. D. 1993 (editor). **The Economic Democratisation of South Africa. AIPA's Five-Year programme for the Integration of Blacks into the Economy and the Promotion of Economic Cooperation Between South Africa and the Rest of Africa**. Cape Town: WR Publishers.

Nyilas, J. 1976 (editor). **Theoretical Problems, Current Structural Changes in the World Economy**. Budapest: Akademiai Kiado.

Onyango, D. 2003. **A Snapshot of Industry-Wide Trends in Exports, 1991-2001**. Trade and Industry Secretariat Policy http://www.tips.org.za.

Onyango, D. & van Seventer, D. 2001. **South Africa's Export Performance: A Bird's Eye View**. Trade and Industry Monitor, Vol. 19, pp10-13.

Orkin, M. 1989 (editor). **Sanctions Against Apartheid**. Cape Town: David Phillip.

Parr, R. 2000. **Specialisation in South African Manufactures Trade, 1993-1998**. South African Journal of Economics, 68(2): 297-306.

Petersson, L. 2000. **The Theory of New Economic Geography and Industrial Location in SADC**. Stockholm: University of Lund.

Page, S. 1994. **How Developing Countries Trade: The Institutional Constraints**. London: Routledge.

Rankin, N. 2003. **The Export Behaviour of South African Manufacturing Firms**. London: University of Export, Centre for the Study of African Economies.

RDP, 1994. **The Reconstruction and Development Programme: A Policy Framework**. Johannesburg: Umanyano.

Republic of South Africa, 1972. **Report of the Commission of Inquiry into the Export Trade of the Republic of South Africa**. Pretoria: Government Printers Report RP69/72.

Reuvid, J. 1995. **Doing Business in South Africa**. Second edition. Johannesburg. ABSA Bank: Kogan Page.

Roberts, S. 1988. **A Preliminary Analysis of the Impact of Trade Liberalisation on Manufacturing or "Will Trade Liberalisation Generate Export-led Growth in South Africa**?" London: University of London.

Roberts, S, 2000. **Understanding the Effects of Trade Policy Reforms: The Case of South Africa**. South African Journal Economics, 68(4): 607-635.

Samson, M, MacQueue, K. & van Niekerk, I. 2001. **Capital/Skills-Intensity and Job Creation: An Analysis of Policy Options**. Trade and Industry Policy Secretariat http://www.tips.org.za.

Salvatore, D. & Dowling E, 1977. **Theory and Problems of Development Economics**. London: McGraw-Hill Book Company.

Salvatore, D. 2001. **International Trade**. Seventh edition. New York: John-Wiley & Sons.

Sandberg, H.M & Martin, T. L, 2001. **Trade Relationships and Economic Development: The Case of the Southern African Development Community**. South African Journal of Economics 69(3): 405-473.

Schoeman, N. J. & Blignaut, J.N. 1998. **Socio-Economic Environment and Labour Absorption in South Africa**. South African Journal Economics. 66(3): 299-318.

Soderbom, M. 2001. **Constraints and Opportunities in Kenyan Manufacturing: Report on the Kenyan Manufacturing Enterprises Survey 2000**. UNIDO, Centre for Southern African Economies: University of Oxford.

Schrire, R. 1990 (editor). **Critical Choices for South Africa: An Agenda for the 1990s**. Cape Town: Oxford University Press.

South African Reserve Bank (SARB) Quarterly Bulletin, **various issues**.

Sellars, C. 2000. **Unemployment, Policy and Social Partnership**. South African Journal of Economics, 68(3): 484-513.

Sono, T. 1994. **From the East: Lessons from Taiwan for South Africa**. Pretoria: Human Sciences Research Council.

Statistics South Africa, 2002. **Discussion Paper Comparative Labour Statistics Survey of Employment and Earnings in Selected December 2001**. Statistics South Africa. P0271.

Stopford, M. 1997. **Maritime Economics**. Second edition. New York & Toronto: Routledge.

Struthers, L. 1990. **Factors Affecting the Competitiveness of Exports**. Unpublished MBA dissertation. Johannesburg: University of Witwatersrand.

Subramanian, A & Alleyne, T.S. 2001. What does South Africa's pattern of trade say about its labour market. New York: IMF, African Development.

Thoburn, J. 2000. **Finding the Right Track for Industry in Africa – Some Policy Issues and Options: A Discussion Paper**. Vienna: UNIDO.

Thirwall, A. P. 1999. **Growth and Development**. Sixth edition. London: MacMillian Press.

Todaro, M. P. 2000. **Economic Development**. Seventh edition. London: Addison-Wesley Longman.

Trade Industry Policy Secretariat Sectoral Focus Series, 2003. **A Snapshot of Industry-wide Employment, 1991-2001. http://www.tips.org.za.**

Trade and Industrial Policy Strategies, 2003. **A Snapshot of Industry-Wide Trends in Value-Added, 1991-2001**. **http://www.tips.org.za.**

Trade and industrial Policy Strategies, 2002. **A Review of the Changing Composition of the South African Economy. http://www.tips.org.za.**

Trade and Industry Policy Strategies, 2003. **A Snapshot of Industry-Wide Trends in Value-Added, 1991-2001. http://www.tips.org.za.**

Tsikata, Y. 1999. **Liberalisation and Trade Performance in South Africa**. Trade and Industry Monitor, Vol. 10, pp 7-10.

Tsikita, Y. 2000. Southern Africa: **Trade, Liberalisation and Implications for a Free Trade Area**. Trade and Industry Monitor, Vol. 13, pp14-16.

Valentine, N & Krasnik, G. 2000. **SADC Trade With the Rest of the World: Winning Exports Sectors and Revealed Comparative Advantage Ratios**. South African Journal of Economics, 68(2): 267-285.

Valodia, I.1997. **Trade Policy, Productivity and Learning: Evidence in South Africa.** A paper prepared for Trade and Industry Policy Secretariat Conference 22-23 September. University of Natal: Centre for Social and Development Studies.

van Dijk, M. 2003. **South African Manufacturing Performance in International Perspective 1970-1999**. South African Journal of Economics, 71 (1): 119-142.

van Seventer, D. 2001. **The Level and Variation of Tariff Rates: An Analysis of Tariff Rates in South Africa**. Trade and Industry Monitor, Vol. 15 pp. 5-9.

van Zyl, E. A. J. 1998. **Stages of Growth in the South African Economy: The Role of agriculture**. South African Journal of Economics, 45 (2): 204-218.

Venables, A. J. 1999. **Regional Integration Agreements: A Force for Convergence of Divergence. pp 1-26.** a.j.venables@Ise.ac.uk.

Visser, M. 2001. **The Role of Intra-industry Trade and Cross-border Supply Chains in Facilitating Regional Integration in the SADC Markets**. DPRU Working Paper 01/57. University of Cape Town.

www.sars.gov.za

www.tips.org.za

www.uct.ac.za/dpru